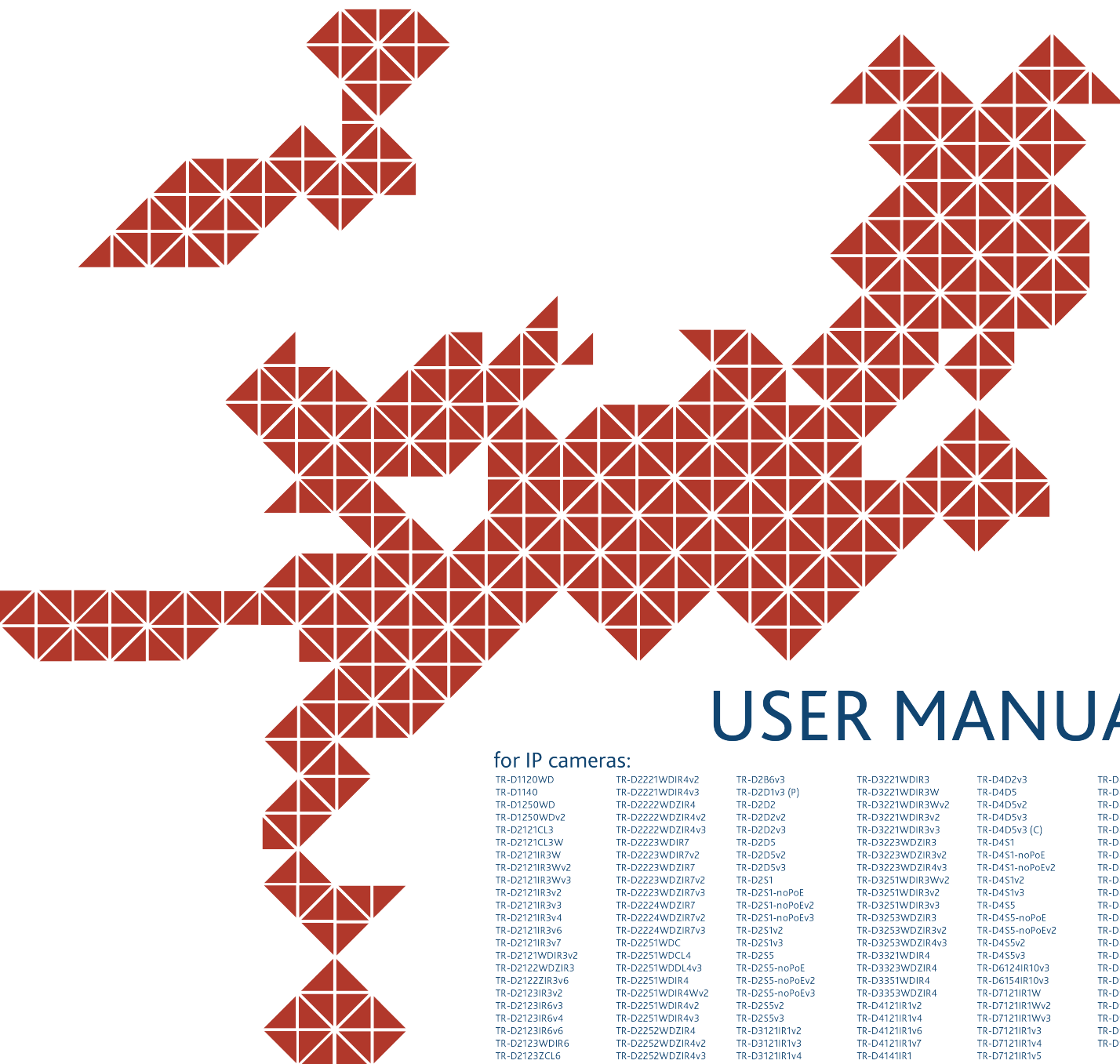




## USER MANUAL

for IP cameras:

|                     |                 |                 |                  |                  |                 |
|---------------------|-----------------|-----------------|------------------|------------------|-----------------|
| TR-D1120WD          | TR-D2221WDIR4v2 | TR-D2B6v3       | TR-D3221WDIR3    | TR-D4D2v3        | TR-D8152ZIR2    |
| TR-D1140            | TR-D2221WDIR4v3 | TR-D2D1v3 (P)   | TR-D3221WDIR3W   | TR-D4D5          | TR-D8152ZIR2v2  |
| TR-D1250WD          | TR-D2222WDIR4   | TR-D2D2         | TR-D3221WDIR3Wv2 | TR-D4D5v2        | TR-D8153ZIR4v7  |
| TR-D1250WDv2        | TR-D2222WDIR4v2 | TR-D2D2v2       | TR-D3221WDIR3v2  | TR-D4D5v3        | TR-D8221WDC     |
| TR-D2121CL3         | TR-D2222WDIR4v3 | TR-D2D2v3       | TR-D3221WDIR3v3  | TR-D4D5v3 (C)    | TR-D8221WDC3    |
| TR-D2121CL3W        | TR-D2223WDIR7   | TR-D2D5         | TR-D3223WDIR3    | TR-D4S1          | TR-D8221WDIR3   |
| TR-D2121IR3W        | TR-D2223WDIR7v2 | TR-D2D5v2       | TR-D3223WDIR3v2  | TR-D4S1-noPoE    | TR-D8221WDIR3v2 |
| TR-D2121IR3Wv2      | TR-D2223WDIR7   | TR-D2D5v3       | TR-D3223WDIR4v3  | TR-D4S1-noPoEv2  | TR-D8221WDIR3v3 |
| TR-D2121IR3Wv3      | TR-D2223WDIR7v2 | TR-D2S1         | TR-D3251WDIR3Wv2 | TR-D4S1v2        | TR-D8251WDC     |
| TR-D2121IR3v2       | TR-D2223WDIR7v3 | TR-D2S1-noPoE   | TR-D3251WDIR3v2  | TR-D4S1v3        | TR-D8251WDC3    |
| TR-D2121IR3v3       | TR-D2224WDIR7   | TR-D2S1-noPoEv2 | TR-D3251WDIR3v3  | TR-D4S5          | TR-D8251WDC3v3  |
| TR-D2121IR3v4       | TR-D2224WDIR7v2 | TR-D2S1-noPoEv3 | TR-D3253WDIR3v2  | TR-D4S5-noPoE    | TR-D8251WDIR3   |
| TR-D2121IR3v6       | TR-D2224WDIR7v3 | TR-D2S1v2       | TR-D3253WDIR3v3  | TR-D4S5-noPoEv2  | TR-D8251WDIR3v2 |
| TR-D2121IR3v7       | TR-D2251WDC     | TR-D2S1v3       | TR-D3253WDIR4v3  | TR-D4S5v2        | TR-D8251WDIR3v3 |
| TR-D2121WDIR3v2     | TR-D2251WDC3    | TR-D2S5         | TR-D3321WDIR4    | TR-D4S5v3        | TR-D8321WDIR4   |
| TR-D2122WDIR3       | TR-D2251WDC4v3  | TR-D2S5-noPoE   | TR-D3323WDIR4    | TR-D6124IR10v3   | TR-D8351WDIR4   |
| TR-D2122ZIR3v6      | TR-D2251WDIR4   | TR-D2S5-noPoEv2 | TR-D3351WDIR4    | TR-D6154IR10v3   | TR-D9141IR2     |
| TR-D2123IR3v2       | TR-D2251WDIR4v3 | TR-D2S5-noPoEv3 | TR-D3353WDIR4    | TR-D7121IR1W     | TR-D9151IR2     |
| TR-D2123IR6v3       | TR-D2251WDIR4v2 | TR-D2S5v2       | TR-D4121IR1v2    | TR-D7121IR1Wv2   | TR-D9151IR2v2   |
| TR-D2123IR6v4       | TR-D2252WDIR4   | TR-D2S5v3       | TR-D4121IR1v4    | TR-D7121IR1Wv3   | TR-D9161IR2     |
| TR-D2123IR6v6       | TR-D2252WDIR4v2 | TR-D3121IR1v2   | TR-D4121IR1v6    | TR-D7121IR1v3    | TR-D9251WDIR3   |
| TR-D2123WDIR6       | TR-D2252WDIR4v3 | TR-D3121IR1v3   | TR-D4121IR1v7    | TR-D7121IR1v4    | TR-D9251WDIR3v2 |
| TR-D2123ZCL6        | TR-D2253WDIR7   | TR-D3121IR1v4   | TR-D4151IR1      | TR-D7121IR1v5    |                 |
| TR-D2123ZIR6v7      | TR-D2253WDIR7v2 | TR-D3121IR2Wv3  | TR-D4151IR1v2    | TR-D7121IR1v6    |                 |
| TR-D2141IR3         | TR-D2253WDIR7v3 | TR-D3121IR2v6   | TR-D4151IR1v7    | TR-D7121IR1v7    |                 |
| TR-D2142ZIR3        | TR-D2253WDIR7v2 | TR-D3121IR3v7   | TR-D4151IR1v7    | TR-D7141IR1      |                 |
| TR-D2143IR3         | TR-D2253WDIR7v3 | TR-D3122WDIR2   | TR-D4161IR1      | TR-D7151IR1      |                 |
| TR-D2143IR6         | TR-D2253WDIR7v2 | TR-D3122ZIR2v6  | TR-D4181IR1      | TR-D7151IR1v7    |                 |
| TR-D2151CL3v7       | TR-D2253WDIR7v3 | TR-D3123IR2v3   | TR-D4221WDIR2    | TR-D7221WDIR2Wv2 |                 |
| TR-D2151IR3         | TR-D2253WDIR7v4 | TR-D3123IR2v4   | TR-D4221WDIR2v2  | TR-D8121CL2      |                 |
| TR-D2151IR3v2       | TR-D2254WDIR7v3 | TR-D3123IR2v6   | TR-D4221WDIR2v3  | TR-D8121IR2W     |                 |
| TR-D2151IR3v7       | TR-D2321WDIR4   | TR-D3123VIR2v2  | TR-D4251WDIR2v2  | TR-D8121IR2Wv2   |                 |
| TR-D2152ZIR3        | TR-D2323WDIR7   | TR-D3123WDIR2   | TR-D4251WDIR2v3  | TR-D8121IR2Wv3   |                 |
| TR-D2152ZIR3v2      | TR-D2324WDIR9   | TR-D3123ZIR3v7  | TR-D4321WDIR2    | TR-D8121IR2v2    |                 |
| TR-D2153IR6         | TR-D2351WDIR4   | TR-D3141IR1     | TR-D4351WDIR2    | TR-D8121IR2v3    |                 |
| TR-D2153IR6v2       | TR-D2353WDIR7   | TR-D3142ZIR2    | TR-D485          | TR-D8121IR2v4    |                 |
| TR-D2153ZCL6v7      | TR-D2354WDIR9   | TR-D3143IR2     | TR-D485-noPoE    | TR-D8121IR2v6    |                 |
| TR-D2153ZIR6v7      | TR-D2B5         | TR-D3143VIR2    | TR-D485-noPoEv2  | TR-D8121IR3v7    |                 |
| TR-D2161IR3 (rev.2) | TR-D2B5-noPoE   | TR-D3151CL3v7   | TR-D485L         | TR-D8121WDIR2v2  |                 |
| TR-D2163IR6         | TR-D2B5-noPoEv2 | TR-D3151IR2     | TR-D485L-noPoE   | TR-D8122ZIR2v6   |                 |
| TR-D2181IR3 (rev.2) | TR-D2B5-noPoEv3 | TR-D3151IR2v2   | TR-D485v2        | TR-D8123ZIR3     |                 |
| TR-D2183IR6         | TR-D2B5L        | TR-D3151IR3v7   | TR-D485v3        | TR-D8123ZIR4v7   |                 |
| TR-D2221WDC         | TR-D2B5L-noPoE  | TR-D3152ZIR2    | TR-D486          | TR-D8141IR2      |                 |
| TR-D2221WDC3        | TR-D2B5v2       | TR-D3152ZIR2v2  | TR-D486v2        | TR-D8151CL3v7    |                 |
| TR-D2221WDIR4       | TR-D2B5v3       | TR-D3153IR2     | TR-D486v3        | TR-D8151IR2      |                 |
| TR-D2221WDIR4W      | TR-D2B6         | TR-D3153IR2v2   | TR-D4D2          | TR-D8151IR2v2    |                 |
| TR-D2221WDIR4Wv2    | TR-D2B6v2       | TR-D3153ZIR3v7  | TR-D4D2v2        | TR-D8151IR3v7    |                 |

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## CHAPTER 1. INTRODUCTION

### 1.1 TRASSIR IP camera exterior

#### WARNING!

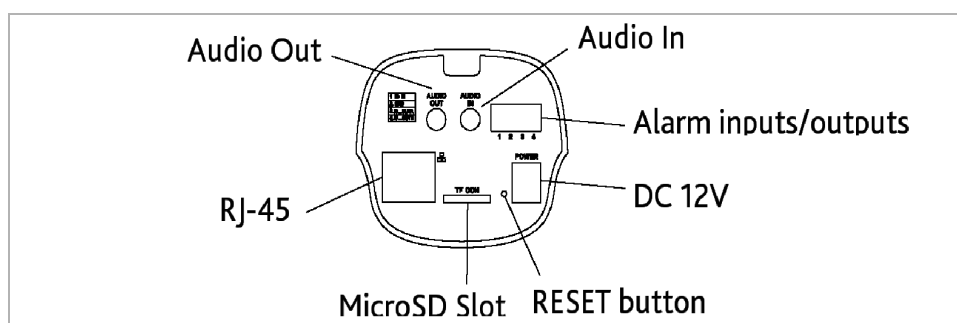
Hereinafter, the model name also refers to all its modifications.

The modification is indicated by a Latin letter in brackets in the model name.

#### 1.1.1 TRASSIR TR-D1120WD / TR-D1140



External connectors:

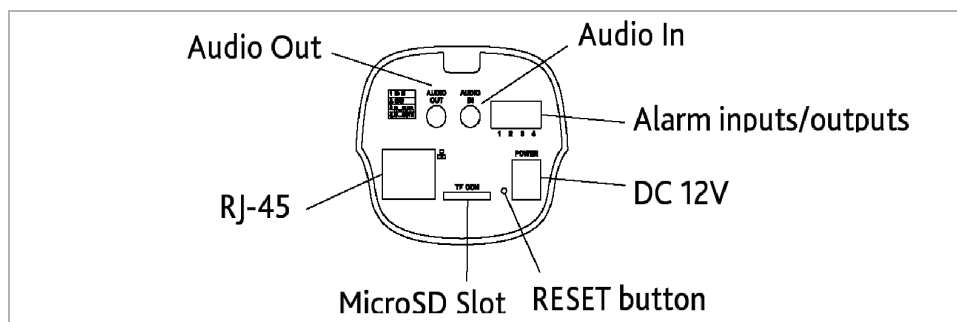


| Connector                   | Description                   |
|-----------------------------|-------------------------------|
| <b>DC12V</b>                | 12V power supply connector.   |
| <b>RJ-45</b>                | LAN connector.                |
| <b>Audio IN</b>             | Microphone Connector.         |
| <b>Audio OUT</b>            | Speaker connector.            |
| <b>Alarm inputs/outputs</b> | Alarm inputs and outputs.     |
| <b>MicroSD Slot</b>         | Slot for microSD memory card. |
| <b>RESET Button</b>         | Reset to factory defaults.    |

1.1.2 TRASSIR TR-D1250WD / TR-D1250WDv2



External connectors:

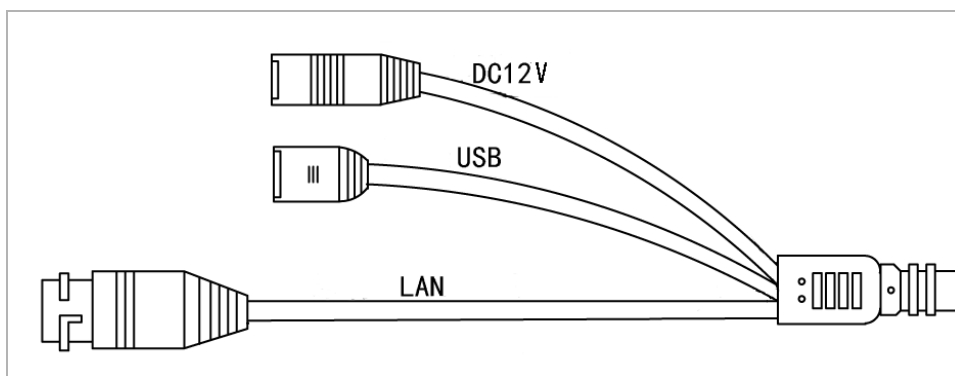


| Connector                   | Description                   |
|-----------------------------|-------------------------------|
| <b>DC12V</b>                | 12V power supply connector.   |
| <b>RJ-45</b>                | LAN connector.                |
| <b>Audio IN</b>             | Microphone Connector.         |
| <b>Audio OUT</b>            | Speaker connector.            |
| <b>Alarm inputs/outputs</b> | Alarm inputs and outputs.     |
| <b>MicroSD Slot</b>         | Slot for microSD memory card. |
| <b>RESET Button</b>         | Reset to factory defaults.    |

1.1.3 TRASSIR TR-D2121IR3v2 / TR-D2121IR3v3 / TR-D2121IR3v4 /  
TR-D2121WDIR3v2 / TR-D2122WDZIR3 / TR-D2141IR3 / TR-D2142ZIR3 /  
TR-D2161IR3 / TR-D2181IR3



External connectors:

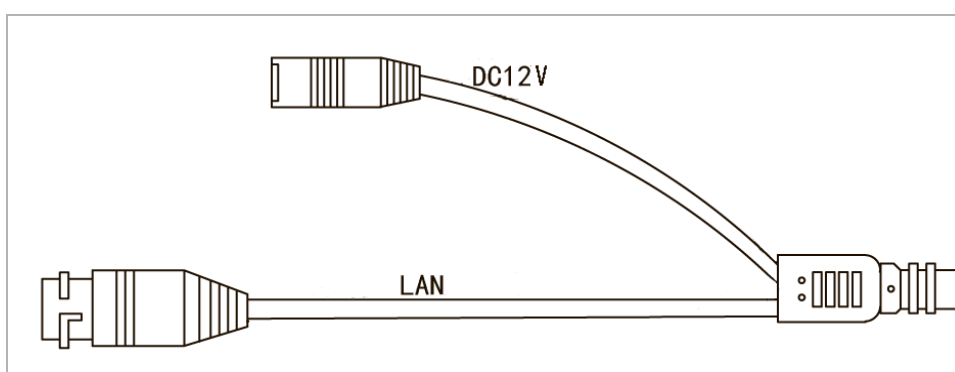


| Connector    | Description                 |
|--------------|-----------------------------|
| <b>DC12V</b> | 12V power supply connector. |
| <b>LAN</b>   | LAN connector.              |
| <b>USB</b>   | USB connector for USBHDD    |

## 1.1.4 TRASSIR TR-D2121IR3W



External connectors:

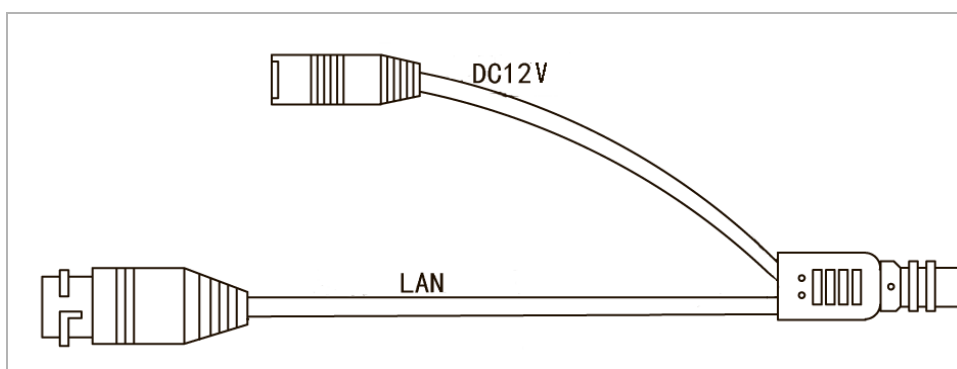


| Connector | Description                 |
|-----------|-----------------------------|
| DC12V     | 12V power supply connector. |
| LAN       | LAN connector.              |

### 1.1.5 TRASSIR TR-D2121CL3W



External connectors:



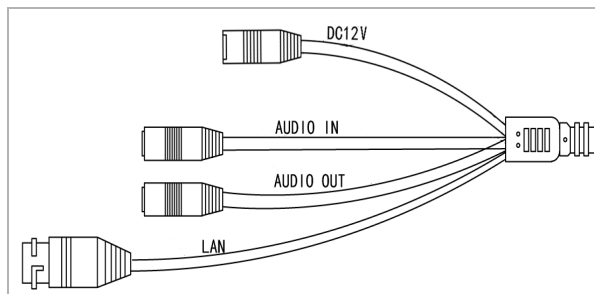
| Connector | Description                 |
|-----------|-----------------------------|
| DC12V     | 12V power supply connector. |
| LAN       | LAN connector.              |

1.1.6 TRASSIR TR-D2123ZCL6 / TR-D2153ZCL6v7 / TR-D2224WDZIR7 /  
TR-D2224WDZIR7v2 / TR-D2253WDZCL7 / TR-D2253WDZDL7v3

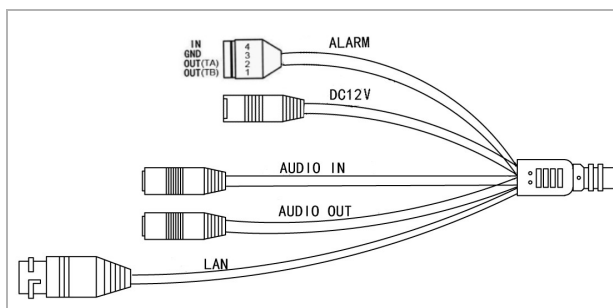


## External connectors:

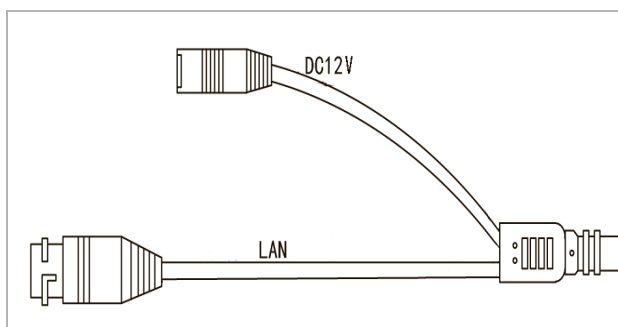
TR-D2153ZCL6v7



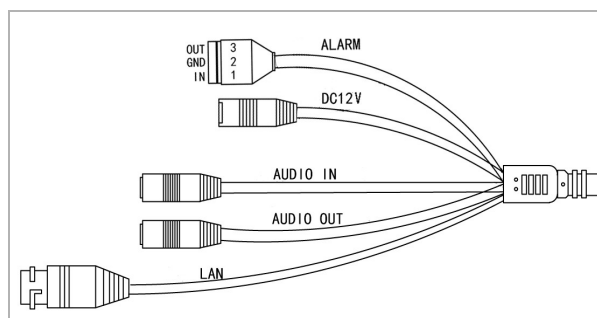
TR-D2224WDZIR7v2 / TR-D2253WDZCL7 /  
TR-D2253WDZDL7v3



TR-D2123ZCL6



TR-D2224WDZIR7

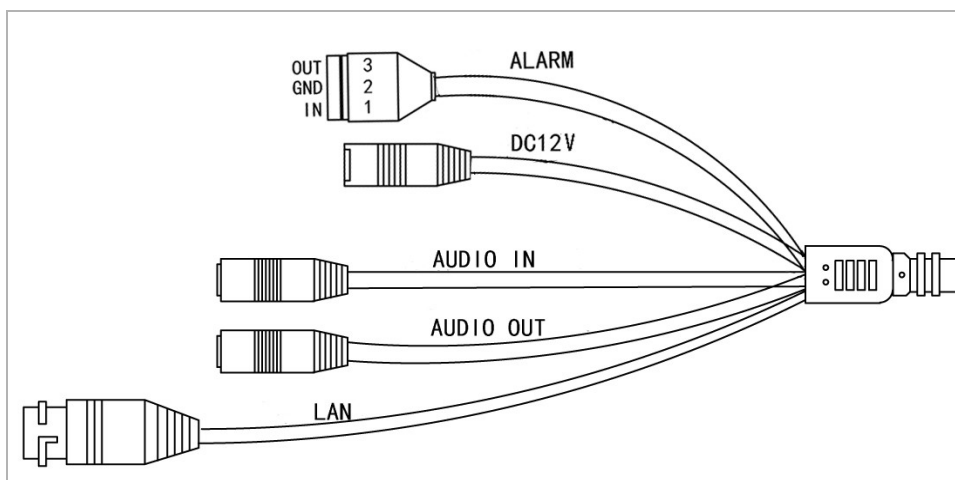


| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |
| ALARM     | Alarm inputs and outputs.    |

1.1.7 TRASSIR TR-D2123IR3v2 / TR-D2143IR3



External connectors:



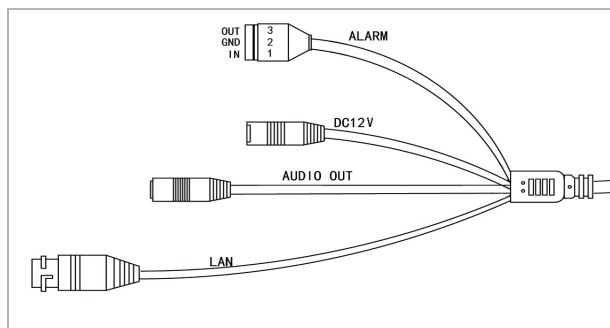
| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |
| Alarm I/O | Alarm inputs and outputs.    |

1.1.8 TRASSIR TR-D2121IR3v6 / TR-D2122ZIR3v6 / TR-D2151IR3 /  
TR-D2151IR3v2 / TR-D2152ZIR3 / TR-D2152ZIR3v2 / TR-D2221WDIR4 /  
TR-D2221WDIR4v2 / TR-D2251WDIR4 / TR-D2251WDIR4v2

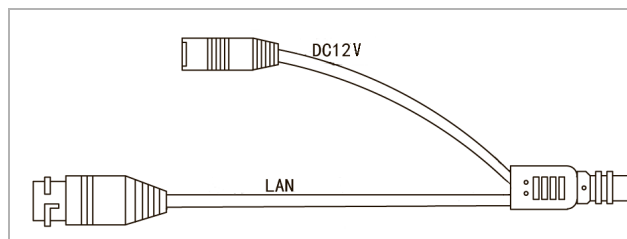


**External connectors:**

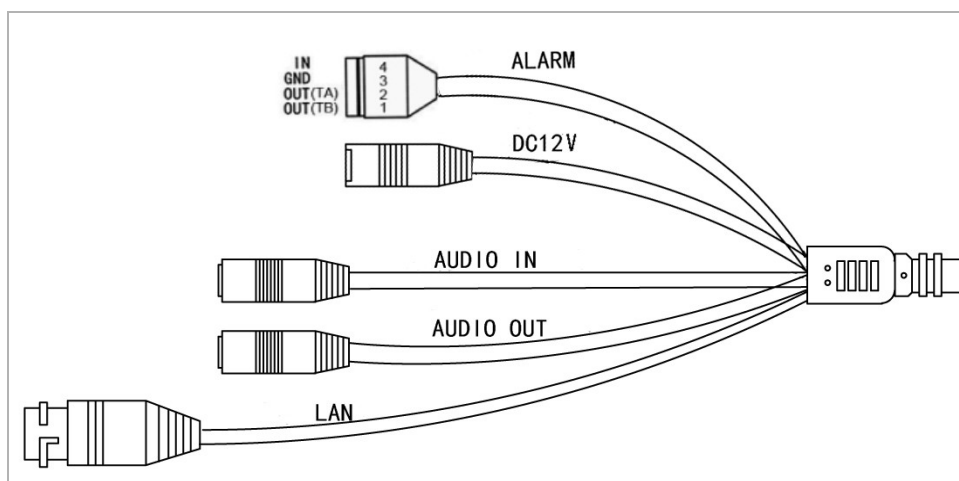
TR-D2221WDIR4 / TR-D2251WDIR4



TR-D2121IR3v6 / TR-D2122ZIR3v6 / TR-D2151IR3 /  
TR-D2151IR3v2 / TR-D2152ZIR3 / TR-D2152ZIR3v2



TR-D2221WDIR4v2 / TR-D2251WDIR4v2

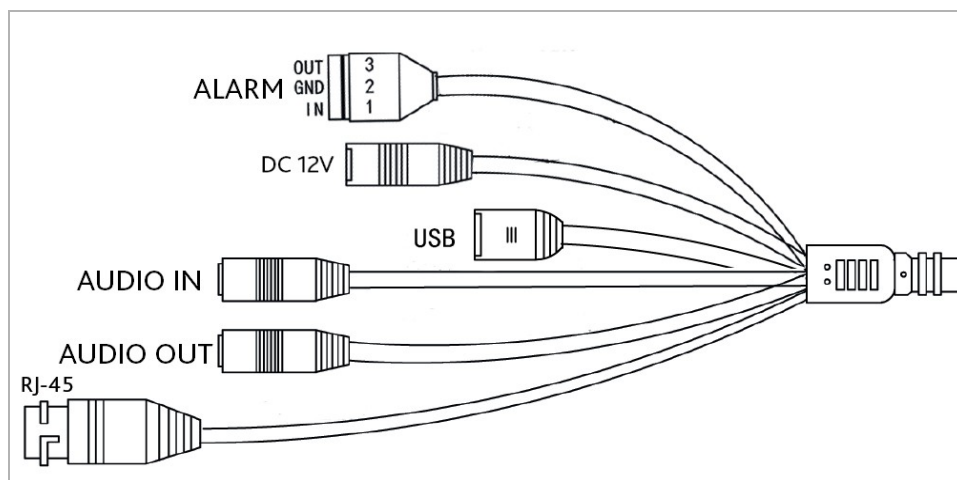


| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |
| Alarm I/O | Alarm inputs and outputs.    |

1.1.9 TRASSIR TR-D2123IR6v3 / TR-D2123IR6v4 / TR-D2143IR6  
/TR-D2123WDIR6 / TR-D2163IR6 / TR-D2183IR6



Eternal connectors:

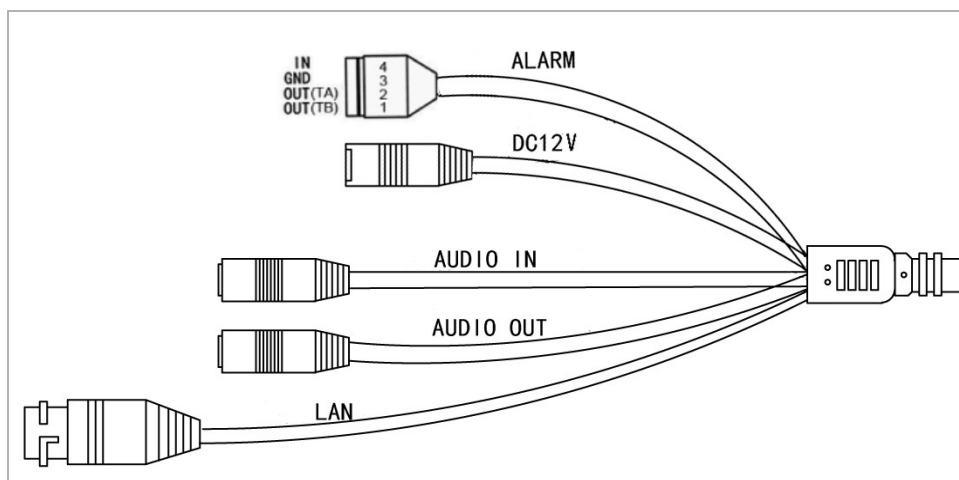


| Connector        | Description                  |
|------------------|------------------------------|
| <b>DC12V</b>     | 12V power supply connector.  |
| <b>LAN</b>       | LAN connector.               |
| <b>Audio OUT</b> | Speaker connector.           |
| <b>AUDIO IN</b>  | Active microphone connector. |
| <b>Alarm I/O</b> | Alarm inputs and outputs.    |
| <b>USB</b>       | USB connector for USBHDD     |

1.1.10 TRASSIR TR-D2321WDIR4 / TR-D2351WDIR4



External connectors:

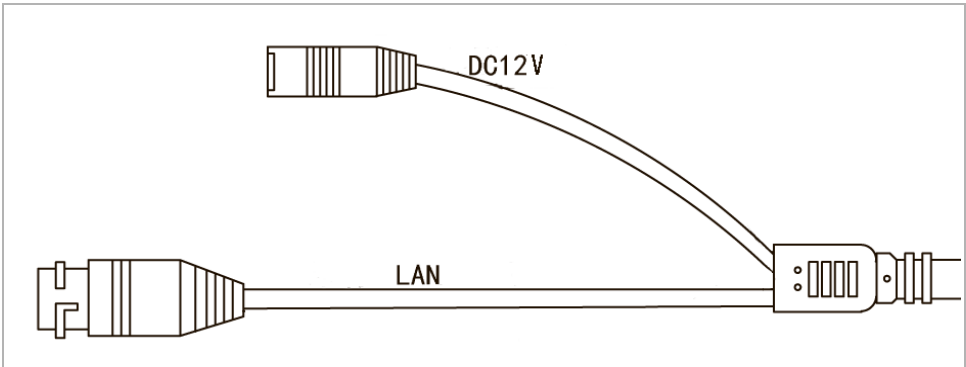


| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |
| ALARM     | Alarm inputs and outputs.    |

1.1.11 TRASSIR TR-D2B6 / TR-D2B6v2 / TR-D4B6 / TR-D4B6v2



External connectors:



| Connector | Description                 |
|-----------|-----------------------------|
| DC12V     | 12V power supply connector. |
| LAN       | LAN connector.              |

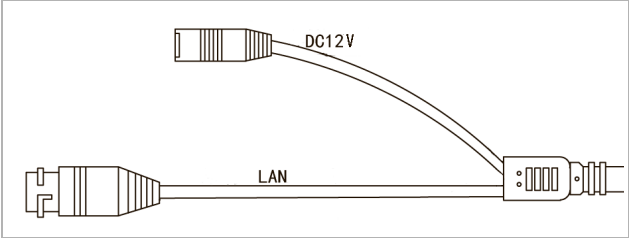
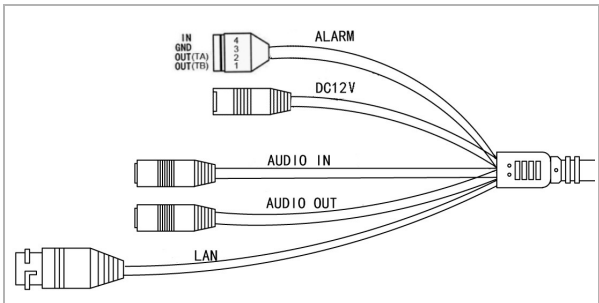
*1.1.12 TRASSIR TR-D2B5-noPoE / TR-D2B5-noPoEv2 / TR-D2B5 / TR-D2B5v2 / TR-D2B5v2 (B) / TR-D4B5-noPoE / TR-D4B5*



External connectors:

TR-D2B5v2 (B)

TR-D2B5-noPoE / TR-D2B5-noPoEv2 / TR-D2B5 /  
TR-D2B5v2 / TR-D4B5-noPoE / TR-D4B5

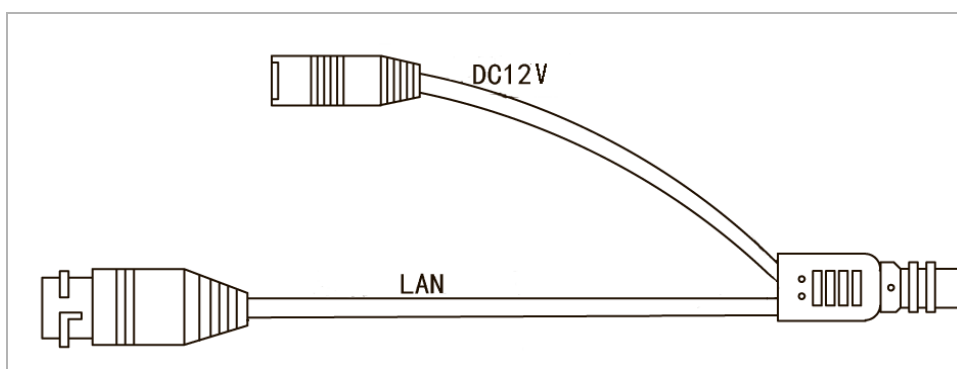


| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |
| Alarm I/O | Alarm inputs and outputs.    |

**1.1.13 TRASSIR TR-D2B5L / TR-D2B5L-noPoE / TR-D4B5L / TR-D4B5L-noPoE**



**External connectors:**



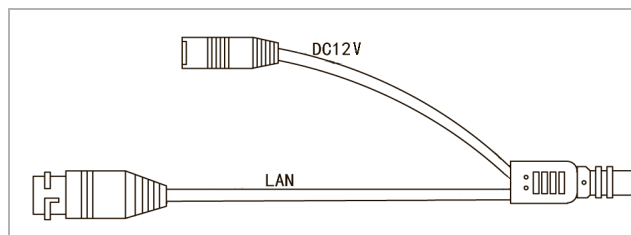
| Connector | Description                 |
|-----------|-----------------------------|
| DC12V     | 12V power supply connector. |
| LAN       | LAN connector.              |

1.1.14 TRASSIR TR-D2B5v3 / TR-D2B5v3 (B) / TR-D2B5-noPoEv3 / TR-D4B5v3

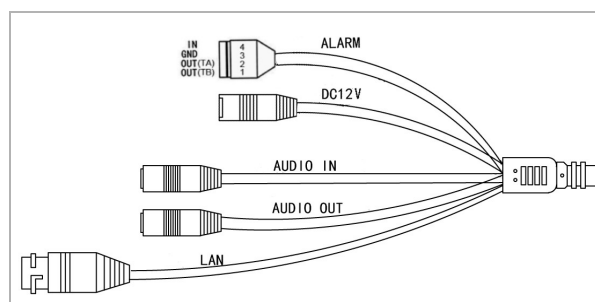


**External connectors:**

TR-D2B5v3 / TR-D2B5-noPoEv3 / TR-D4B5v3



TR-D2B5v3 (B)

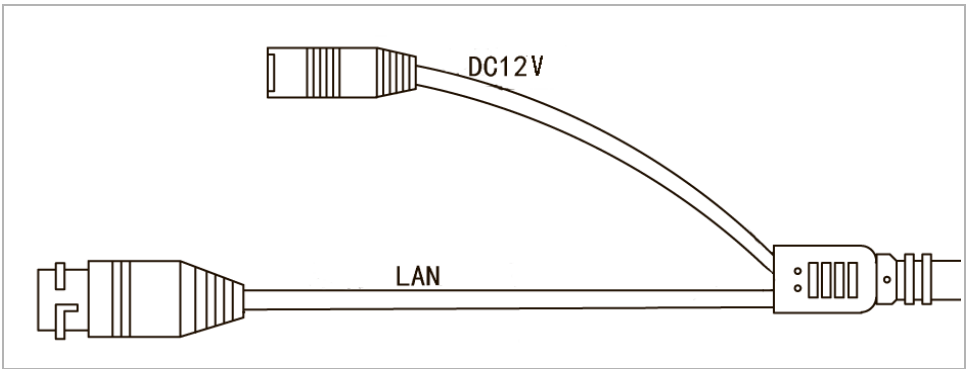


| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |
| Alarm I/O | Alarm inputs and outputs.    |

1.1.15 TR-D2B6v3 / TR-D4B6v3



External connectors:



| Connector | Description                 |
|-----------|-----------------------------|
| DC12V     | 12V power supply connector. |
| LAN       | LAN connector.              |

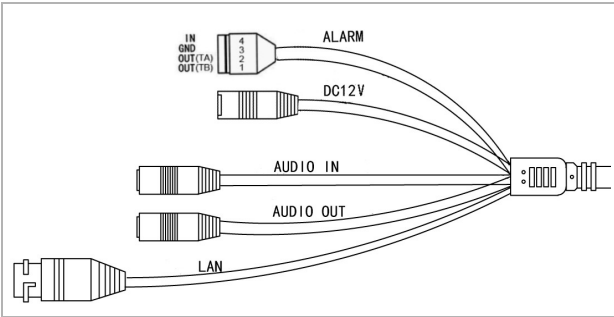
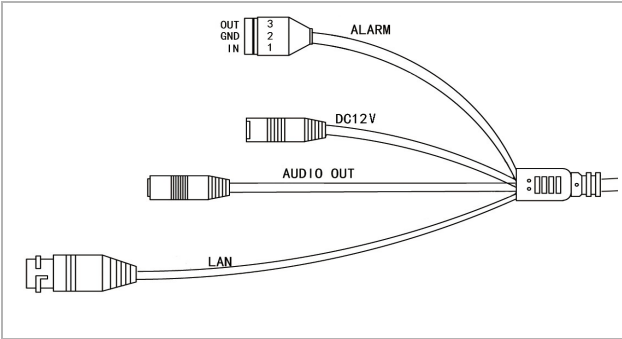
*1.1.16 TRASSIR TR-D2121IR3Wv2 / TR-D2121IR3Wv3 / TR-D2221WDIR4W /  
TR-D2221WDIR4Wv2 / TR-D2251WDIR4Wv2*



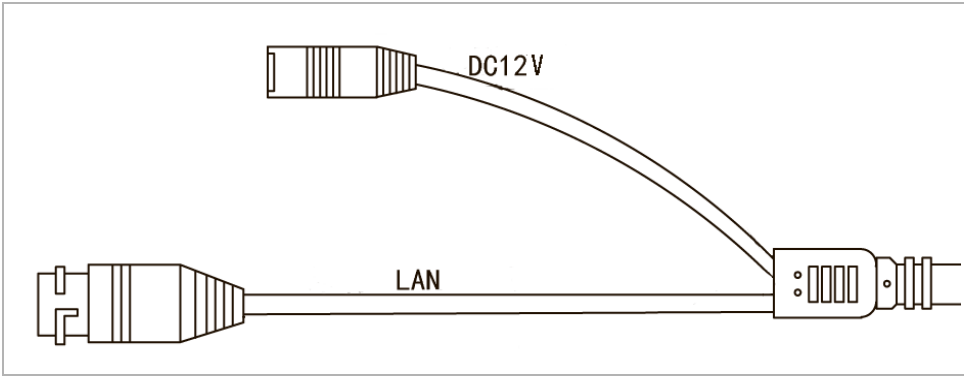
External connectors:

TR-D2221WDIR4W

TR-D2221WDIR4Wv2 / TR-D2251WDIR4Wv2



TR-D2121IR3Wv2 / TR-D2121IR3Wv3



| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |
| Alarm I/O | Alarm inputs and outputs.    |

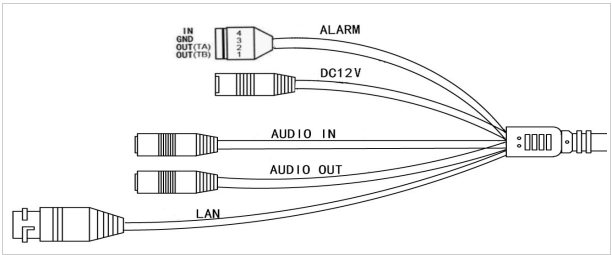
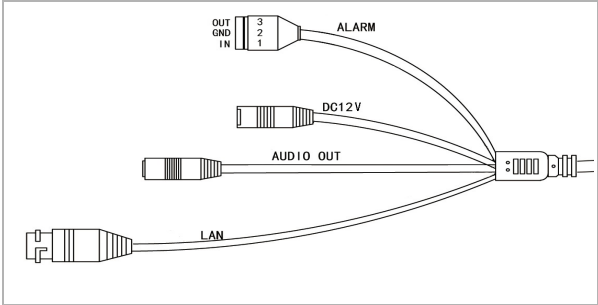
**1.1.17 TRASSIR TR-D2222WDZIR4 / TR-D2222WDZIR4v2 / TR-D2252WDZIR4 /  
TR-D2252WDZIR4v2**



External connectors:

TR-D2222WDZIR4 / TR-D2252WDZIR4

TR-D2222WDZIR4v2 / TR-D2252WDZIR4v2

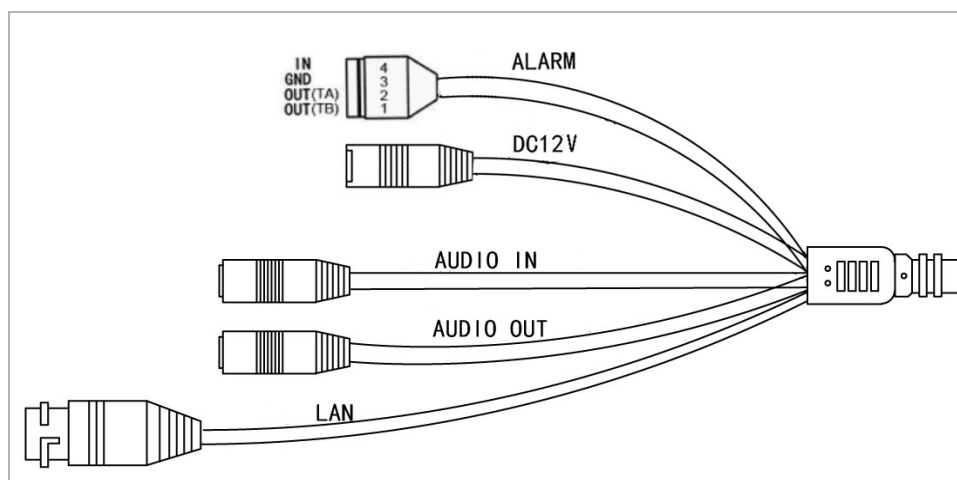


| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |
| Alarm I/O | Alarm inputs and outputs.    |

### 1.1.18 TRASSIR TR-D2222WDZIR4v3 / TR-D2252WDZIR4v3



External connectors:



| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |
| ALARM     | Alarm inputs and outputs.    |

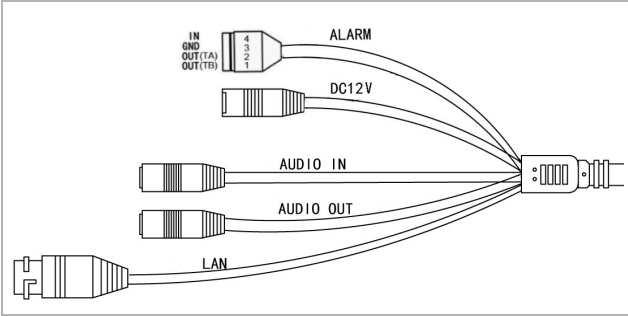
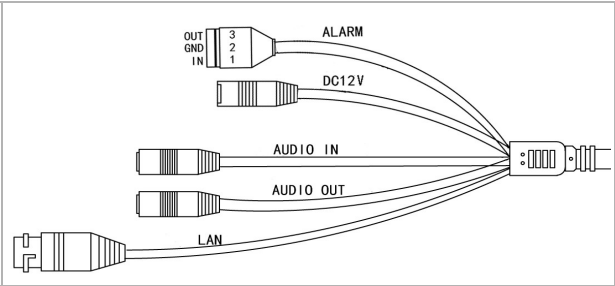
*1.1.19 TRASSIR TR-D2123IR6v6 / TR-D2153IR6/ TR-D2153IR6v2 /  
TR-D2223WDIR7/ TR-D2223WDIR7v2 / TR-D2223WDZIR7 /  
TR-D2223WDZIR7v2 / TR-D2253WDIR7 / TR-D2253WDIR7v2 /  
TR-D2253WDZIR7 / TR-D2253WDZIR7v2*



External connectors:

TR-D2123IR6v6 / TR-D2153IR6/ TR-D2153IR6v2 /  
TR-D2223WDIR7 / TR-D2223WDZIR7 /  
TR-D2253WDIR7 / TR-D2253WDZIR7

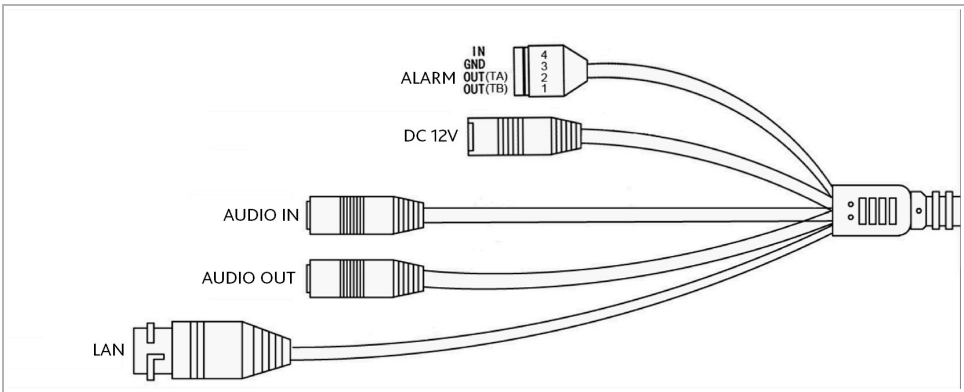
TR-D2223WDZIR7v2 / TR-D2223WDIR7v2 /  
TR-D2253WDIR7v2 / TR-D2253WDZIR7v2



| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |
| ALARM     | Alarm inputs and outputs.    |

**1.1.20 TRASSIR TR-D2323WDZIR7 / TR-D2353WDZIR7**

External connectors

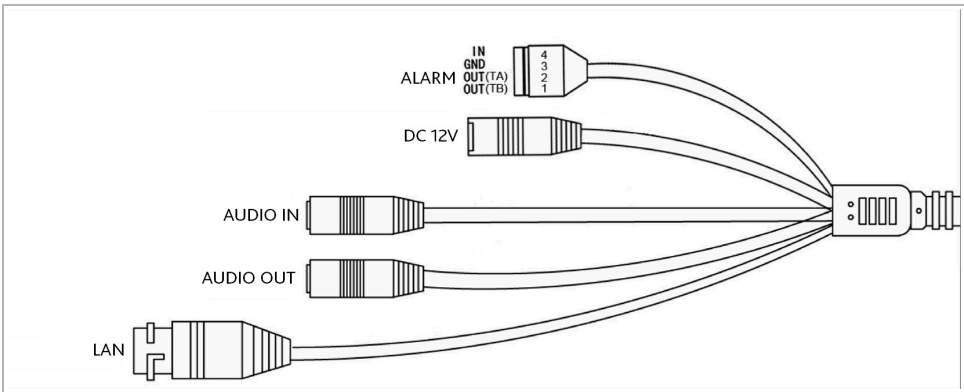


| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |
| ALARM     | Alarm inputs and outputs.    |

*1.1.21 TRASSIR TR-D2224WDZIR7v3 / TR-D2254WDZIR7v3 /  
TR-D2324WDZIR9 / TR-D2354WDZIR9*



External connectors:



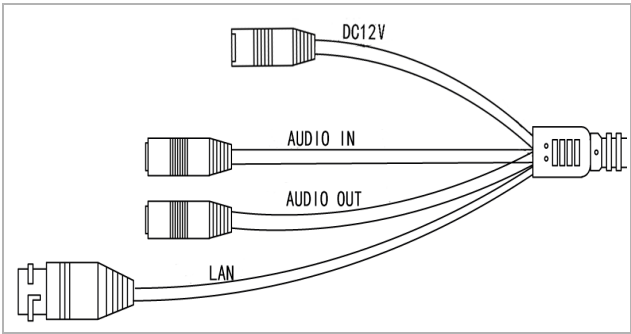
| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |
| ALARM     | Alarm inputs and outputs.    |

**1.1.22 TRASSIR TR-D2123ZIR6v7 / TR-D2153ZIR6v7 TR-D2223WDZIR7v3 / TR-D2253WDZIR7v3**

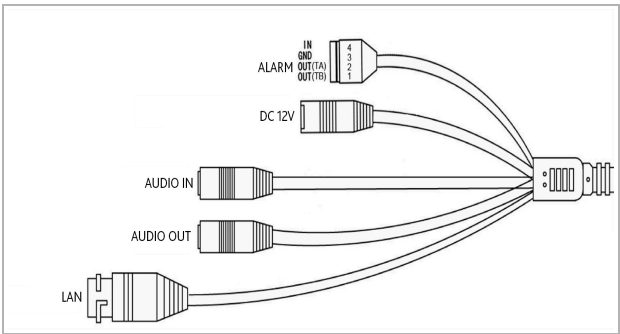


External connectors:

TR-D2123ZIR6v7 / TR-D2153ZIR6v7



TR-D2223WDZIR7v3 / TR-D2253WDZIR7v3



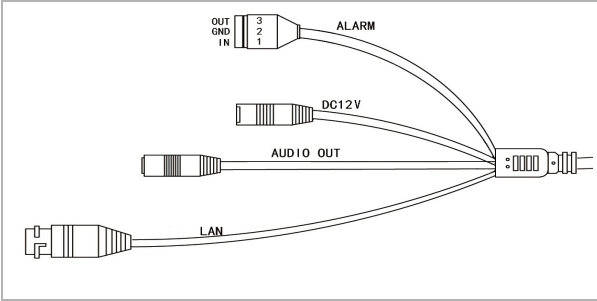
| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |
| ALARM     | Alarm inputs and outputs.    |

*1.1.23 TRASSIR TR-D2121IR3v7 / TR-D2151IR3v7 / TR-D2221WDC /  
TR-D2221WDIR4v3 / TR-D2251WDC / TR-D2251WDIR4v3*

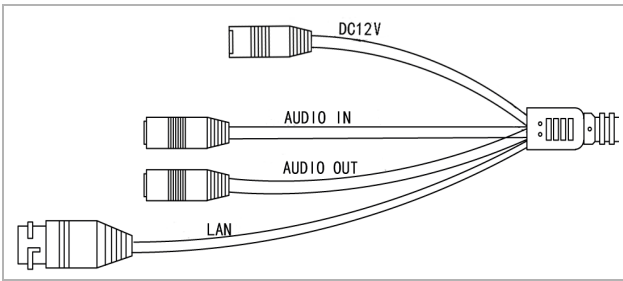


External connectors:

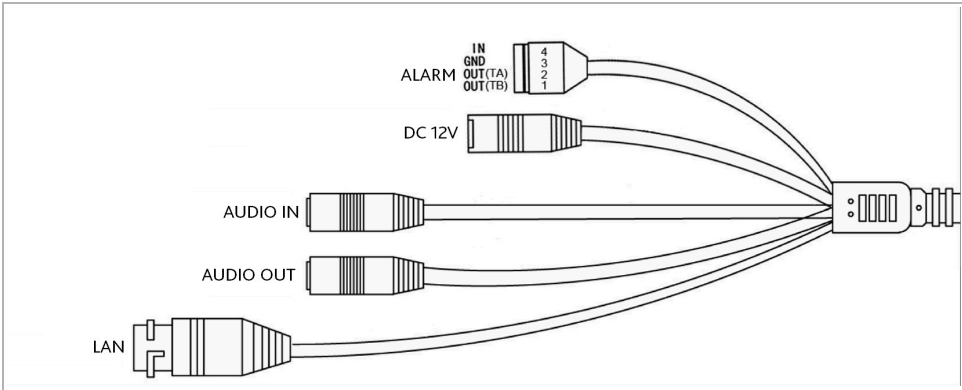
TR-D2221WDC



TR-D2121IR3v7 / TR-D2151IR3v7



TR-D2221WDIR4v3 / TR-D2251WDC / TR-D2251WDIR4v3



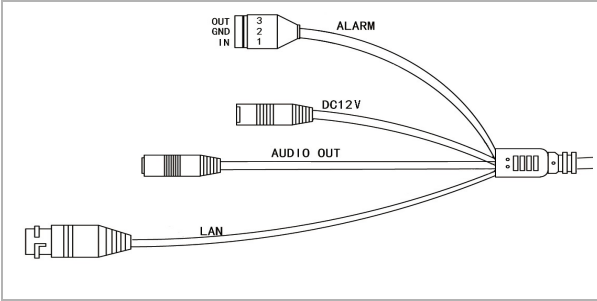
| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |
| Alarm I/O | Alarm inputs and outputs.    |

1.1.24 TRASSIR TR-D2121CL3 / TR-D2221WDCL4 / TR-D2151CL3v7 /  
TR-D2251WDCL4 / TR-D2251WDDL4v3

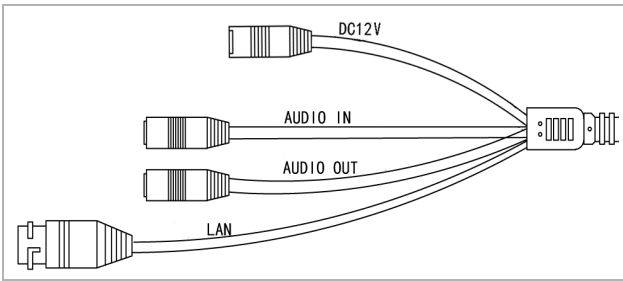


External connectors:

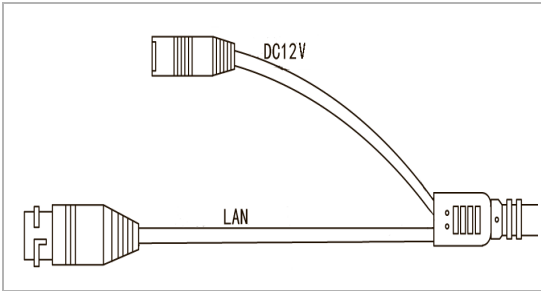
TR-D2151CL3v7



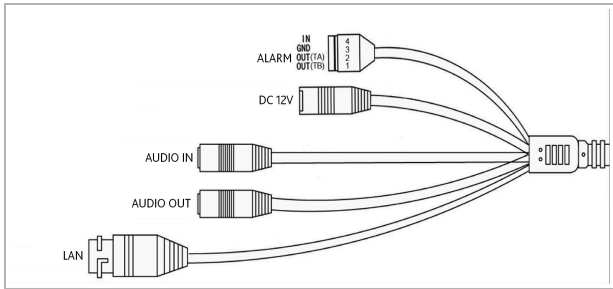
TR-D2221WDCL4



TR-D2121CL3



TR-D2251WDCL4 / TR-D2251WDDL4v3



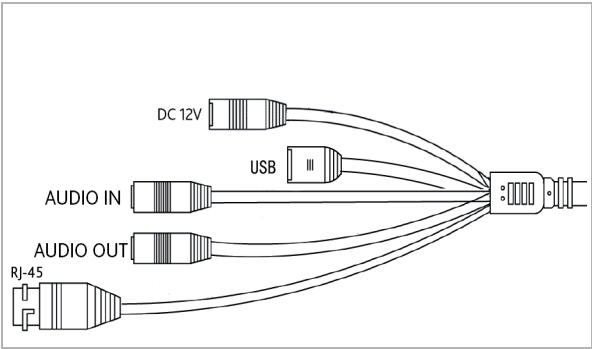
| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |
| Alarm I/O | Alarm inputs and outputs.    |

1.1.25 TRASSIR TR-D2D2 / TR-D2D2v2 / TR-D2D2v3 / TR-D3123IR2v3 /  
TR-D3123IR2v4 / TR-D3123WDIR2 / TR-D3143IR2 / TR-D4D2 / TR-D4D2v2 /  
TR-D4D2v3

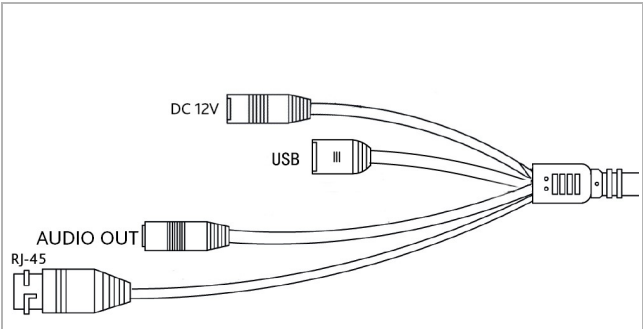


External connectors:

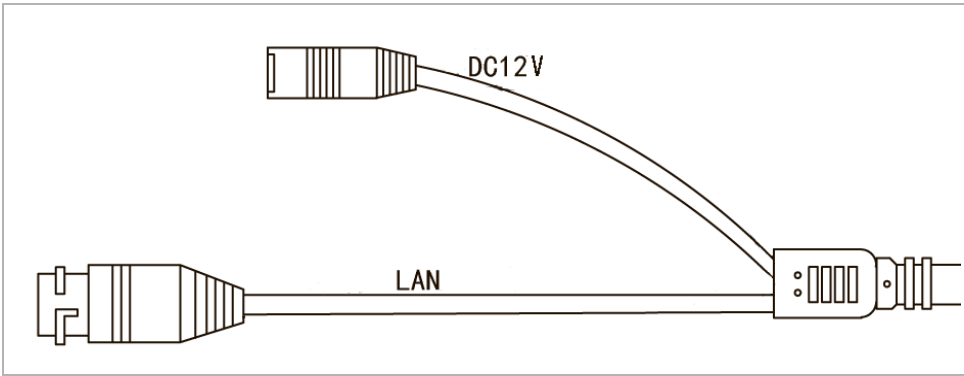
TR-D3123IR2v3 / TR-D3123WDIR2 / TR-D3143IR2



TR-D3123IR2v4



TR-D2D2 / TR-D2D2v2 / TR-D2D2v3 / TR-D4D2 / TR-D4D2v2 / TR-D4D2v3



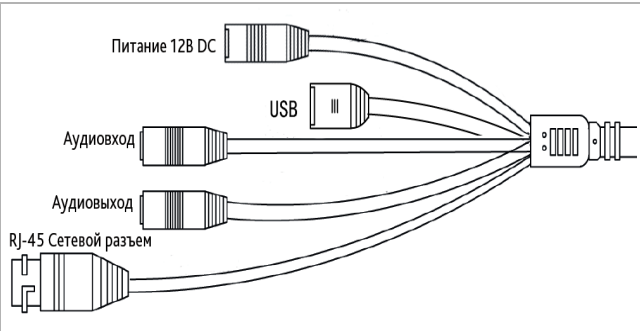
| Connector | Description                  |
|-----------|------------------------------|
| LAN       | LAN connector.               |
| DC12V     | 12V power supply connector.  |
| USB       | USB connector for USBHDD.    |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |

1.1.26 TRASSIR TR-D2D1v3 (P) / TR-D2D5 / TR-D2D5v2 / TR-D2D5v3 /  
TR-D3121IR1v2 / TR-D3121IR1v3 / TR-D3121IR1v4 / TR-D3141IR1 / TR-D4D5 /  
TR-D4D5v2 / TR-D4D5v3

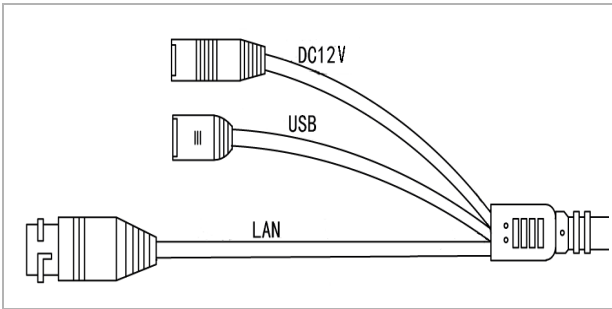


External connectors:

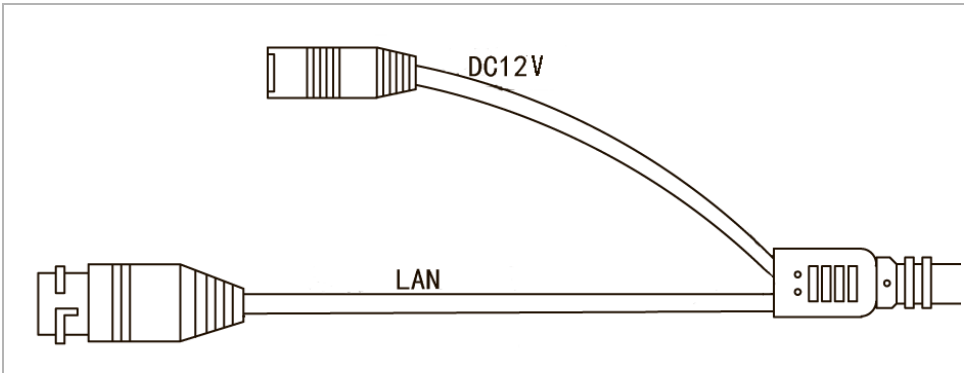
TR-D3141IR1



TR-D3121IR1v2 / TR-D3121IR1v3 / TR-D3121IR1v4



TR-D2D5 / TR-D2D5v2 / TR-D2D1v3 (P) / TR-D2D5v3 / TR-D4D5 / TR-D4D5v2 / TR-D4D5v3

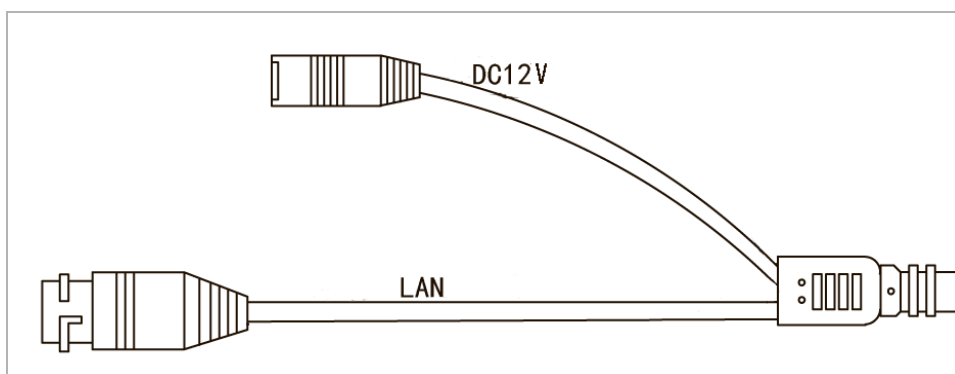


| Connector | Description                  |
|-----------|------------------------------|
| LAN       | LAN connector.               |
| DC12V     | 12V power supply connector.  |
| USB       | USB connector for USBHDD.    |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |

*1.1.27 TRASSIR TR-D2S1 / TR-D2S1v2 / TR-D2S1v3 / TR-D2S1-noPoE /  
TR-D2S1-noPoEv2 / TR-D2S1-noPoEv3 / TR-D4S1 / TR-D4S1v2 / TR-D4S1-  
noPoEv2 / TR-D4S1v3*



External connectors:



| Connector | Description                 |
|-----------|-----------------------------|
| LAN       | LAN connector.              |
| DC12V     | 12V power supply connector. |

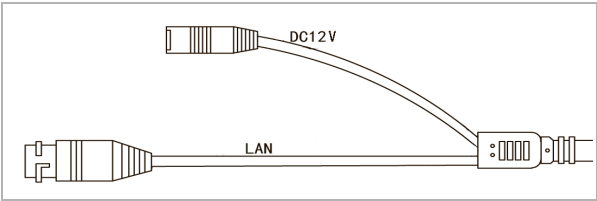
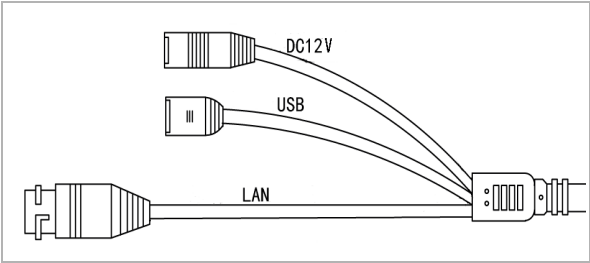
1.1.28 TRASSIR TR-D2S5 / TR-D2S5-noPoEv2 / TR-D2S5-noPoEv3/  
TR-D2S5v2 / TR-D2S5v3 / TR-D4S5 / TR-D4S5-noPoE / TR-D4S5-noPoEv2 /  
TR-D4S5v2 / TR-D4S5v3 / TR-D8121IR2v2 / TR-D8121IR2v3 /  
TR-D8121WDIR2v2 / TR-D8141IR2 / TR-D8121IR2v4



External connectors:

TR-D8121IR2v2 / TR-D8121IR2v3 / TR-D8121IR2v4 /  
TR-D8121WDIR2v2 / TR-D8141IR2

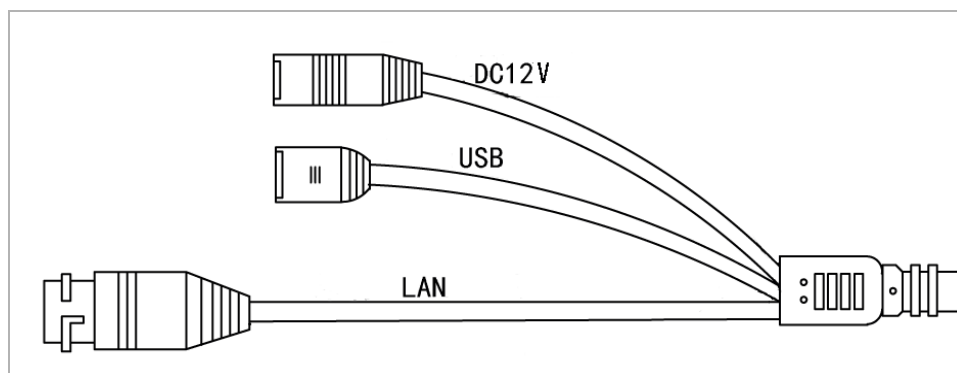
TR-D2S5-noPoEv2 / TR-D2S5 / TR-D2S5v3 /  
TR-D2S5-noPoEv3 / TR-D4S5 / TR-D4S5-noPoE /  
TR-D4S5-noPoEv2 / TR-D4S5v2 / TR-D4S5v3



| Connector | Description                 |
|-----------|-----------------------------|
| LAN       | LAN connector.              |
| USB       | USB connector for USBHDD    |
| DC12V     | 12V power supply connector. |

**1.1.29 TRASSIR TR-D3122WDZIR2 / TR-D3142ZIR2**

External connectors:



| Connector | Description                 |
|-----------|-----------------------------|
| LAN       | LAN connector.              |
| USB       | USB connector for USBHDD    |
| DC12V     | 12V power supply connector. |

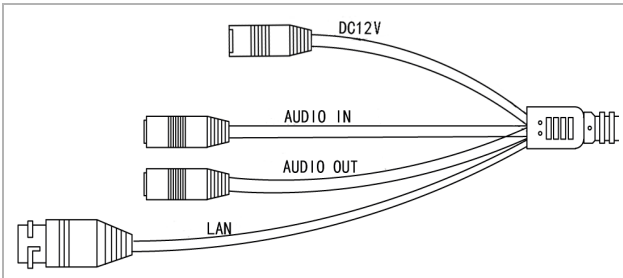
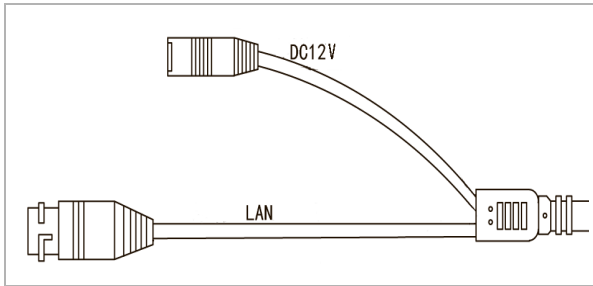
1.1.30 TRASSIR TR-D3121IR2v6 / TR-D3122ZIR2v6 / TR-D3123IR2v6 /  
TR-D3151IR2 / TR-D3151IR2v2 / TR-D3152ZIR2 / TR-D3152ZIR2v2 /  
TR-D3221WDIR3/ TR-D3221WDIR3v2 / TR-D3251WDIR3v2



External connectors:

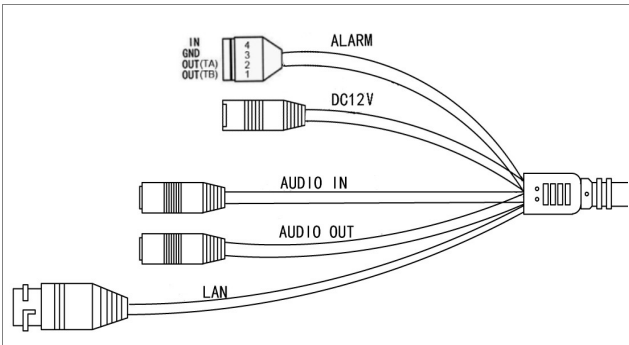
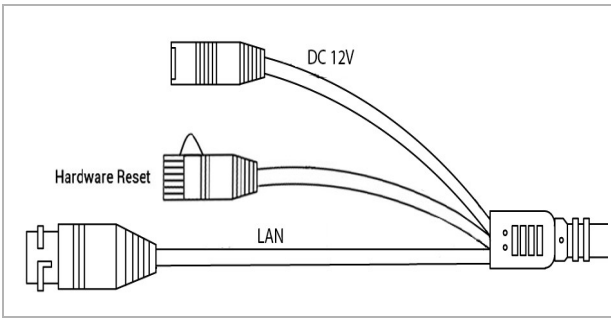
TR-D3121IR2v6 / TR-D3122ZIR2v6 / TR-D3151IR2 / TR-D3152ZIR2 / TR-D3152ZIR2v2

TR-D3123IR2v6

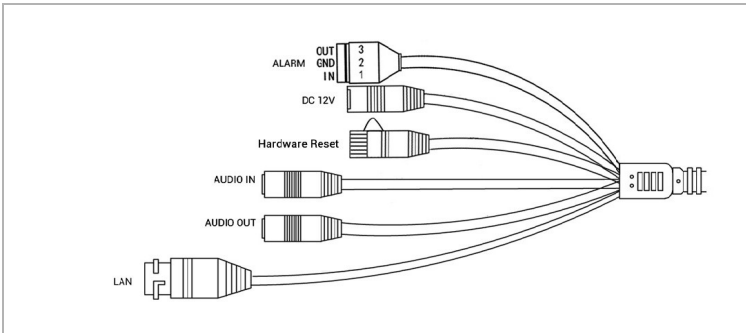


D3151IR2v2

TR-D3221WDIR3v2 / TR-D3251WDIR3v2



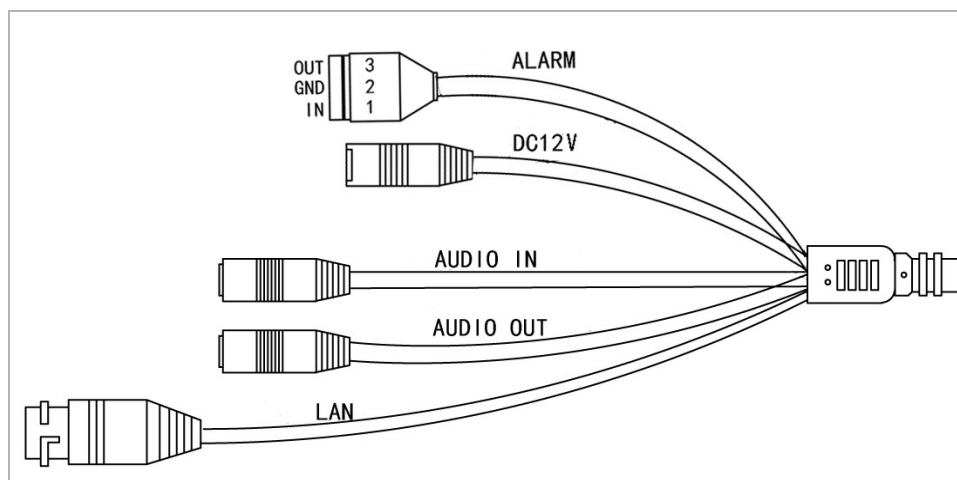
TR-D3221WDIR3



| Connector | Description                        |
|-----------|------------------------------------|
| DC12V     | 12V power supply connector.        |
| LAN       | LAN connector.                     |
| AUDIO OUT | Speaker connector.                 |
| AUDIO IN  | Active microphone connector.       |
| RESET     | Hardware settings reset (see 2.6). |
| ALARM     | Alarm inputs and outputs.          |

**1.1.31 TRASSIR TR-D3123VIR2v2 / TR-D3143VIR2**

External connectors:

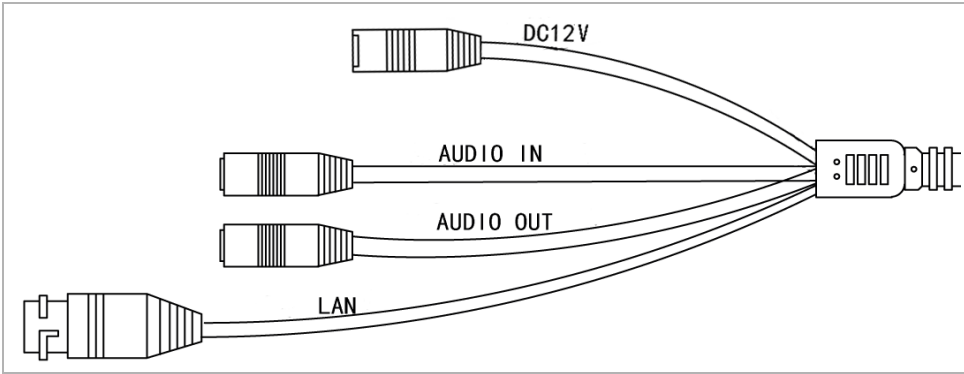


| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |
| ALARM     | Alarm inputs and outputs.    |

### 1.1.32 TRASSIR TR-D3151CL3v7



External connectors:



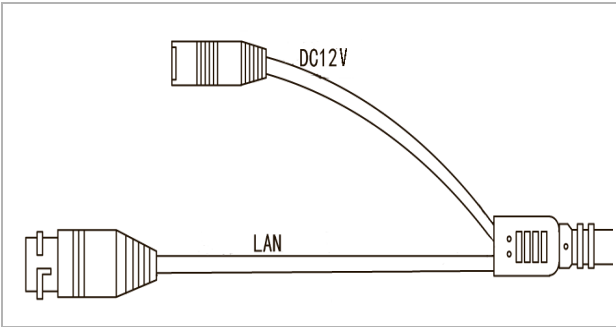
| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |

*1.1.33 TRASSIR TR-D3121IR2Wv3 / TR-D3221WDIR3W / TR-D3221WDIR3Wv2 /  
TR-D3251WDIR3Wv2*

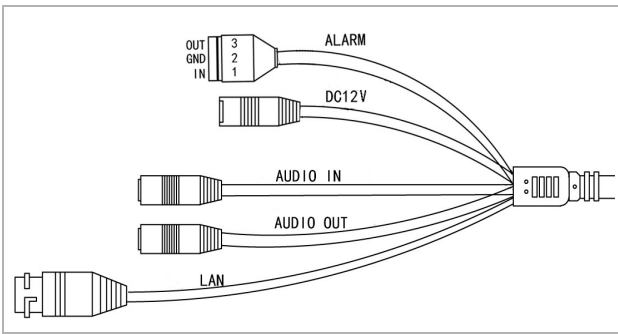


External connectors:

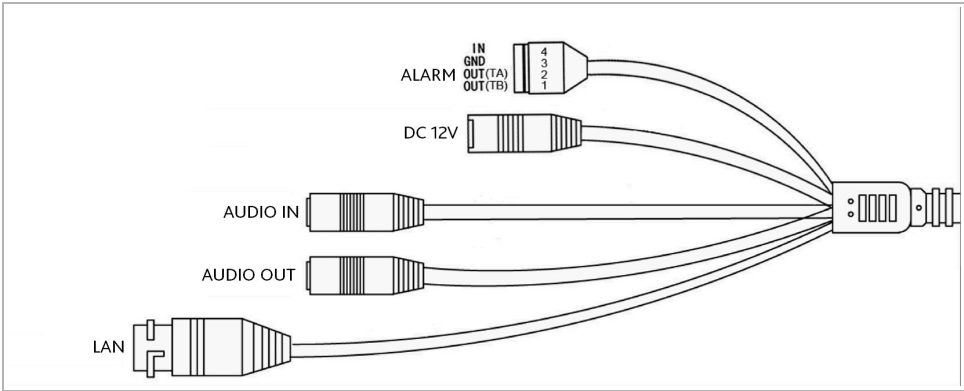
TR-D3121IR2Wv3



TR-D3221WDIR3W



TR-D3221WDIR3Wv2 / TR-D3251WDIR3Wv2



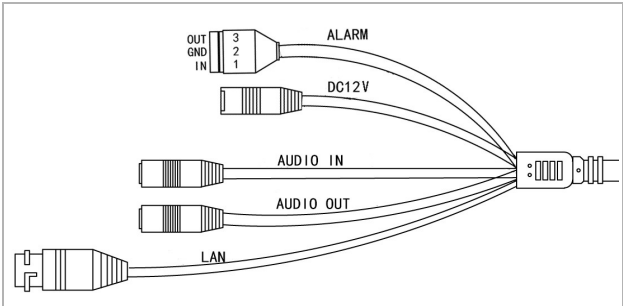
| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |
| ALARM     | Alarm inputs and outputs.    |

1.1.34 TRASSIR TR-D3223WDZIR3 / TR-D3223WDZIR3v2 /  
TR-D3253WDZIR3 / TR-D3253WDZIR3v2 / TR-D3153IR2 / TR-D3153IR2v2

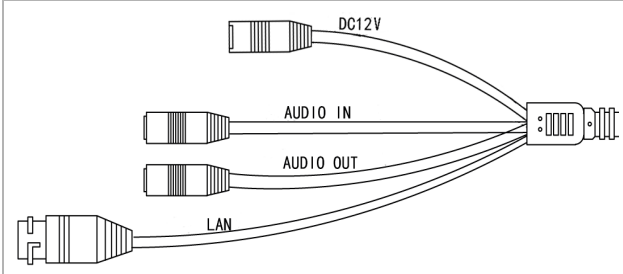


External connectors:

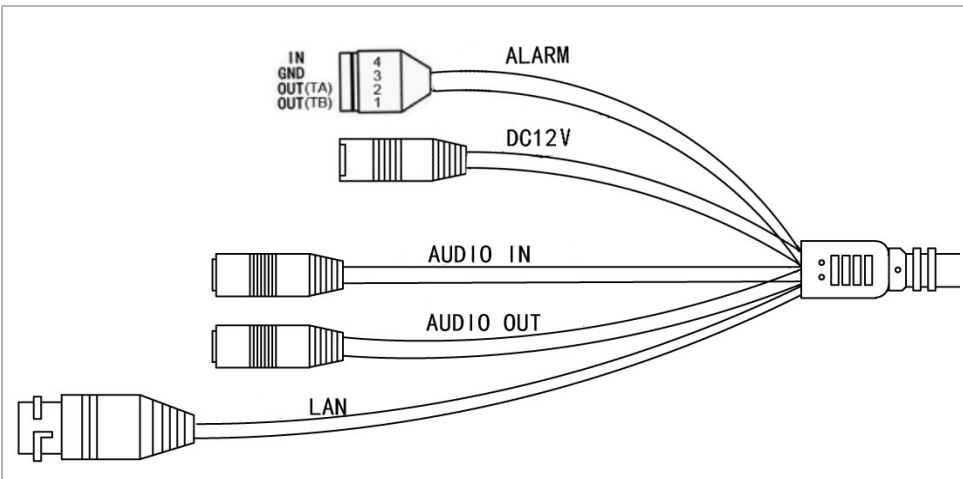
TR-D3153IR2v2 / TR-D3223WDZIR3 /  
TR-D3253WDZIR3



TR-D3153IR2



TR-D3223WDZIR3v2 / TR-D3253WDZIR3v2



| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |
| ALARM     | Alarm inputs and outputs.    |

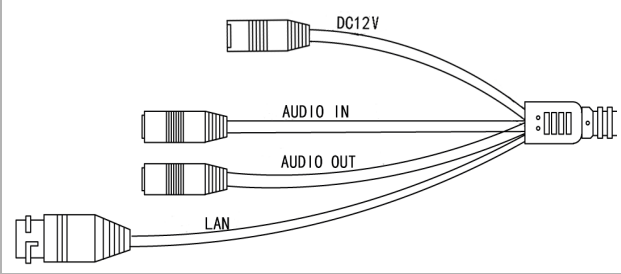
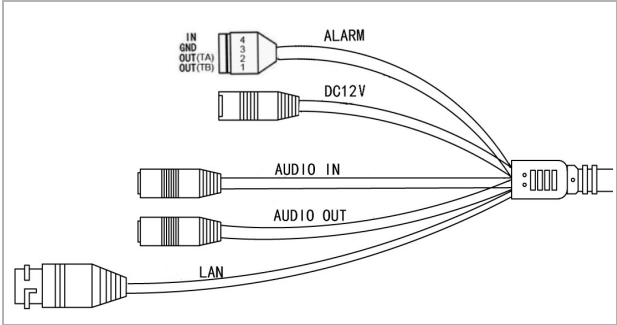
*1.1.35 TRASSIR TR-D3121IR3v7 / TR-D3151IR3v7 / TR-D3221WDIR3v3 /  
TR-D3251WDIR3v3 / TR-D3321WDIR4 / TR-D3351WDIR4*



External connectors:

TR-D3221WDIR3v3 / TR-D3251WDIR3v3 /  
TR-D3321WDIR4 / TR-D3351WDIR4

TR-D3121IR3v7 / TR-D3151IR3v7



| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |
| ALARM     | Alarm inputs and outputs.    |

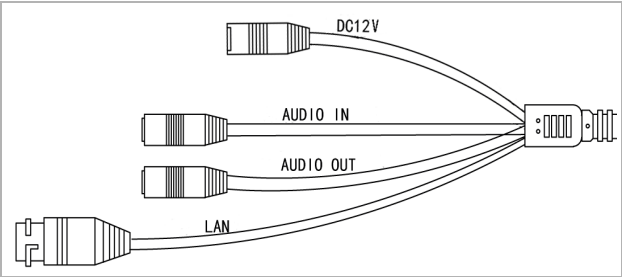
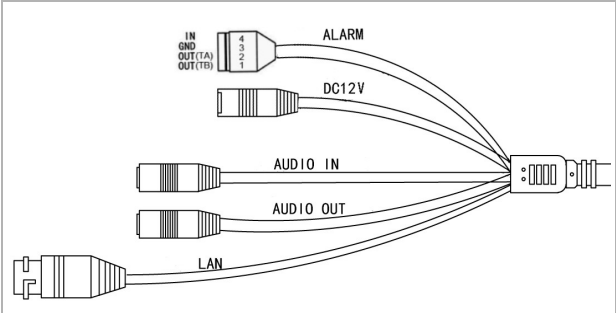
1.1.36 TRASSIR TR-D3123ZIR3v7 / TR-D3153ZIR3v7 / TR-D3223WDZIR4v3 /  
TR-D3253WDZIR4v3 / TR-D3323WDZIR4 / TR-D3353WDZIR4



External connectors:

TR-D3223WDZIR4v3 / TR-D3253WDZIR4v3 /  
TR-D3323WDZIR4 / TR-D3353WDZIR4

TR-D3123ZIR3v7 / TR-D3153ZIR3v7



| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |
| ALARM     | Alarm inputs and outputs.    |

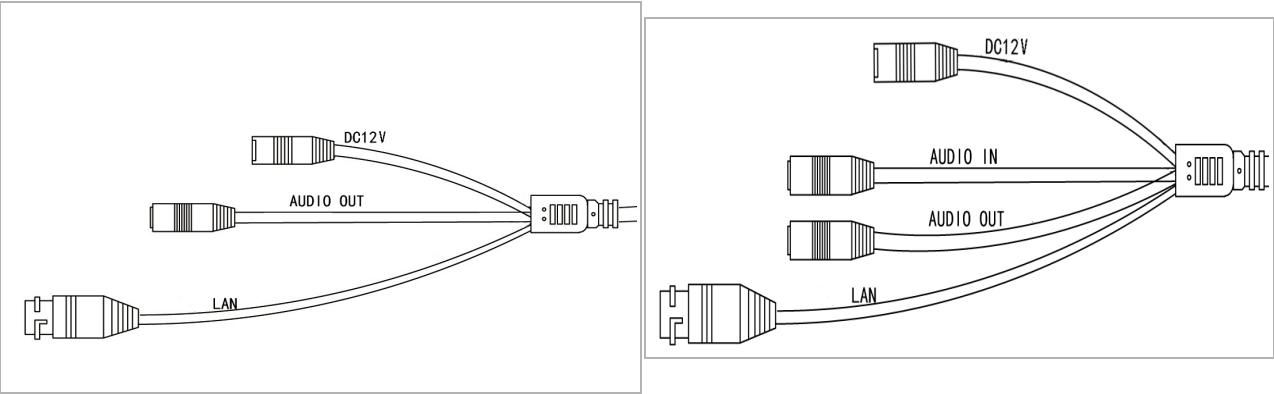
1.1.37 TRASSIR TR-D4121IR1v2 / TR-D4121IR1v4 / TR-D4121IR1v6 /  
TR-D4141IR1 / TR-D4151IR1 / TR-D4151IR1v2 / TR-D4161IR1 / TR-D4181IR1 /  
TR-D4221WDIR2 / TR-D4221WDIR2v2 / TR-D4221WDIR2v3 /  
TR-D4251WDIR2v3



External connectors:

TR-D4121IR1v4

TR-D4121IR1v2 / TR-D4121IR1v6 / TR-D4141IR1 / TR-D4151IR1 / TR-D4151IR1v2 / TR-D4161IR1 / TR-D4181IR1 / TR-D4221WDIR2 / TR-D4221WDIR2v2 / TR-D4221WDIR2v3 / TR-D4251WDIR2v3

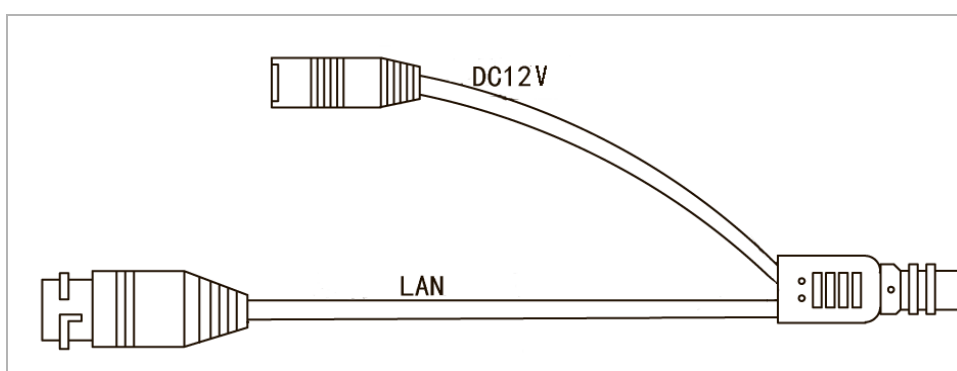


| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |

### 1.1.38 TRASSIR TR-D4B5v2 / TR-D4B5-noPoEv2



External connectors:



| Connector | Description                 |
|-----------|-----------------------------|
| LAN       | LAN connector.              |
| DC12V     | 12V power supply connector. |

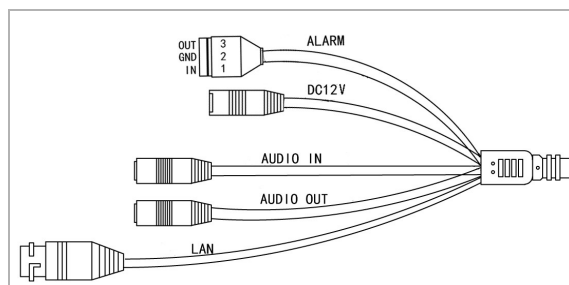
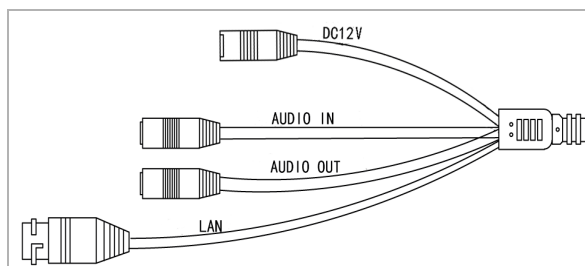
1.1.39 TRASSIR TR-D4121IR1v7 / TR-D4151IR1v7 / TR-D4251WDIR2 /  
TR-D4251WDIR2v2 / TR-D4321WDIR2 / TR-D4351WDIR2



**External connectors:**

TR-D4121IR1v7 / TR-D4151IR1v7 / TR-D4251WDIR2 /  
TR-D4251WDIR2v2

TR-D4321WDIR2 / TR-D4351WDIR2

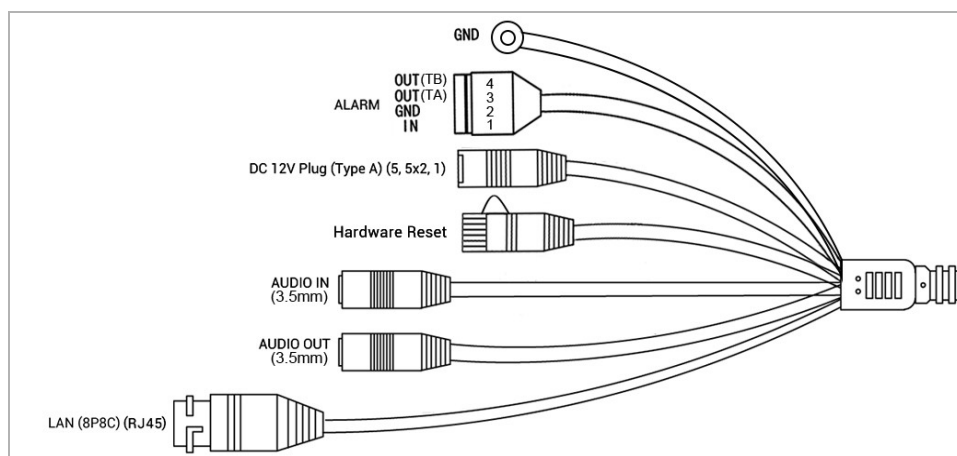


| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |
| ALARM     | Alarm inputs and outputs.    |

1.1.40 TRASSIR TR-D6124IR10v3 / TR-D6154IR10v3



External connectors:

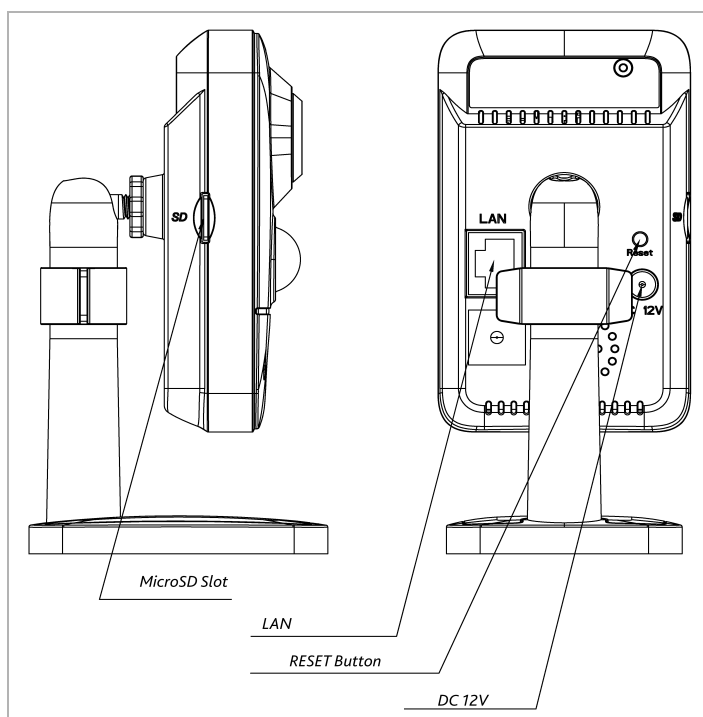


| Connector             | Description                        |
|-----------------------|------------------------------------|
| <b>DC12V</b>          | 12V power supply connector.        |
| <b>LAN</b>            | LAN connector.                     |
| <b>AUDIO OUT</b>      | Speaker connector.                 |
| <b>AUDIO IN</b>       | Active microphone connector.       |
| <b>ALARM</b>          | Alarm inputs and outputs.          |
| <b>Hardware Reset</b> | Hardware settings reset (see 2.6). |
| <b>GND</b>            | Ground connector.                  |

1.1.41 TRASSIR TR-D7121IR1W / TR-D7121IR1Wv2 / TR-D7121IR1Wv3



External connectors:

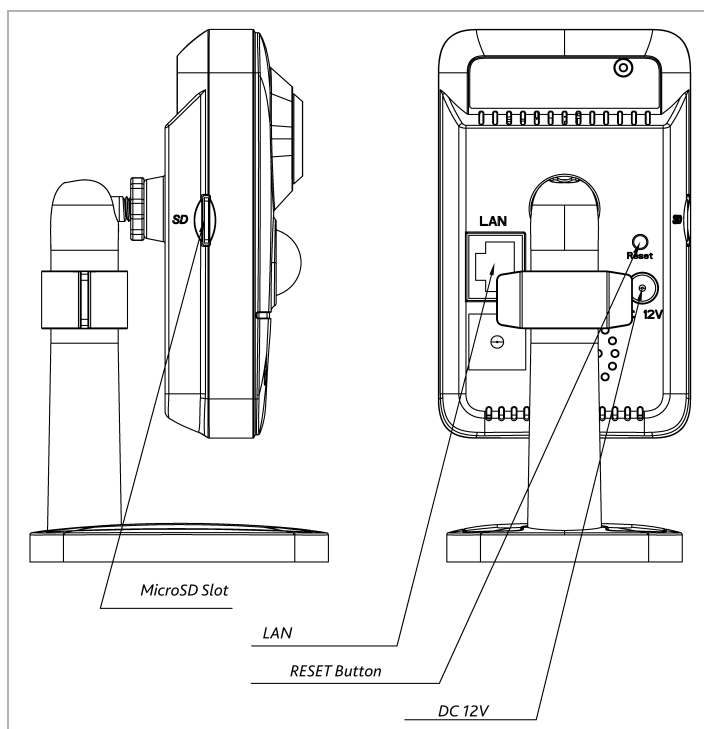


| Connector    | Description                                          |
|--------------|------------------------------------------------------|
| LAN          | LAN connector.                                       |
| DC 12V       | 12V DC power connector.                              |
| RESET button | Button to reset camera settings to factory defaults. |
| MicroSD Slot | Slot for microSD memory card.                        |

1.1.42 TRASSIR TR-D7121IR1v3 / TR-D7121IR1v4 / TR-D7121IR1v5 / TR-D7121IR1v6 / TR-D7121IR1v7 / TR-D7141IR1 / TR-D7151IR1 / TR-D7151IR1v7 / TR-D7251WDIR2Wv2 / TR-D7221WDIR2Wv2



External connectors:

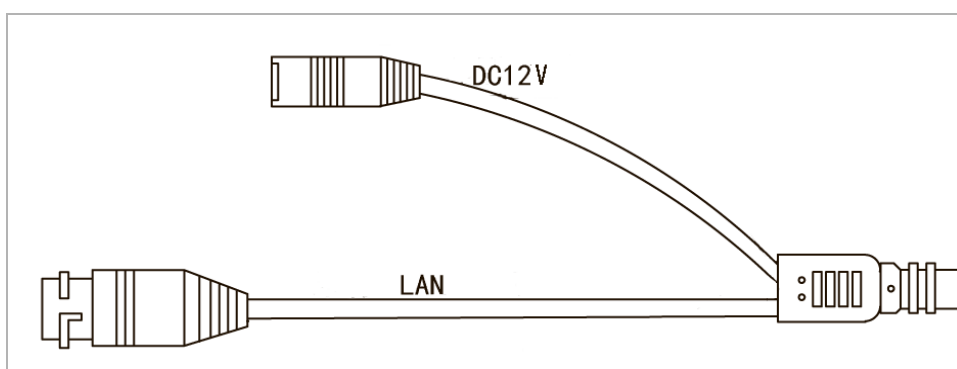


| Connector    | Description                                          |
|--------------|------------------------------------------------------|
| LAN          | LAN connector.                                       |
| DC 12V       | 12V DC power connector.                              |
| RESET button | Button to reset camera settings to factory defaults. |
| MicroSD Slot | Slot for microSD memory card.                        |

## 1.1.43 TRASSIR TR-D8121IR2W



External connectors:

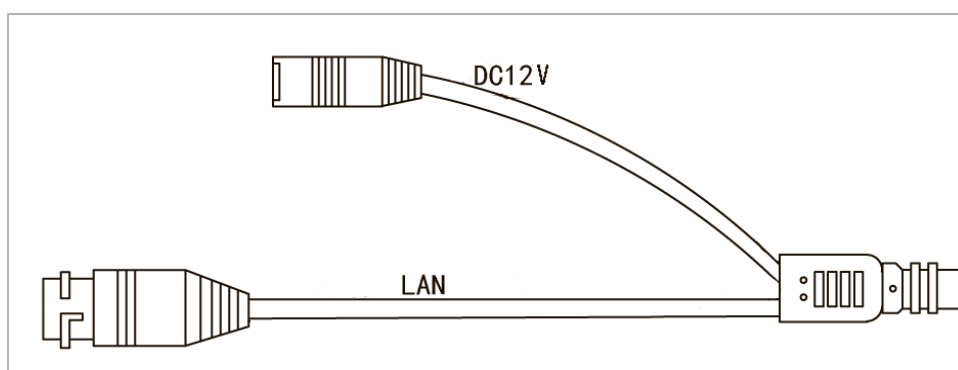


| Connector | Description                 |
|-----------|-----------------------------|
| RJ-45     | LAN connector.              |
| DC12V     | 12V power supply connector. |

1.1.44 TRASSIR TR-D8121R2Wv2 / TR-D8121R2Wv3



External connectors:



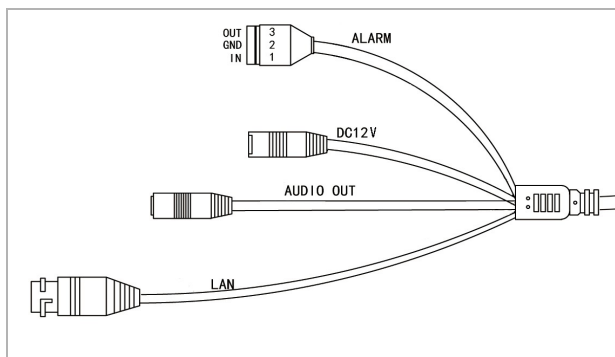
| Connector | Description                 |
|-----------|-----------------------------|
| RJ-45     | LAN connector.              |
| DC12V     | 12V power supply connector. |

1.1.45 TRASSIR TR-D8121IR2v6 / TR-D8221WDIR3/ TR-D8221WDIR3v2 /  
TR-D8122ZIR2v6 / TR-D8251WDIR3 / TR-D8251WDIR3v2 / TR-D8151IR2/  
TR-D8151IR2v2 / TR-D8152ZIR2 / TR-D8152ZIR2v2

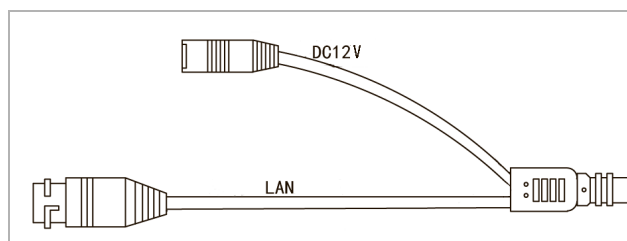


**External connectors:**

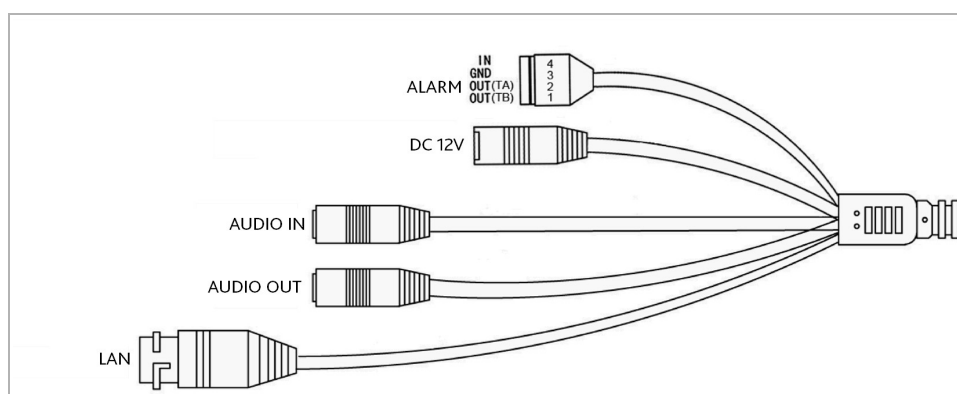
TR-D8221WDIR3 / TR-D8251WDIR3



TR-D8121IR2v6 / TR-D8122ZIR2v6 / TR-D8151IR2/  
TR-D8151IR2v2 / TR-D8152ZIR2 / TR-D8152ZIR2v2



TR-D8221WDIR3v2 / TR-D8251WDIR3v2



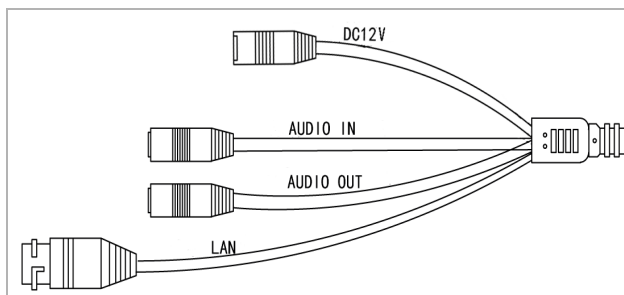
| Connector        | Description                  |
|------------------|------------------------------|
| <b>RJ-45</b>     | LAN connector                |
| <b>AUDIO OUT</b> | Speaker connector.           |
| <b>AUDIO IN</b>  | Active microphone connector. |
| <b>DC12V</b>     | 12V power supply connector.  |
| <b>Alarm I/O</b> | Alarm inputs and outputs.    |

1.1.46 TRASSIR TR-D8121CL2 / TR-D8151CL3v7 / TR-D8221WDCL3 /  
TR-D8251WDCL3 / TR-D8251WDDL3v3

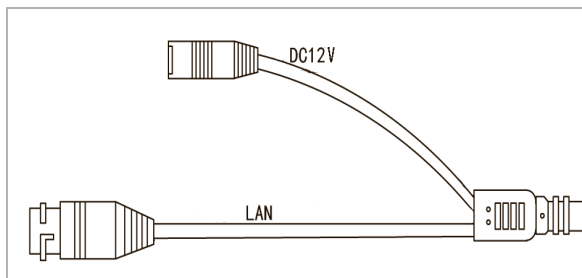


**External connectors:**

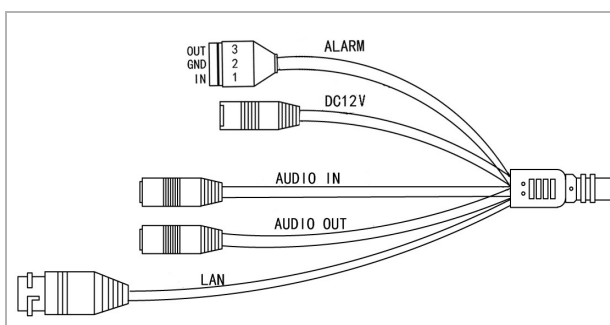
**TR-D8151CL3v7**



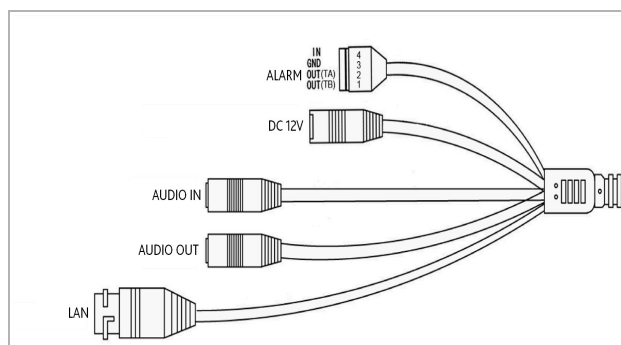
**TR-D8121CL2**



**TR-D8221WDCL3**



**TR-D8251WDCL3 / TR-D8251WDDL3v3**



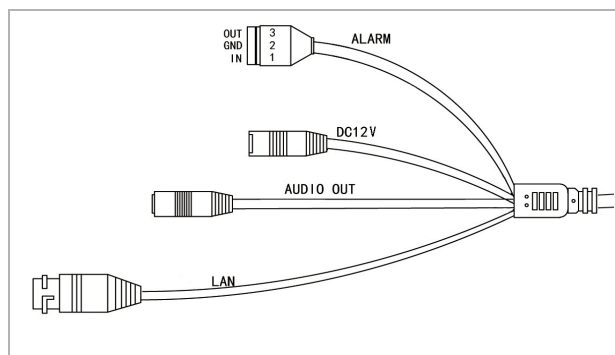
| Connector        | Description                  |
|------------------|------------------------------|
| <b>RJ-45</b>     | LAN connector.               |
| <b>AUDIO OUT</b> | Speaker connector.           |
| <b>AUDIO IN</b>  | Active microphone connector. |
| <b>DC12V</b>     | 12V power supply connector.  |
| <b>Alarm I/O</b> | Alarm inputs and outputs.    |

1.1.47 TRASSIR TR-D8121IR3v7 / TR-D8151IR3v7 / TR-D8221WDC /  
TR-D8221WDIR3v3 / TR-D8251WDC / TR-D8251WDIR3v3 / TR-D8321WDIR4 /  
TR-D8351WDIR4

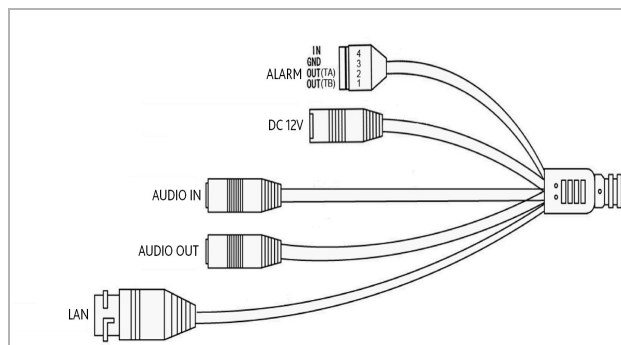


**External connectors:**

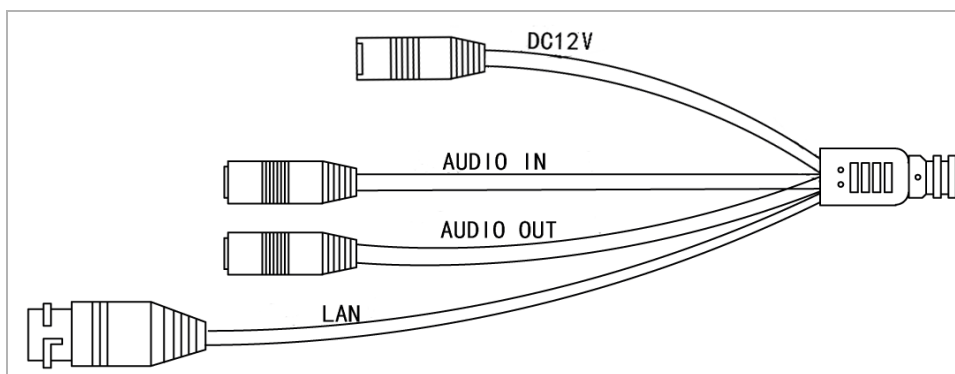
TR-D8221WDC



TR-D8221WDIR3v3 / TR-D8251WDC /  
TR-D8251WDIR3v3 / TR-D8321WDIR4 /  
TR-D8351WDIR4



TR-D8121IR3v7 / TR-D8151IR3v7

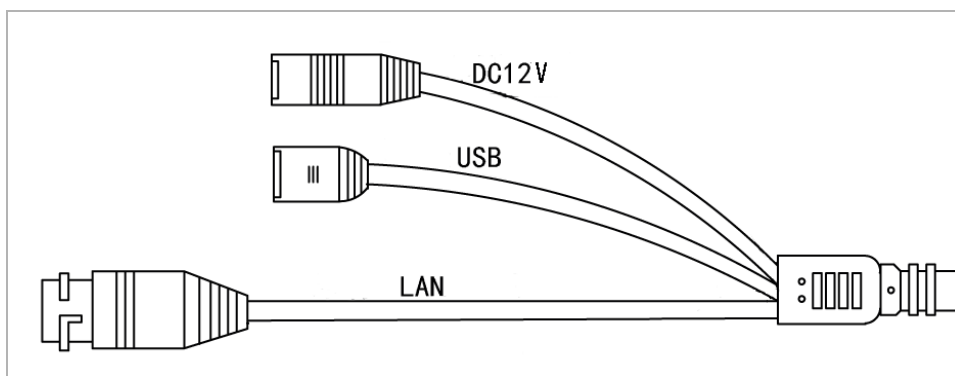


| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |
| Alarm I/O | Alarm inputs and outputs.    |

1.1.48 TRASSIR TR-D8123ZIR3



External connectors:

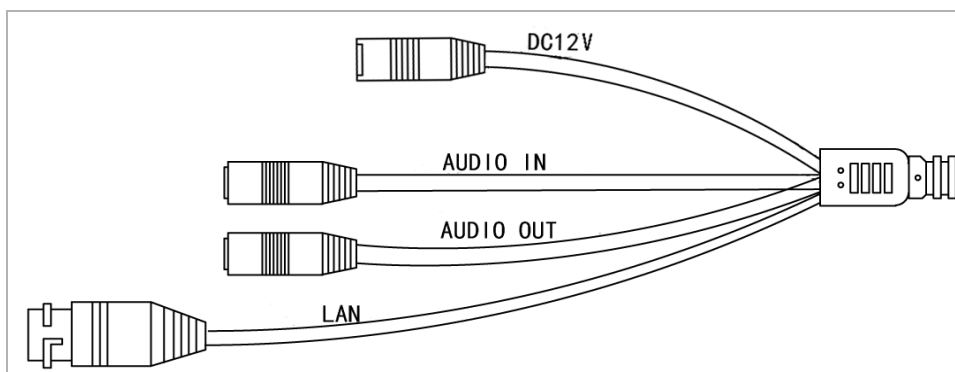


| Connector    | Description                 |
|--------------|-----------------------------|
| <b>DC12V</b> | 12V power supply connector. |
| <b>LAN</b>   | LAN connector.              |
| <b>USB</b>   | USB connector for USBHDD.   |

1.1.49 TRASSIR TR-D8123ZIR4v7 / TR-D8153ZIR4v7



External connectors:



| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |

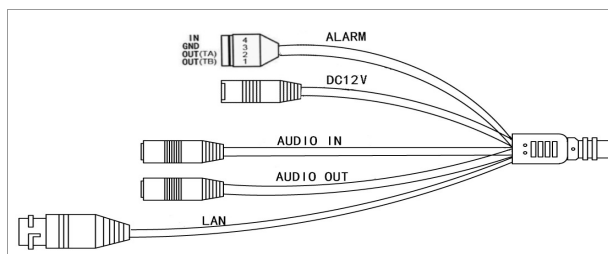
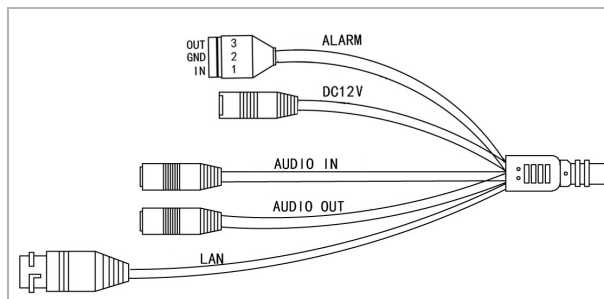
1.1.50 TRASSIR TR-D9141IR2 / TR-D9161IR2 / TR-D9151IR2 / TR-D9151IR2v2 /  
TR-D9251WDIR3 / TR-D9251WDIR3v2



**External connectors:**

TR-D9151IR2 / TR-D9151IR2v2 / TR-D9251WDIR3 /  
TR-D9141IR2 / TR-D9161IR2

TR-D9251WDIR3v2



| Connector | Description                  |
|-----------|------------------------------|
| DC12V     | 12V power supply connector.  |
| LAN       | LAN connector.               |
| AUDIO OUT | Speaker connector.           |
| AUDIO IN  | Active microphone connector. |
| ALARM     | Alarm inputs and outputs.    |

## 1.2 Safety instructions

Please, read this manual before connecting and setting up your IP camera.

Check the conformity of the input voltage with the passport details and make sure that the power source is operating properly.

Use network filters or UPS to increase the reliability of the IP-camera, protect against voltage drops, and ensure uninterrupted power supply.

Do not expose the IP camera to high pressure, shaking, mechanical shock, or strong electromagnetic radiation. Avoid installing the equipment on surfaces subject to vibrations, as this may damage it. When transporting, the IP camera must be placed in its original packaging or packaging the device safety.

Do not touch the sensor module. If necessary, use a clean cloth with a small amount of ethanol. The operation of the sensor may be disrupted by the laser ray, so when using any laser equipment, make sure that the rays do not hit the surface of the matrix. Do not aim the camera at the sun or very bright areas. This can lead to loss of image clarity, and can significantly shorten the life of the sensor module.

Do not expose the camera to extremely high or low temperatures (you can see the specification in the device datasheet).

Do not use the device in dirty rooms with high humidity, as this may result in a fire or an electrical short circuit. Free air exchange is required for proper camera operation.

In cases where the IP camera installation requires opening the housing, the silica gel must be replaced with a spare one from the kit.

Do not expose the equipment to direct sunlight. Do not place it near heat sources such as a stove, heater or radiator (it may result in fire).

The IP camera mounted on a wall or ceiling must be securely fixed.

If case of IP camera malfunction, contact your supplier or the nearest service center. Do not attempt to repair the camera by yourself. (The manufacturer declines the warranty obligations for damages resulting from unauthorized repairs or maintenance.).

## 1.3 Warranty obligations

The warranty period for cameras is 5 years.

The warranty obligations are valid from the date of sale of the IP camera to the final consumer and throughout the entire warranty period

If the IP camera malfunctions during the warranty period, you are entitled to request a free repair, except for non-warranty cases, in DSSL Service Center.

The warranty is void if the cause of the malfunction of the IP camera is:

- ◆ intentional corruption;
- ◆ fire, flood, or any other natural disaster;
- ◆ power outages;
- ◆ violation of technical requirements for placement, connection and operation;
- ◆ mechanical damages.

## CHAPTER 2. CONNECTING TRASSIR IP CAMERA

### 2.1 System requirements

To start working with the TRASSIR IP camera, you need a PC connected to the local network:

- ◆ on Windows, Mac OS, Linux etc.;
- ◆ having Google Chrome, Mozilla Firefox, Safari or any other web browser installed.

### 2.2 Local network connection

Depending on the model, you can choose one of the following options to connect the IP camera to the local network:

- ◆ using a network cable (you can check the description on the connectors in section 1.1);
- ◆ using a network cable to any network equipment with the support of PoE technology;
- ◆ to WiFi wireless network.

#### NOTE.

It is not recommended to use switches, injectors and other PoE power supplies that use the Passive PoE standard to power up the cameras.

## 2.3 IP address configuration

### NOTE.

In order to connect to IP camera, you PC should be in the same local network with the camera. You can read a detailed description of the PC settings sequence in Supplement A.

The following network settings should be configured on the IP camera by default:

- ◆ IP address: **192.168.1.188**;
- ◆ Subnet mask: **255.255.0.0**;
- ◆ Gateway: **192.168.1.1**;
- ◆ HTTP port: **80**;
- ◆ user name: **admin**;
- ◆ password: **admin**.

The example of the network settings:

- ◆ IP address: **192.168.1.10**;
- ◆ Subnet mask: **255.255.0.0**.

Start the web browser and try to connect to the IP camera. To do this, type in **http://192.168.1.188** into the address bar and press **Enter**.

Enter user name and password to access web interface (see section. 3.1), after that change the IP camera network settings (see section 3.4.3.1).

### NOTE.

If you failed to get access to the IP camera, check you firewall settings and try again.

If the IP address of the camera differs from the default settings, then use the **IPManager** utility (see section Searching for IP-camera using TRASSIR IPManager app).

## 2.4 Connecting to the IP camera via the Internet

There are several options to access IP camera via the Internet:

- ◆ The Internet service provider provides an actual **static** IP address.

In this case, the provider grants the subscriber a list of network settings: **IP address**, **subnet mask**, **gateway** and **DNS server IP address**, or **PPPoE** connection details, which should be specified in the camera settings. Using such a network organization, it is impossible to use an external IP address to connect to several network devices at once, that is, it will be possible to connect to only one IP camera at a time

### NOTE.

A static camera IP address and other required parameters are specified in the network settings (see 3.4.3.1).

See PPPoE settings description in 3.4.3.4.

- ◆ The Internet service provider allocates an actual external **static** IP address, which is used to connect to an office or home network.

In this case, to organize the local network, a special device is used - a router (or a NAT server). To access the IP camera from the Internet, you should configure forwarding of the incoming connections from the router (NAT server) to the internal local addresses of IP cameras

### NOTE.

See detailed router settings description in «SUPPLEMENT C. Router settings».

- ◆ The Internet service provider allocates an actual external **dynamic** IP address. That is upon connection to the Internet the IP address will be different each time. This variant is very common when working through 3G, GPRS or ADSL connection. In this case you should use DDNS server options.

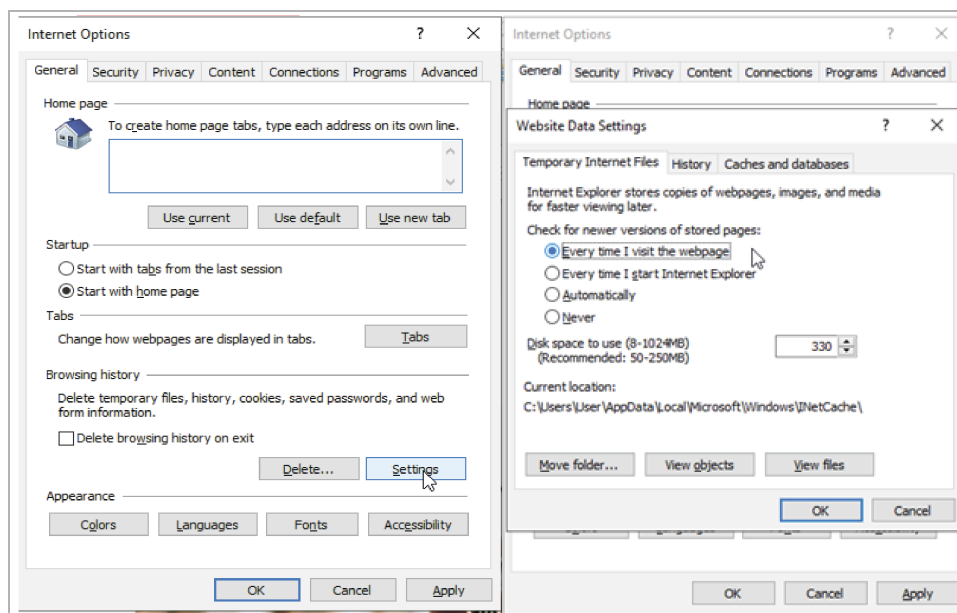
### NOTE.

See description of DDNS server in IP camera in 3.4.3.1.

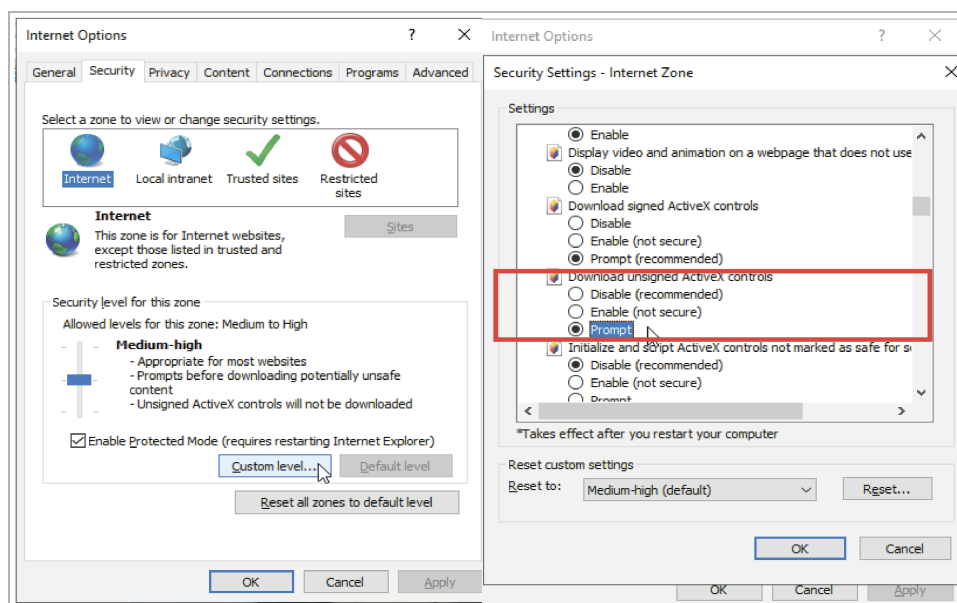
### 2.5 Configuring ActiveX for Internet Explorer

If you use the Internet Explorer browser to get image from the IP camera, check ActiveX settings before gaining access to the IP camera web interface (see section 3.1).

Open the **General** tab of the Internet Explorer options. Press **Settings** in the Browsing History settings group. Select **Everytime I visit the webpage** in **Check for newer versions of the stored page** parameters group in **Website data settings** window.



Open the **Security** tab, select the **Internet** area and press the **Custom level...** button. Select **Prompt** in **Download unsigned ActiveX components**.



Press **OK** in all opened windows to save the changes.

### WARNING!

In case the image is absent in the preview window (see section 3.2) of the web interface (see section 3.1) it means ActiveX plugin is not installed. Internet Explorer will offer to download and install ActiveX plugin.

You should run the browser as Administrator to save some settings of the IP camera web interface.

## 2.6 Reset IP camera settings

There are three ways to reset IP camera settings:

1. Software reset to default values (see section 3.4.2.3).
2. Software reset to factory settings (see section 3.4.2.3).
3. Hardware reset using RESET button.

### **WARNING!**

**Software reset to the factory settings and hardware reset set factory default settings on the camera, including IP camera, login and password.**

**It is recommended to use these methods in case of emergency, if the software reset does not help.**

You can perform the hardware reset using RESET button the following:

1. Power the camera on.
2. Press the RESET button (see 1.1) and hold for 10 sec.
3. Release the button. The camera will restart.
4. Try to connect to the IP camera (see 2.3).

## CHAPTER 3. TRASSIR IP CAMERA CONFIGURATION

### 3.1 Gaining access to IP camera web interface.

In case you know IP camera IP address and port, then start Internet Explorer and enter **http://<ip>:<port>** into the address bar (where **<ip>** is a camera IP address and **<port>** is a value of http port). After that press **Enter**.

#### NOTE.

If the **<port>** is **80**, you can omit it. Just enter **http://<ip>** into the address bar. E.g., **http://192.168.1.188**.

#### NOTE.

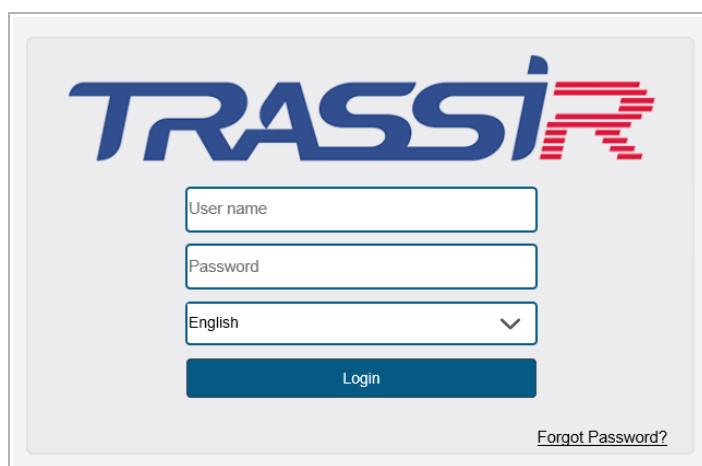
You can see the description of the IP camera network settings in 3.4.3.1.

Default values:

IP address: **192.168.1.188**

Port: **80**

In case of successful connection you will see a user authorization window:



Enter user name and password. You can also change the interface language. After that press **Login**.

### NOTE.

The default setting is described in 3.4.7.1.

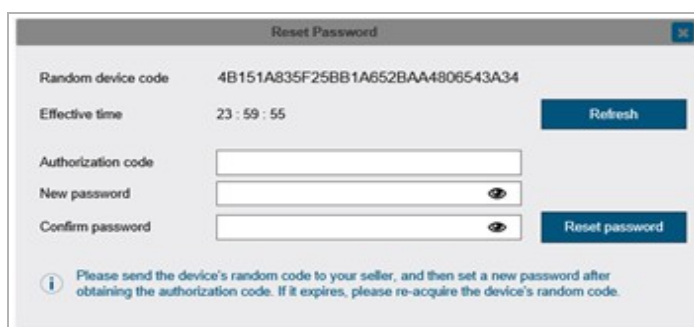
Default values:

User name: **admin**

Password: **admin**

### NOTE.

In order to reset your password press **Reset password** in the authorization menu. You will see the random device code in the opened window. The Random device code will be valid for 24 hours, it is not allowed to reboot or turn the device off within this time period.



After that contact our technical support via [reset@trassir.com](mailto:reset@trassir.com) and provide the following data in your request:

1. Full name.
2. Contact telephone number.
3. You company name.
4. Random device code.
5. The photo of the sticker on camera.

As a reply you will receive the authorization code. Enter this code into the corresponding field in the authorization window and create a new password.

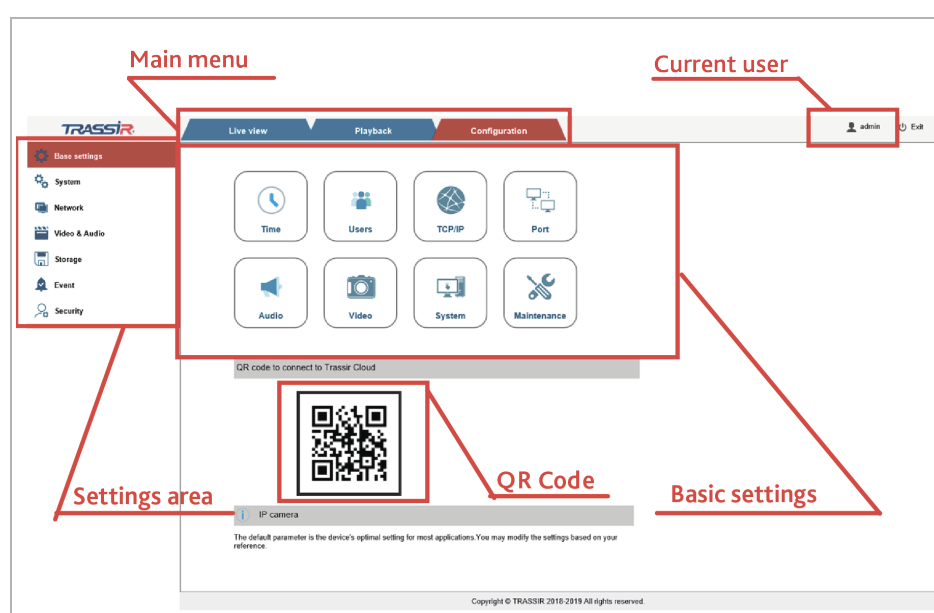
**WARNING!**

We recommend to change the administrator password (see 3.4.7.1) and IP address (see 3.4.3.1) upon the first connection to the IP camera web interface.

**WARNING!**

If there is no image from camera check your ActiveX settings in Internet Explorer (see 2.5)

In case of successful authorization in Internet Explorer you will see the settings menu.

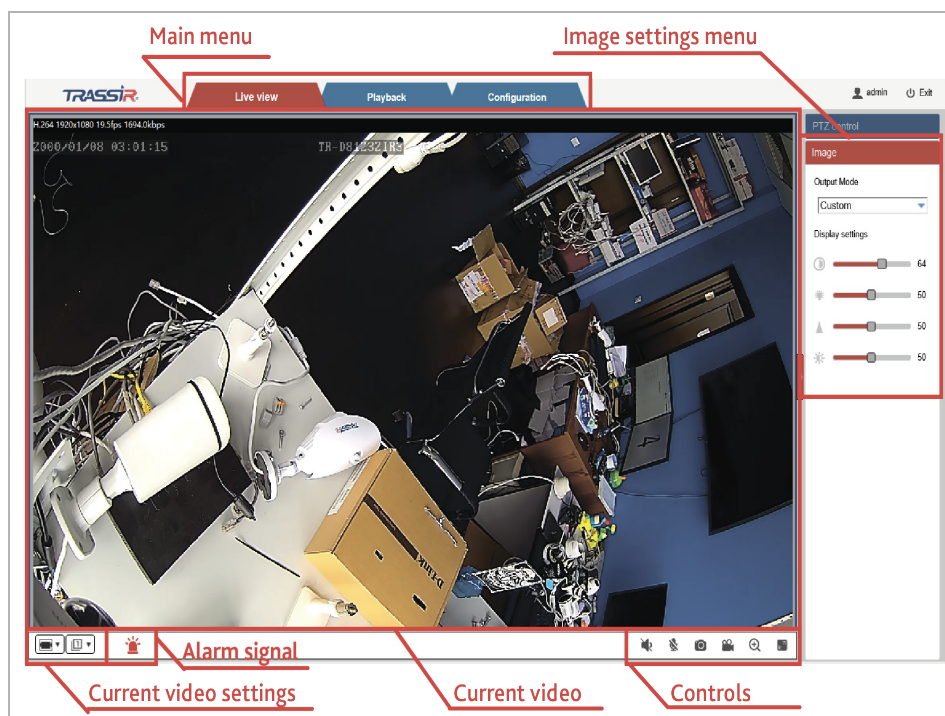


The menu consists of the following areas:

| Setting               | Description                                                                                                                                                                  |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Basic settings</b> | IP camera main settings buttons.                                                                                                                                             |
| <b>Current user</b>   | Current authorized user. Read more about user settings in section 3.4.7.1.                                                                                                   |
| <b>Main menu</b>      | IP camera main menu.                                                                                                                                                         |
| <b>Settings area</b>  | Click the tab to open.<br>This area lets you perform basic actions to configure your camera.                                                                                 |
| <b>QR code</b>        | QR code for TRASSIR Cloud connection via TRASSIR Client mobile app. Read more about TRASSIR Cloud connection in section 3.4.3.13 and in <a href="#">TRASSIR User guide</a> . |

## 3.2 Preview menu

This menu lets you check and configure parameters of the camera video. Press **Preview** to open the menu.



| Setting                       | Description                                                                                          |
|-------------------------------|------------------------------------------------------------------------------------------------------|
| <b>Menu menu</b>              | Main IP camera menu                                                                                  |
| <b>Image settings menu</b>    | Context menu to manage image and video settings (see 3.2.1).                                         |
| <b>Current video settings</b> | Parameters of the video displayed in current window (see 3.4.4.2).                                   |
| <b>Current video</b>          | Real-time video image transmitted by the camera.                                                     |
| <b>Alarm signal</b>           | Alarm signal. Flashes in case of alarm event or motion detection (see sections 3.4.6.1 and 3.4.6.2). |

| Setting  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Controls | IP camera video controls: <ul style="list-style-type: none"><li> Sound on/off</li><li> Enable two-way communication</li><li> Save snapshot</li><li> Record start/stop</li><li> Zoom in</li><li> Fullscreen</li></ul> |

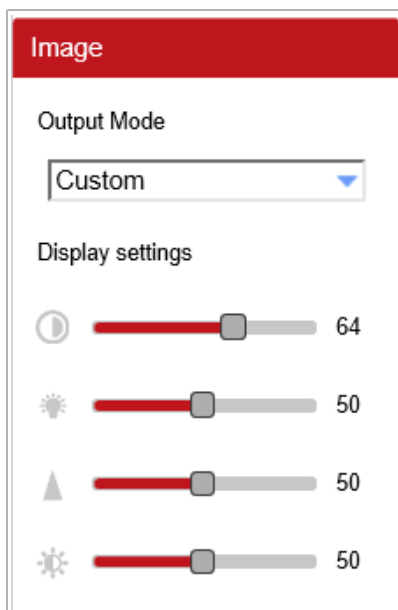
**NOTE.**

Image settings and controls menu are available only in Internet Explorer.

Use **Image settings** to customize the image in any other browser (see section 3.4.4.5).

### 3.2.1 Image settings menu

Press  in the right part of the **Preview** menu.



It lets you select and set up the following image settings modes:

- ◆ **Standard;**
- ◆ **Bright;**
- ◆ **Vivid;**
- ◆ **Gentle;**
- ◆ **Custom.**

You can configure the following settings manually when selecting the **Custom** mode:

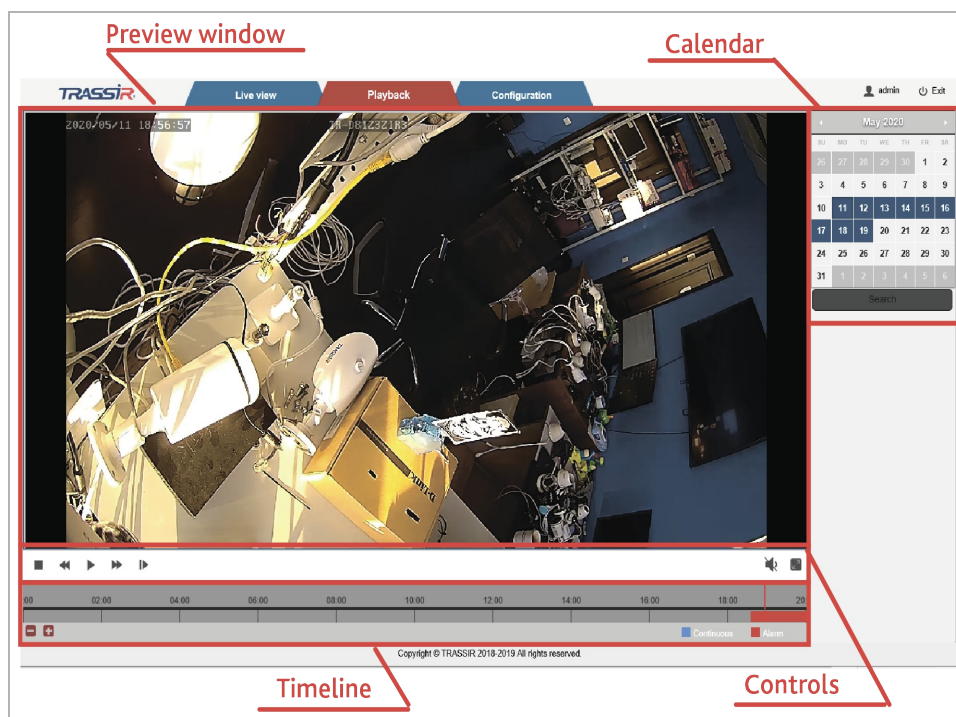
- ◆ **Saturation** — Saturation of the image. The higher the value is, the more saturated is the transmitted image.
- ◆ **Brightness** — Brightness of the image. The higher the value is, the brighter is the image.
- ◆ **Sharpness** — Image sharpness. The higher the value is, the sharper is the transmitted image.
- ◆ **Contrast** — Image contrast. The higher the value is, the sharper is the transmitted image.

Read more about image settings in section 3.4.4.5.

### 3.3 Archive menu

This menu lets you recorded video archive.

Press **Playback** to open the menu.

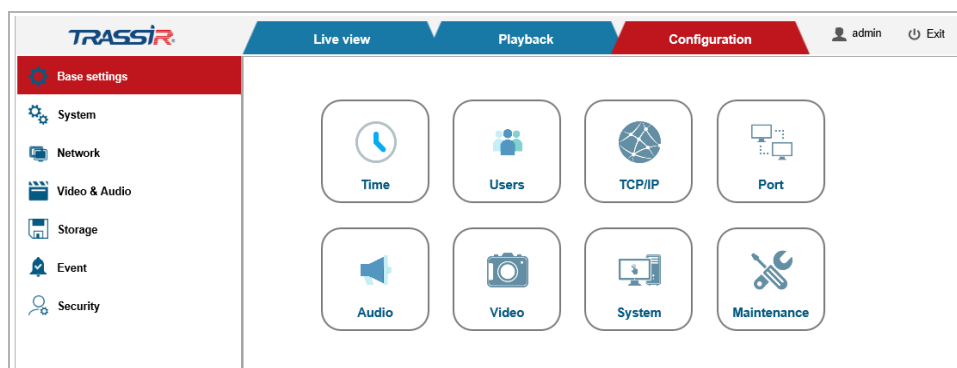


| Setting               | Description                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Preview window</b> | Lets you view your video.                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Calendar</b>       | The highlighted dates in the calendar indicate that these days the video was recorded to the archive. Select the required date and press <b>Search</b> . The fragments with the recorded videos will be displayed on the timescale.                                                                                                                                                                    |
| <b>Timeline</b>       | <p>The red color on a timeline indicates the alarm events record (see 3.4.6), the blue color indicates permanent record to the archive. Read more about archive recording setting in section 3.4.5.</p> <p>Hold down the left mouse button to move the timeline.</p> <p>Press  to zoom in and out the timeline.</p> |

| Setting         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Controls</b> | <p>Video playback controls:</p> <div>  Start playback         </div> <div>  Pause playback         </div> <div>  Stop playback         </div> <div>  Proceed to the next recorded fragment         </div> <div>  Back to the previous fragment         </div> <div>  Frame by frame playback         </div> <div>  Fullscreen         </div> <div>  Sound on/off         </div> |

## 3.4 Configuration menu

### 3.4.1 Base settings menu



Press **Configuration** to open the menu. You will see the **Base Settings** section.

This menu contains shortcuts to the main IP camera parameters and features:

- ◆ **Time** —date and time settings on IP camera (see 3.4.2.2);
- ◆ **Users** —configure IP camera access parameters (see 3.4.7.1);
- ◆ **TCP/IP** —configure IP camera network interface parameters (see 3.4.3.1);
- ◆ **Port** —select IP camera network ports (see 3.4.3.2);
- ◆ **Audio** —configure audio stream (see 3.4.4.1);
- ◆ **Video Stream** —configure video stream (see 3.4.4.2);
- ◆ **System** —check IP camera system status (see 3.4.2.4);
- ◆ **Maintenance** —perform IP camera system maintenance (see 3.4.2.6).

### 3.4.2 "System" menu

Click **System** to open the menu.

The menu consists of sections which allow to:

- ◆ **General** —change the device name (see section 3.4.2.6);
- ◆ **Date & Time** —configure date and time on IP camera (see section 3.4.2.2);
- ◆ **Auto Maintain** —configure automatic task management on IP camera (see section 3.4.2.3);
- ◆ **Upgrade** —upgrade IP camera hardware (see section 3.4.2.4);
- ◆ **Information** —check system information (see section 3.4.2.6);
- ◆ **Log** —check and save system log (see section 3.4.2.7).

## 3.4.2.1 "General" menu

Open **General** section in the **System** menu.

The screenshot displays the configuration interface for a TRASSIR IP camera. On the left, a sidebar menu lists various settings categories. The 'System' category is expanded, and the 'General' sub-menu is selected. The main panel shows the 'General' settings, with a 'Device name' field containing the text 'TR-D8123ZIR3'. At the bottom of this panel are 'Refresh' and 'Save' buttons.

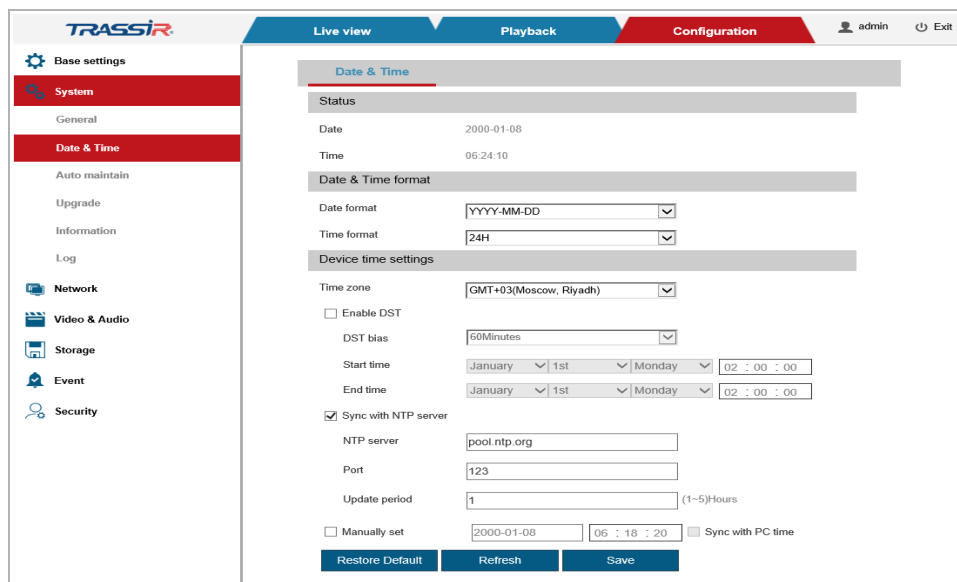
You can specify the name of the device which will be displayed when it is detected in local network in the **Device name** field.

Press **Refresh** to return to the current settings.

Press **Save** to save the changes.

### 3.4.2.2 "Date & time" menu

Open the **Date & Time** tab in the **System** settings menu to set up date and time on IP camera.



The screenshot shows the TRASSIR web interface with the 'Configuration' tab selected. The left sidebar lists various settings categories, with 'System' expanded and 'Date & Time' selected. The main content area is titled 'Date & Time' and contains several sections:

- Status:** Displays the current date (2000-01-08) and time (06:24:10).
- Date & Time format:** Allows configuration of the date format (YYYY-MM-DD) and time format (24h).
- Device time settings:** Includes options for time zone (GMT+03(Moscow, Riyadh)), enabling DST, DST bias (60Minutes), start time, end time, and NTP server settings (pool.ntp.org, port 123, update period 1 hour).
- Manually set:** A section for manually setting the date and time, with a checkbox for 'Sync with PC time'.

At the bottom of the configuration area are buttons for 'Restore Default', 'Refresh', and 'Save'.

The **Status** block displays date and time set on IP camera.

The **Date & Time format** block lets you configure IP camera date and time format.

Configure values in the **Time zone** setting in **Device Time Settings** block to set up the time zone of the IP camera.

The IP camera also features daylight saving time. In order to activate it, set **Enable DST** flag.

#### NOTE.

Daylight saving time is not used in Russian Federation.

There are three ways to set up date and time on IP camera:

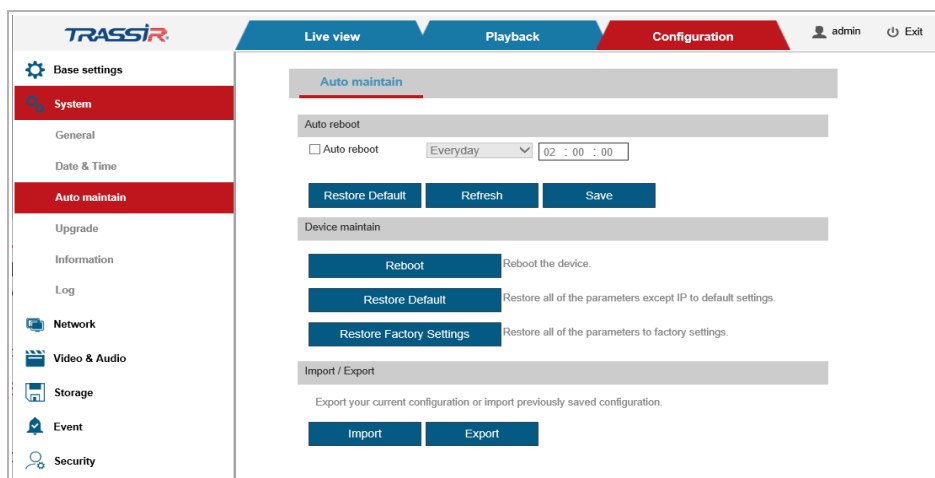
- ◆ **Sync with NTP Server Time**  
Specify data to connect to NTP server in **NTP Server** and **Port** fields. Select the time period, in hours, after which the time will synchronize on IP camera in the **Update period** field.
- ◆ **Manual Set**  
Enter current date and time into the **Date** and **Time** fields.
- ◆ **Sync with PC Time**  
The data from the PC on which the IP camera is configured will be downloaded into the **Date and Time** fields.

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

### 3.4.2.3 "Auto maintain" menu

Open the **Auto maintain** section in the **System** settings menu.



The **Auto reboot** you can configure and schedule the device reboot. To do this, check the corresponding flag and select the day in the drop down list and the time in the adjacent field when the device will be rebooted.

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

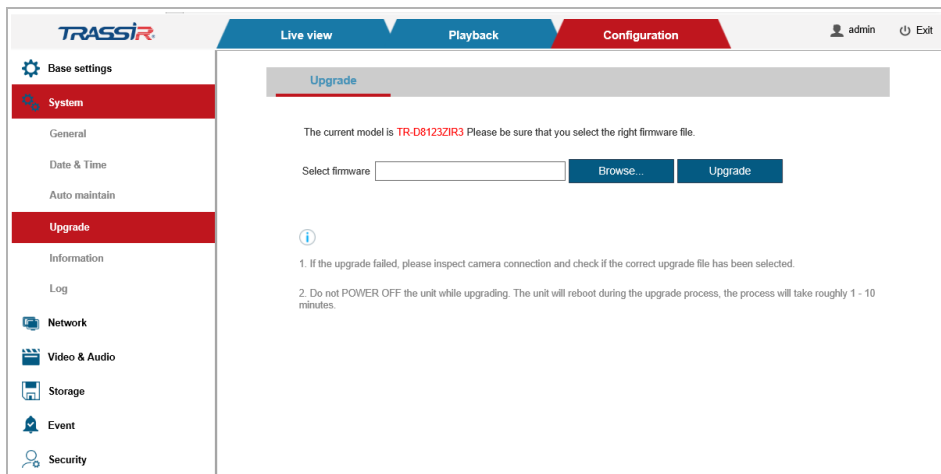
Press the corresponding button in the **Device maintain** block to:

- ◆ **Reboot** —reboot IP camera;
- ◆ **Restore Default** —reset all IP camera settings, except for network to default values (see 3.4.3.1);
- ◆ **Restore Factory Settings** —reset all IP camera settings to factory default, including network settings.

Use corresponding buttons in **Import / Export** block to save current settings configuration to a file or upload a previously saved configuration.

## 3.4.2.4 "Upgrade" menu

In order to update the IP camera firmware open the **Upgrade** section in the **System** settings menu.



Press the **Browse** button in **Upgrade** block and locate the firmware file. Press **Upgrade** to start uploading the file.

**WARNING!**

Using unofficial software to update the camera may result in a denial of warranty service.

**WARNING!**

Update the camera software only if absolutely necessary.

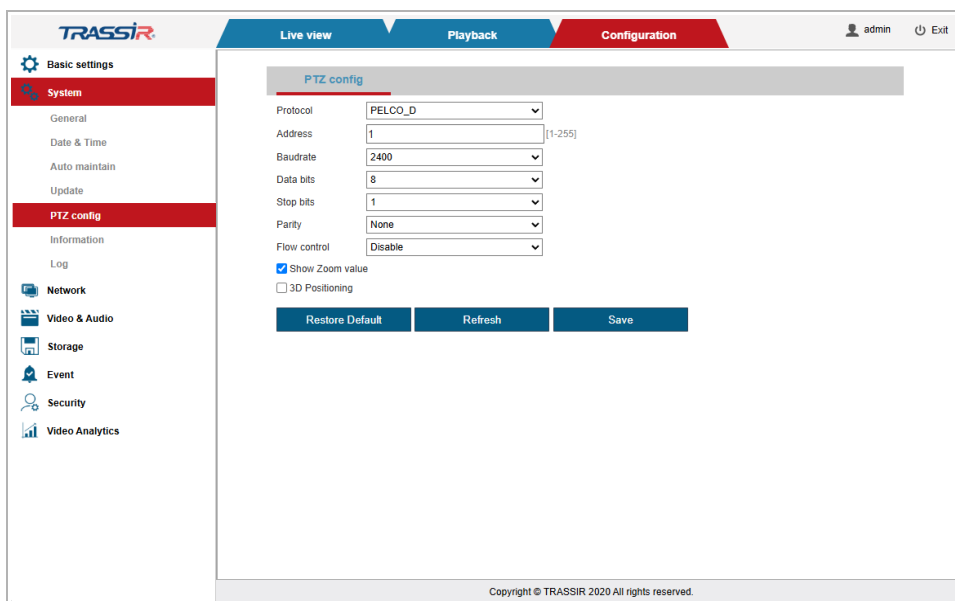
**WARNING!**

The update may take several minutes.

Do not turn off the power or reboot the device during the update process.

### 3.4.2.5 "PTZ" menu

In order to setup PTZ of the IP camera open the **PTZ** in the **System** settings menu.



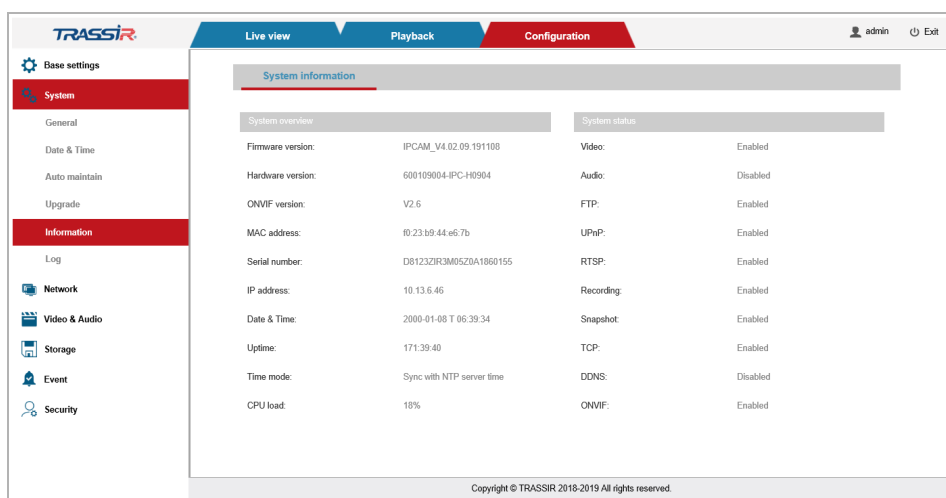
- ◆ **Protocol:** PTZ control protocol.
- ◆ **Address:** Camera ID on the network. Each PTZ device must have a unique ID to connect to one control device, such as a DVR or controller.
- ◆ **Baudrate:** Sets the data transfer rate between the camera and the control device using the PELCO protocol.
- ◆ **Data bits:** The number of data bits in one information packet for the PELCO protocol.
- ◆ **Stop bits:** The number of stop bits that signal the end of the information packet transmission.
- ◆ **Parity:** Sets the parity bit in PELCO serial protocols.
- ◆ **Flow control:** Additional flow control.

Check **Show Zoom value** to display the current zoom level of the camera.

Check **3D Positioning** to specify the location for camera rotation on the video stream via the WEB interface (**Live view** tab).

## 3.4.2.6 "Information" menu

Open IP camera maintenance menu on **Information** tab in the **System** settings menu.



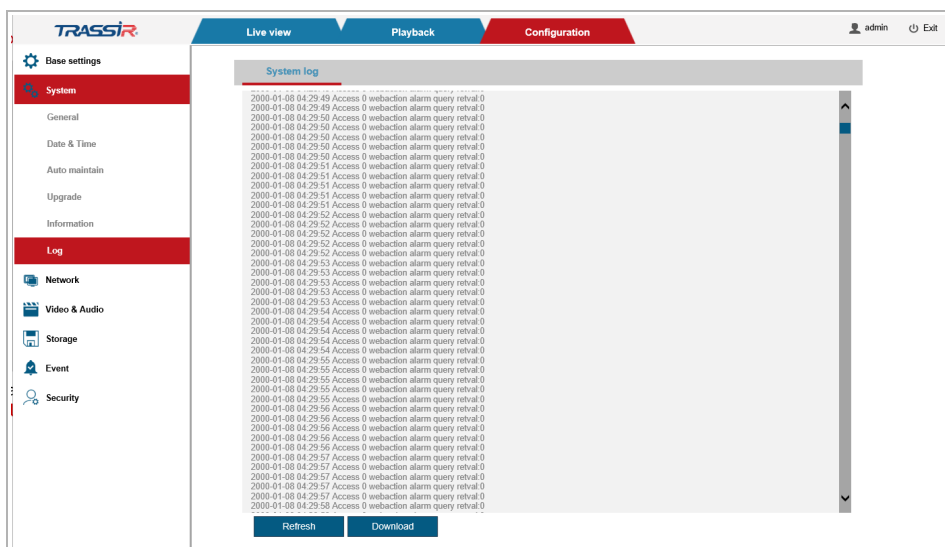
The **System overview** block provides the following information:

| Setting                 | Description                                                             |
|-------------------------|-------------------------------------------------------------------------|
| <b>Firmware version</b> | IP camera firmware version                                              |
| <b>Hardware version</b> | IP camera hardware version                                              |
| <b>Onvif version</b>    | ONVIF protocol version                                                  |
| <b>MAC address</b>      | IP camera mac address                                                   |
| <b>Serial Number</b>    | IP camera serial number                                                 |
| <b>IP address</b>       | Device IP address                                                       |
| <b>Date &amp; Time</b>  | Date and time set on device                                             |
| <b>Uptime</b>           | Duration of the last continuous authorization of the current user       |
| <b>Time mode</b>        | The time synchronization method selected on the IP camera (see 3.4.2.2) |
| <b>CPU load</b>         | CPU load level                                                          |

The **System status** block contains info on the current status of some IP camera functions.

### 3.4.2.7 "Log" menu

The **Log** section of the **System** settings menu contains the system log.



You can download the system log in **.txt** or **.html** formats, if necessary. To do this, press **Download**, specify the name and the required file format and press **Save**.

### 3.4.3 "Network" menu

Press **Network** to open the menu.

The menu consists of the following sections which allow to:

- ◆ **TCP/IP** —check and configure camera network interface parameters (see section 3.4.3.1);
- ◆ **Port** —select network ports used by IP camera (see section 3.4.3.2);
- ◆ **WIFI** —configure IP camera wireless network connection parameters (see section 3.4.3.3);
- ◆ **PPPoE** — configure connection with IP camera on PPPoE protocol (see section 3.4.3.4);
- ◆ **SMTP** —configure parameters for sending IP messages by email (see section 3.4.3.5);
- ◆ **UPnP** —configure UpnP service parameters and IP camera network port forwarding (see section 3.4.3.6);
- ◆ **DDNS** —configure connection to DDNS server ( see section 3.4.3.7);
- ◆ **RTSP** —configure RTSP data transfer (see section 3.4.3.8);
- ◆ **RTMP** — configure RTMP parameters (see section 3.4.3.9);
- ◆ **VoIP** — configure VoIP data transfer settings (see section 3.4.3.10);
- ◆ **SNMP** — configure camera management via SNMP(see section 3.4.3.11);
- ◆ **IEEE 802.1x** - (see section 3.4.3.12);
- ◆ **Trassir Cloud** —configure camera connection to [TRASSIR Cloud](#) cloud service (see section 3.4.3.13).
- ◆ **HTTPS** —configure data transfer via HTTPS for secure communication (see section 3.4.3.14).

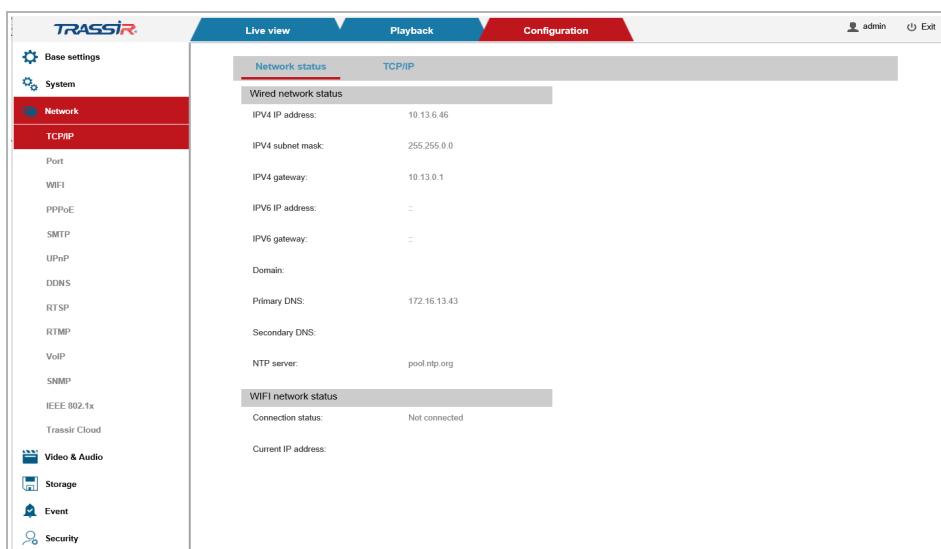
### 3.4.3.1 "TCP/IP" menu

The menu consists of the additional tabs which allow to:

- ◆ **Network Status** — check statuses of IP camera current network interfaces (see 3.4.3.1.1);
- ◆ **TCP/IP** — configure parameters of the network interfaces (see 3.4.3.1.2).

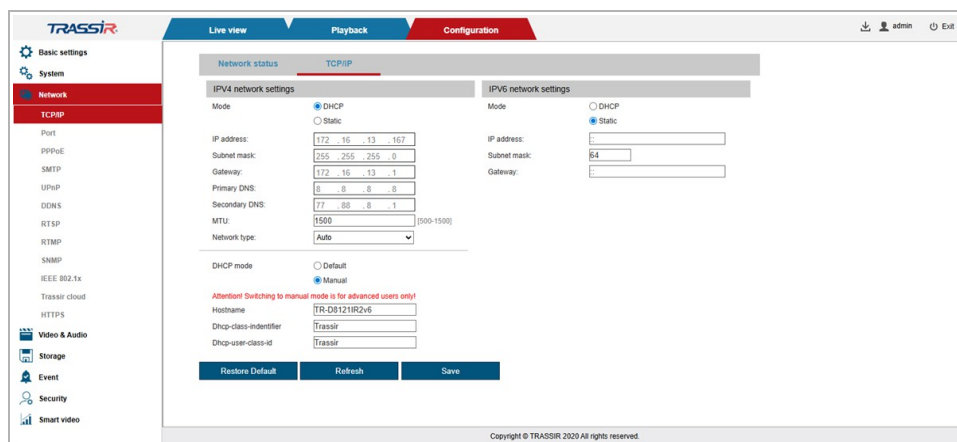
#### 3.4.3.1.1 "Network status" tab

Open the **Network status** tab to check current status of the IP camera network interfaces.



## 3.4.3.1.2 "TCP/IP" tab

Open **TCP/IP** tab in the **Network** settings menu to change current network settings.



Before starting the configuration, select which version of the protocol will be configured.: **IPv4** or **IPv6**.

| Setting              | Description                                                                                                                                                                                                                                                                                              |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Mode</b>          | Select network interface configuration type: <ul style="list-style-type: none"> <li>◆ <b>DHCP</b> —Configure network interface using DHCP server;</li> <li>◆ <b>Use Static IP</b> — Configure network interface manually.</li> </ul> Other parameters are specified for the selected configuration type. |
| <b>IP address</b>    | The IP address that will be used when accessing the IP camera.                                                                                                                                                                                                                                           |
| <b>Subnet mask</b>   | Mask of the subnet to which the IP camera is connected.                                                                                                                                                                                                                                                  |
| <b>Gateway</b>       | The IP address of the proxy server if a gateway is used to connect to another network (for example, the Internet).                                                                                                                                                                                       |
| <b>Primary DNS</b>   | Main DNS server address.                                                                                                                                                                                                                                                                                 |
| <b>Secondary DNS</b> | Alternate DNS server IP address.                                                                                                                                                                                                                                                                         |
| <b>MTU</b>           | Network card value. The default value is <b>1500</b> .                                                                                                                                                                                                                                                   |
| <b>Network type</b>  | Network card speed value.                                                                                                                                                                                                                                                                                |
| <b>DHCP mode</b>     | Select the DHCP mode: <b>Default</b> or <b>Manual</b> . For <b>Manual</b> mode, enter the parameters <b>Hostname</b> , <b>Dhcp-class-identifier</b> , <b>Dhcp-user-class-id</b> .                                                                                                                        |

**WARNING!**

We strongly recommend to change the camera IP address on the first connection to the IP camera web interface.

### WARNING!

Be cautious when using a DHCP server to configure IP camera network settings. Since the DHCP server assigns the camera the first free IP address.

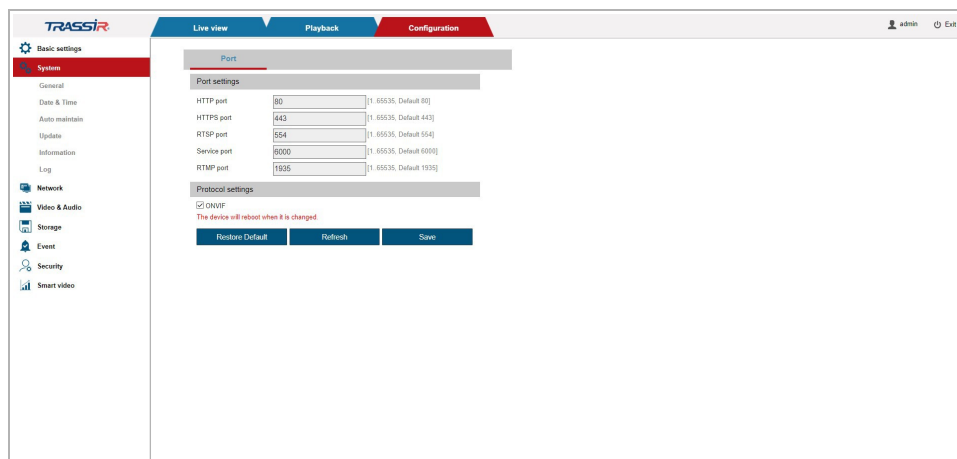
If there is no DHCP server in the local network, the camera will be assigned an IP address of the following type: 169.254.x.x.

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

## 3.4.3.2 "Port" menu

In order to configure networks ports used to access IP cameras features open the **Port** section.



| Setting             | Description                                                                                                                                                                                     |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>HTTP Port</b>    | The number of the port used to connect to IP camera web interface via web browser.<br>Default value: <b>80</b><br>Available values range: from <b>1</b> to <b>65535</b> or <b>80</b> .          |
| <b>RTSP Port</b>    | The number of port on which the data from IP camera will be transferred on RTSP protocol.<br>Default value: <b>554</b><br>Available values range: from <b>1</b> to <b>65535</b> or <b>554</b> . |
| <b>RTSP Port</b>    | The number of port used for IP camera management.<br>Default value: <b>6000</b><br>Available values range: from <b>1</b> to <b>65535</b> or <b>6000</b> .                                       |
| <b>Service port</b> | The number of port used for IP camera management.<br>Default value: <b>6000</b><br>Available values range: from <b>1</b> to <b>65535</b> or <b>6000</b> .                                       |
| <b>RTMP Port</b>    | The number of port used for IP camera management.<br>Default value: <b>1935</b><br>Available values range: from <b>1</b> to <b>65535</b> or <b>1935</b> .                                       |

**WARNING!**

**Network port numbers should not match.**

To use ONVIF connection set the flag in the **Protocol settings** block.

**NOTE.**

Use the following requests to connect an IP camera and transmit video on RTSP:

Main stream: **rtsp://[login]:[password]@[IP address]:[rtsp port]/live/main**

Sub stream: **rtsp://[login]:[password]@[IP address]:[rtsp port]/live/sub**

Third stream: **rtsp://[login]:[password]@[IP address]:[rtsp port]/live/mobile**

Example **rtsp://admin:12345@192.168.25.32:554/live/main**

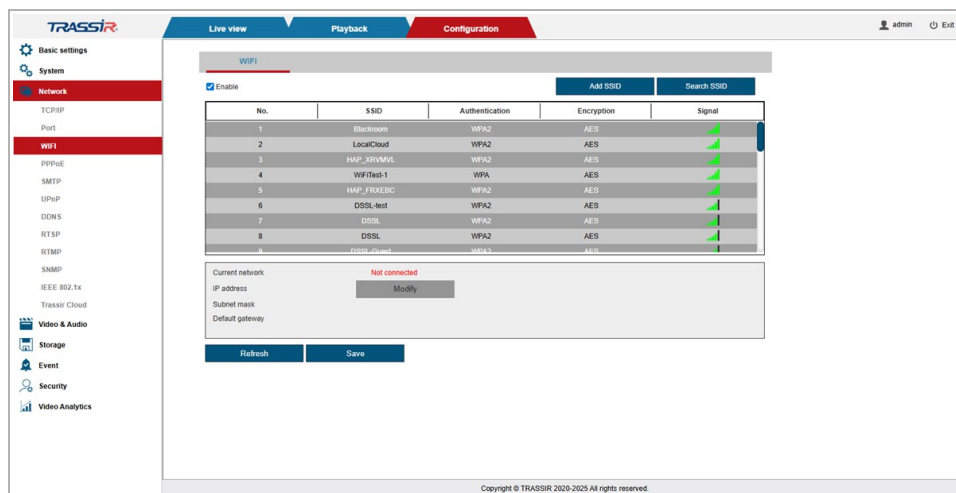
Read more about connecting an IP camera on RTSP in "SUPPLEMENT D. Operation on RTSP and ONVIF".

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

## 3.4.3.3 "WIFI" menu

To connect your camera to a wireless local network, open **WIFI** section of the **Network** settings menu.



Press the **Search SSID** button to display all available wireless networks in the table.

To connect manually, click the **Add SSID** button and enter the network name, encryption type, and password in the window that opens.

If necessary, you can change the camera's IP address on the network by clicking the **Modify** button.

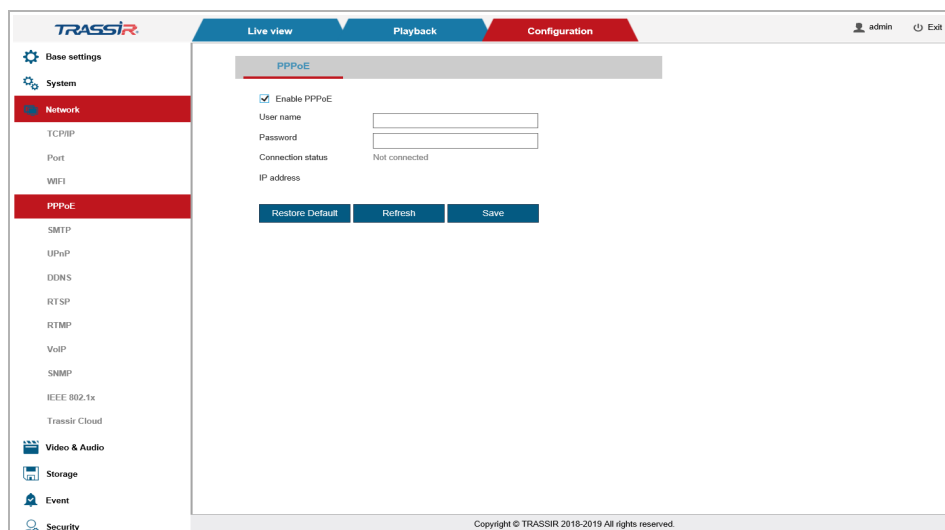
Press **Save** to save the changes.

**WARNING!**

**Simultaneous use of Analytics, WIFI, TRASSIR Cloud and HTTPS can lead to unstable operation of the following camera models: TR-D2121CL3W, TR-D2121IR3Wv3, TR-D2121IR3Wv3, TR-D3121IR2Wv3, TR-D7121IR1Wv3, TR-D8121IR2Wv3.**

### 3.4.3.4 "PPPoE" menu

Go to the **PPPoE** section of the **Network** settings menu to open the menu.



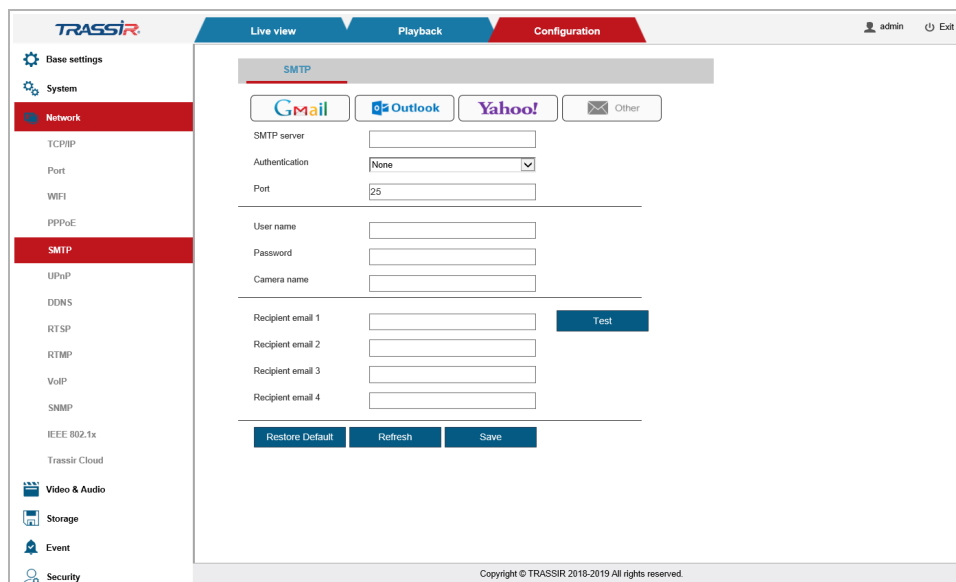
| Setting                  | Description                          |
|--------------------------|--------------------------------------|
| <b>Enable PPPoE</b>      | Set the flag to use PPPoE protocol.  |
| <b>User name</b>         | Enter user name.                     |
| <b>Password</b>          | Enter password.                      |
| <b>Connection status</b> | Connection status on PPPoE protocol. |
| <b>IP address</b>        | Device IP address.                   |

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

## 3.4.3.5 "SMTP" menu

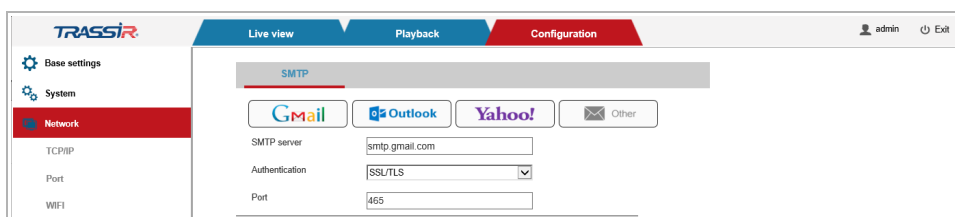
In order to configure sending messages from IP camera by email open **SMTP** section of the **Network** settings menu.



Specify SMTP server parameters in **SMTP** block:

| Setting                    | Description                                                                                                                                           |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SMTP server</b>         | The name or IP address of the main SMTP server.                                                                                                       |
| <b>Authentication</b>      | Secure data transfer protocol: <ul style="list-style-type: none"> <li>◆ <b>None</b>;</li> <li>◆ <b>SSL/TLS</b>;</li> <li>◆ <b>STARTLS</b>.</li> </ul> |
| <b>Port</b>                | Access port number to main SMTP server.                                                                                                               |
| <b>User name</b>           | Main SMTP server user name.                                                                                                                           |
| <b>Password</b>            | Authorization password on main SMTP server.                                                                                                           |
| <b>Sender</b>              | Email address from which the messages will be sent.                                                                                                   |
| <b>Recipient email 1-4</b> | Input up to 4 email addresses to which messages will be sent.                                                                                         |

You can also set the default SMTP server, authentication and port by clicking the corresponding buttons at the top of the settings window:



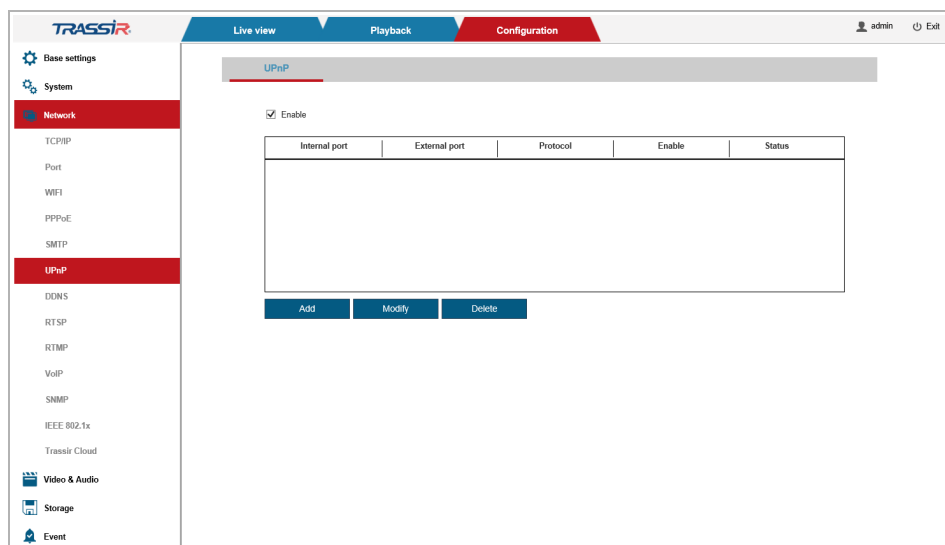
Check the correctness of the configured settings by clicking **Test**, if necessary. If the settings are correct, the email address, specified in the **Recipient email** will receive a message. Otherwise an error message will be received.

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

### 3.4.3.6 "UpnP" menu

Open **UpnP** tab to configure automatic camera detection service in local network.



The **Universal Plug&Play(UPnP)** feature is intended to search for an IP camera in local network by intelligent video surveillance systems.

#### WARNING!

As a rule, UpnP is required for the first IP camera detection in local network. That's why we strongly recommend to disable it after the use in order to prevent unauthorized IP camera access.

This menu also allows configuring IP camera network port forwarding. Network port forwarding is usually used to access and IP camera when it is in another local network.

Press **Add** to create a new rule.

Press **Modify** to edit the existing rule.

Press **Delete** to delete the rule.

UPnP

Enable

Yes

Protocol

TCP

Internal port

80

External port

8080

Save

Cancel

| Setting       | Description                                                                                                                       |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Enable        | Use UpnP conversion: <b>Yes</b> / <b>No</b> .                                                                                     |
| Protocol      | Data transfer protocol: <b>TCP</b> / <b>UDP</b> .                                                                                 |
| Internal Port | Data transfer port, configured on IP camera.<br>Available values range: from <b>1</b> to <b>99999</b> .                           |
| External Port | The port on which the IP camera will be accessed from another network.<br>Available values range: from <b>1</b> to <b>99999</b> . |

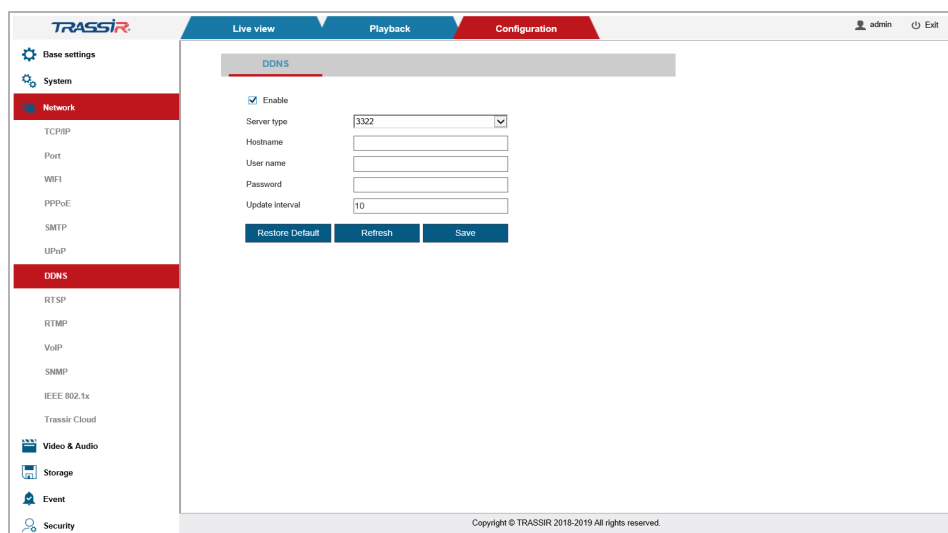
Press **Save** to save the changes.

## 3.4.3.7 "DDNS" menu

Go to the **DDNS** section of the **Network** settings menu to open the menu.

### NOTE.

Prior to the configuration you should register on DDNS service providing web site and receive all required parameters.



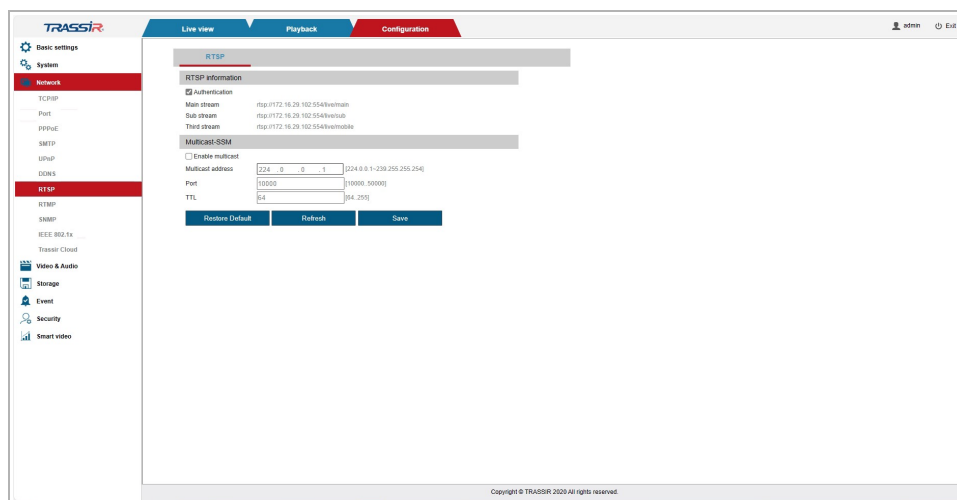
| Setting                | Description                                                                                                                                                                                                   |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Enable</b>          | Set the flag to use DDNS.                                                                                                                                                                                     |
| <b>Server type</b>     | Select the server type. The following DDNS servers are supported: <ul style="list-style-type: none"> <li>◆ <b>3322</b>;</li> <li>◆ <b>Oray</b>;</li> <li>◆ <b>Dyndns</b>;</li> <li>◆ <b>NO-IP</b>.</li> </ul> |
| <b>Hostname</b>        | The IP address of the network device to which the broadcast this IP camera will broadcast.                                                                                                                    |
| <b>User name</b>       | User name registered on DDNS server.                                                                                                                                                                          |
| <b>Password</b>        | Password received on DDNS server.                                                                                                                                                                             |
| <b>Update interval</b> | Connection update interval, from <b>0</b> to <b>99</b> .                                                                                                                                                      |

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

## 3.4.3.8 "RTSP" menu

In order to configure IP camera streaming open **RTSP** section of the **Network** settings menu.



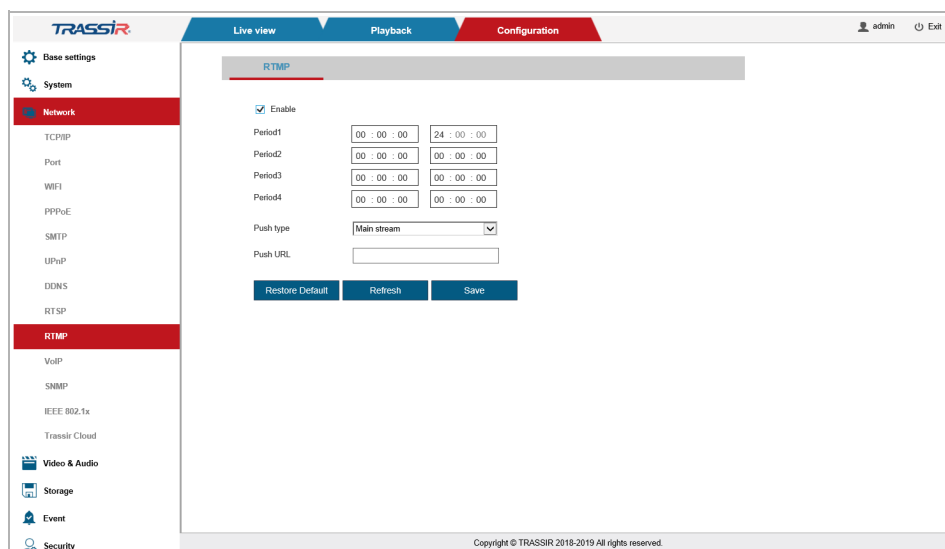
| Setting                  | Description                                                                 |
|--------------------------|-----------------------------------------------------------------------------|
| <b>Authentication</b>    | Set the flag to transmit IP camera sound stream on RTSP.                    |
| <b>Main stream</b>       | Main stream RTSP link.                                                      |
| <b>Sub stream</b>        | Sub stream RTSP link.                                                       |
| <b>Third stream</b>      | Third stream RTSP link.                                                     |
| <b>Enable Multicast</b>  | Set the flag for streaming from an IP camera to a remote network device.    |
| <b>Multicast address</b> | The IP address of the network device to which this IP camera will broadcast |
| <b>Port</b>              | Remote device port.                                                         |
| <b>TTL</b>               | TTL value, from <b>65</b> to <b>255</b> .                                   |

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

## 3.4.3.9 "RTMP" menu

Go to **RTMP** section of the **Network** settings menu to open the menu.



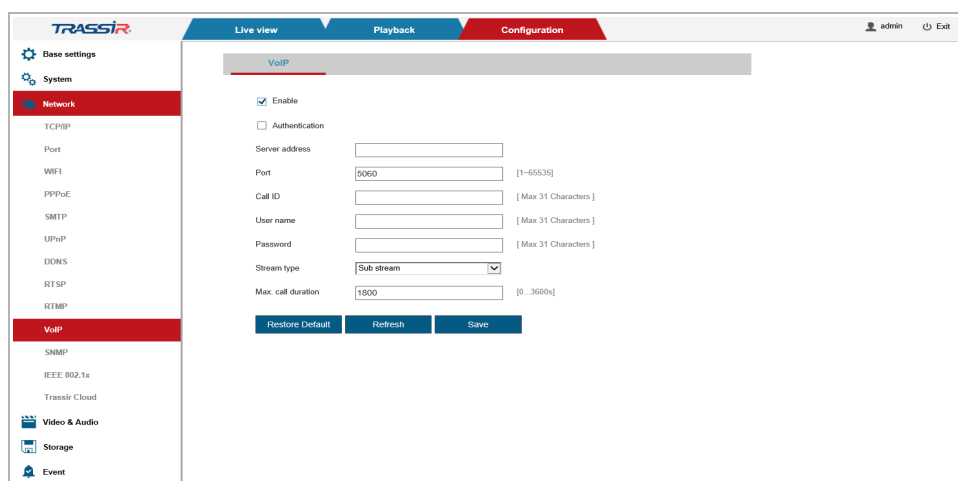
| Setting           | Description                                                  |
|-------------------|--------------------------------------------------------------|
| <b>Enable</b>     | Set the flag to use the setting.                             |
| <b>Period 1-4</b> | You can schedule the broadcasts and create up to 4 periods.  |
| <b>Push type</b>  | Select the stream: <b>Main stream</b> or <b>Sub stream</b> . |
| <b>Push URL</b>   | Stream RTMP address.                                         |

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

## 3.4.3.10 "VoIP" menu

Open the **VoIP** section in the **Network** settings menu.



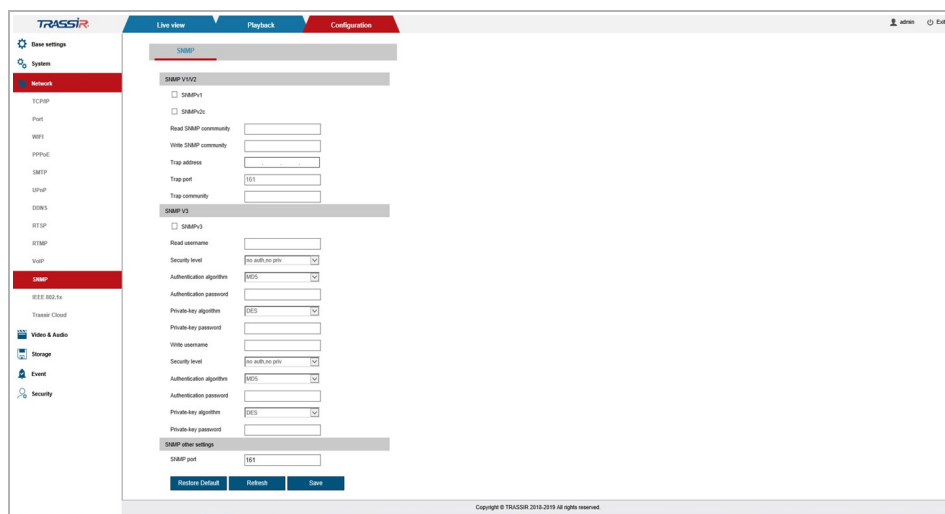
| Setting                  | Description                                                     |
|--------------------------|-----------------------------------------------------------------|
| <b>Enable</b>            | Set the flag to use the setting.                                |
| <b>Authentication</b>    | Set the flag to enable authentication.                          |
| <b>Server address</b>    | IP address or name of the server.                               |
| <b>Port</b>              | Server network port.                                            |
| <b>Call ID</b>           | Unique call ID                                                  |
| <b>User name</b>         | User name.                                                      |
| <b>Password</b>          | Password.                                                       |
| <b>Stream type</b>       | Data transfer stream: <b>Main stream</b> or <b>Sub stream</b> . |
| <b>Max.call duration</b> | Maximal call duration, from <b>0</b> to <b>3600</b> s.          |

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

### 3.4.3.11 "SNMP" menu

Go to the **SNMP** section of the **Network** settings menu.



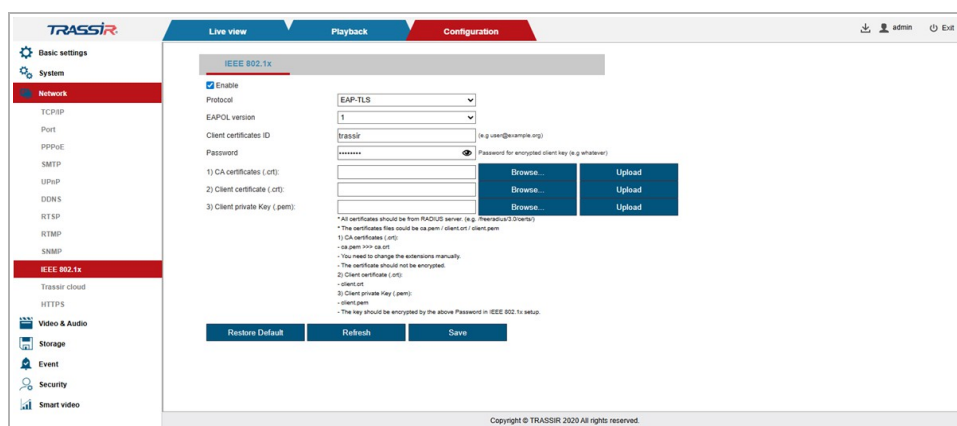
Set the flag of corresponding SNMP version to activate the option (**SNMPv1**, **SNMPv2** or **SNMPv3**) and configure parameters used by the protocol.

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

## 3.4.3.12 "IEEE 802.1x" menu

Go to the **IEEE 802.1x** section of the **Network** settings menu to open the menu.



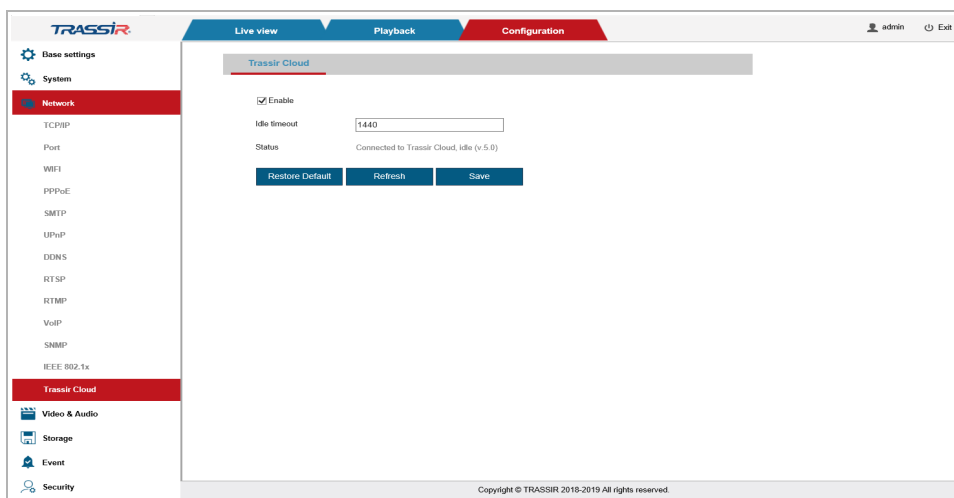
| Setting                          | Description                                                                                                                                          |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Enable</b>                    | Set the flag to activate IEEE 802.1x.                                                                                                                |
| <b>Protocol</b>                  | Data transfer protocol.                                                                                                                              |
| <b>EAPOL version</b>             | EAPOL protocol version.                                                                                                                              |
| <b>User name</b>                 | User name.                                                                                                                                           |
| <b>Password</b>                  | Password.                                                                                                                                            |
| <b>CA certificate (.crt)</b>     | To configure the EAP-TLS protocol, select a CA certificate by clicking the <b>Browse</b> button and add it by clicking the <b>Upload</b> button.     |
| <b>Client certificate (.crt)</b> | To configure the EAP-TLS protocol, select a Client certificate by clicking the <b>Browse</b> button and add it by clicking the <b>Upload</b> button. |
| <b>Client private key (.pem)</b> | To configure the EAP-TLS protocol, select a Client private key by clicking the <b>Browse</b> button and add it by clicking the <b>Upload</b> button. |

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

### 3.4.3.13 "Trassir Cloud" menu

Open the **Trassir Cloud** tab to connect the IP camera to [TRASSIR Cloud](#) cloud service.



| Setting             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Enable</b>       | Set the flag to activate the connection service.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Idle Timeout</b> | Set the time period during which the camera available for cloud connection. <b>Upon the set time period expiration, the service will stop. You need to reboot your IP camera to restart the service.</b>                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Status</b>       | <p>Camera cloud service connection status:</p> <ul style="list-style-type: none"> <li>◆ <b>Unknown Status</b> — service is not activated.</li> <li>◆ <b>Connected to Trassir Cloud, idle</b> — TRASSIR Cloud is established, connect your camera in the cloud.</li> <li>◆ <b>No connection to Trassir Cloud</b> — no connection to TRASSIR Cloud.</li> <li>◆ <b>Connected to Trassir Cloud, working</b> — camera is connected, the video is being streamed to the cloud.</li> <li>◆ <b>"Idle Timeout" reached, service stopped</b> — the time period required to connect the camera to the cloud is expired.</li> </ul> |

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

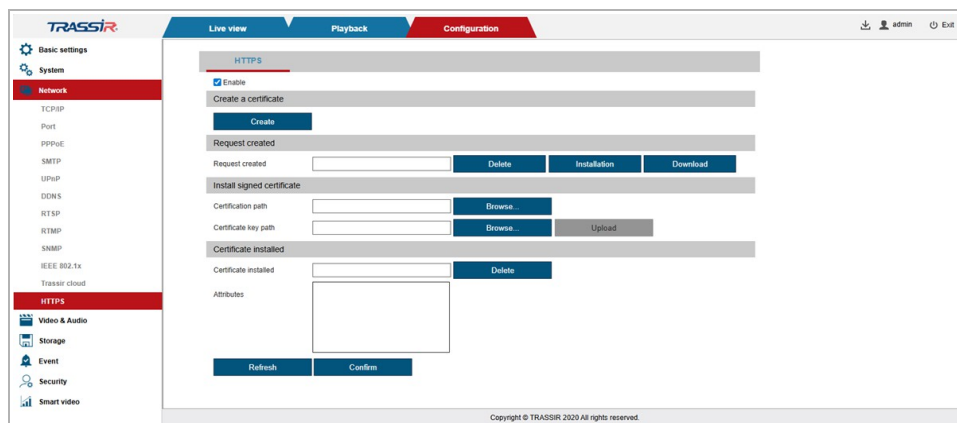
#### WARNING!

The final step of IP camera connection is performed directly in TRASSIR Cloud.

Simultaneous use of Analytics, WIFI, TRASSIR Cloud and HTTPS can lead to unstable operation of the following camera models: TR-D2121CL3W, TR-D2121IR3Wv3, TR-D2121IR3Wv3, TR-D3121IR2Wv3, TR-D7121IR1Wv3, TR-D8121IR2Wv3.

## 3.4.3.14 "HTTPS" menu

To configure the secure data transfer, go to the **HTTPS** section.



| Setting                           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Enable</b>                     | Check to enable HTTPS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Create a certificate</b>       | <p>Click <b>Create</b> and enter the required information in the window that opens:</p> <ul style="list-style-type: none"> <li>◆ <b>Country</b> — two-letter country code, for example RU.</li> <li>◆ <b>IP/domain name</b> — a required field.</li> <li>◆ <b>Expiration date</b> — the certificate expiration period in days.</li> <li>◆ <b>Province</b> — the province name.</li> <li>◆ <b>Position</b> — geographical location.</li> <li>◆ <b>Organization</b> — name of the organization.</li> <li>◆ <b>Organizational Unit</b> — name of the organizational unit.</li> <li>◆ <b>Mail</b> — Email address.</li> </ul> <p>Click <b>Create</b> to create a certificate or <b>Cancel</b> to cancel your action.</p> |
| <b>Request created</b>            | The created request is displayed in the <b>Request created</b> field. Use <b>Delete</b> , <b>Installation</b> and <b>Download</b> buttons to manage it.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Install signed certificate</b> | Click <b>Browse</b> to select the <b>Certification path</b> and <b>Certificate key path</b> , and click <b>Upload</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Certificate installed</b>      | The installed certificate is displayed in the <b>Certificate installed</b> field and its information in the <b>Attributes</b> field. To delete the certificate, click <b>Delete</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

**WARNING!**

Simultaneous use of Analytics, WIFI, TRASSIR Cloud and HTTPS can lead to unstable operation of the following camera models: TR-D2121CL3W, TR-D2121IR3Wv3, TR-D2121IR3Wv3, TR-D3121IR2Wv3, TR-D7121IR1Wv3, TR-D8121IR2Wv3.

#### 3.4.4 "Video & Audio" menu

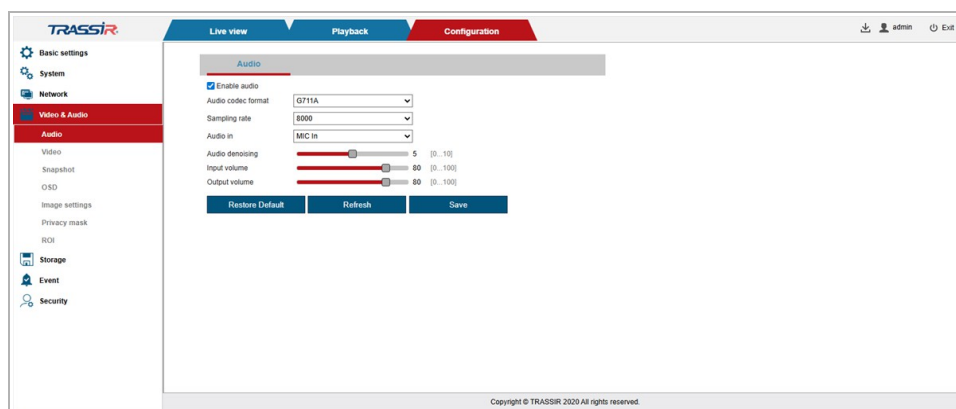
Press **Video & Audio** to open the menu.

The menu consists of the sections which allow to:

- ◆ **Audio** —configure audio stream (see section 3.4.4.1);
- ◆ **Video Stream** —configure video stream ( see section 3.4.4.2);
- ◆ **Snapshot** - configure snapshot saving (see section 3.4.4.3);
- ◆ **OSD** - configure OSD menu display on video ( see section 3.4.4.4);
- ◆ **Image Settings** —configure transmitted image parameters (see section 3.4.4.5);
- ◆ **Privacy Mask** —set up mask zones (see section 3.4.4.5.2);
- ◆ **ROI** —set up zones of interest ( see section 3.4.4.7).

## 3.4.4.1 "Audio" menu

Go to the **Audio** section to set up IP camera audio stream.



| Setting                   | Description                                                                                                   |
|---------------------------|---------------------------------------------------------------------------------------------------------------|
| <b>Enable audio</b>       | Set the flag to use the setting.                                                                              |
| <b>Audio Codec Format</b> | Audio stream compression algorithm: <b>G.711A</b> , <b>G.711U</b> , <b>AAC</b> , <b>G.726</b> or <b>PCM</b> . |
| <b>Sampling rate</b>      | Audio sampling, <b>8000</b> , <b>16000</b> or <b>24000</b> .                                                  |
| <b>Audio In</b>           | IP camera sound stream audio input: <b>Line-in</b> or <b>MIC In</b> . Set up depending on the camera model.   |
| <b>Audio denoising</b>    | Noise canceling level, from <b>0</b> to <b>10</b> .                                                           |
| <b>Input volume</b>       | Input audio volume level, from <b>0</b> to <b>100</b> .                                                       |
| <b>Output volume</b>      | Output audio volume level, from <b>0</b> to <b>100</b> .                                                      |

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

### 3.4.4.2 "Video" menu

The menu consists of the additional tabs which allow you to:

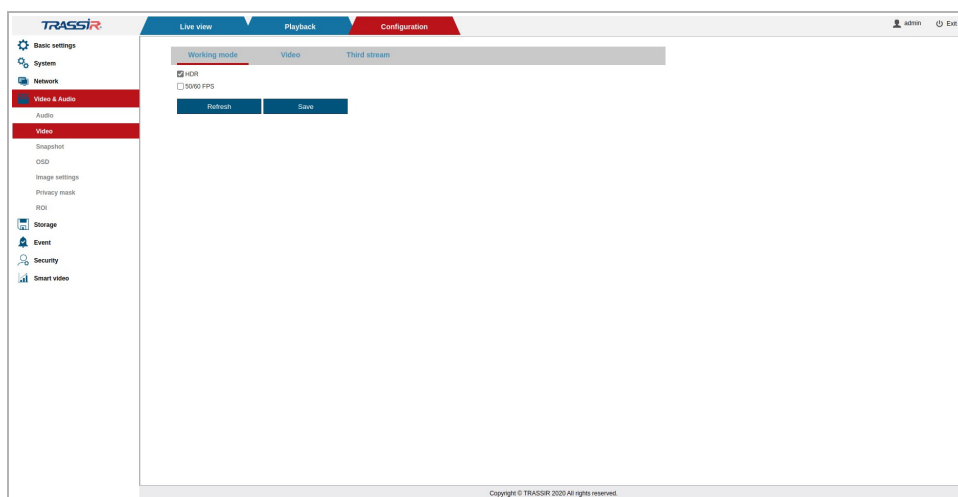
- ◆ **Working mode** —enable HDR (see section 3.4.4.2.1);
- ◆ **Video** —configure video stream (see section 3.4.4.2.2);
- ◆ **Third stream** —configure third (see section 3.4.4.2.3).

#### 3.4.4.2.1 "Working mode" tab

Got to the **Working mode** tab in the **Video** settings menu.

#### NOTE.

Prior to the configuration activate WDR in the **Image** settings menu(see section 3.4.4.5.1).



Check **HDR** to enable RealWDR in the image settings.

Check **Clear HDR** to enable RealWDR in the image settings and reduce movement blurring in the frame (the RealWDR effect will be weaker).

Check **50/60 FPS** to enable the ability to increase the frame rate of streams to 50/60 fps (depending on the video standard value set in the image settings).

#### WARNING.

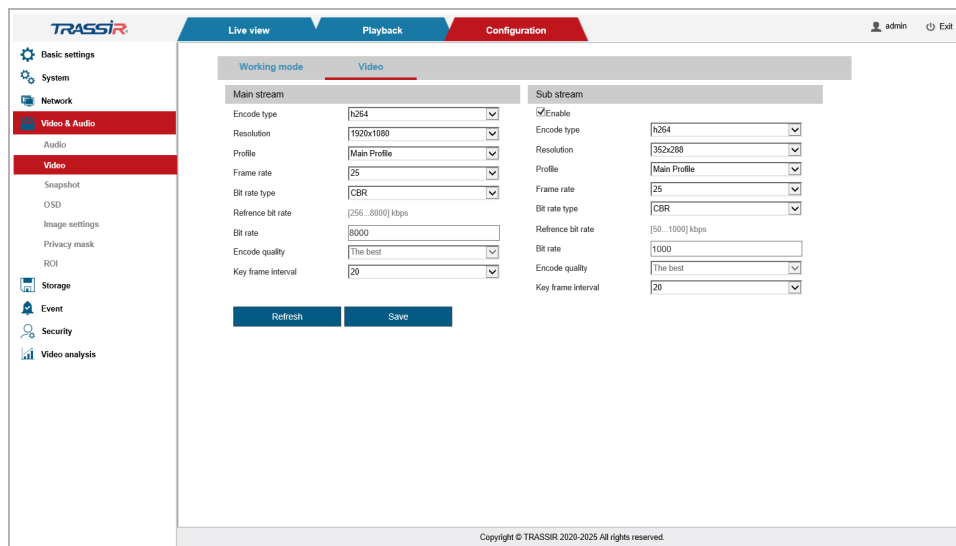
**RealWDR and 50/60 fps can't be activated at the same time.**

Press **Save** to save the changes.

## 3.4.4.2.2 "Video" tab

Go to the **Video** tab in the **Video** settings menu to set up IP camera video stream.

Set the **Enable** flag in the **Sub stream** block in order to activate sub stream settings.



You can configure the following parameters for each stream:

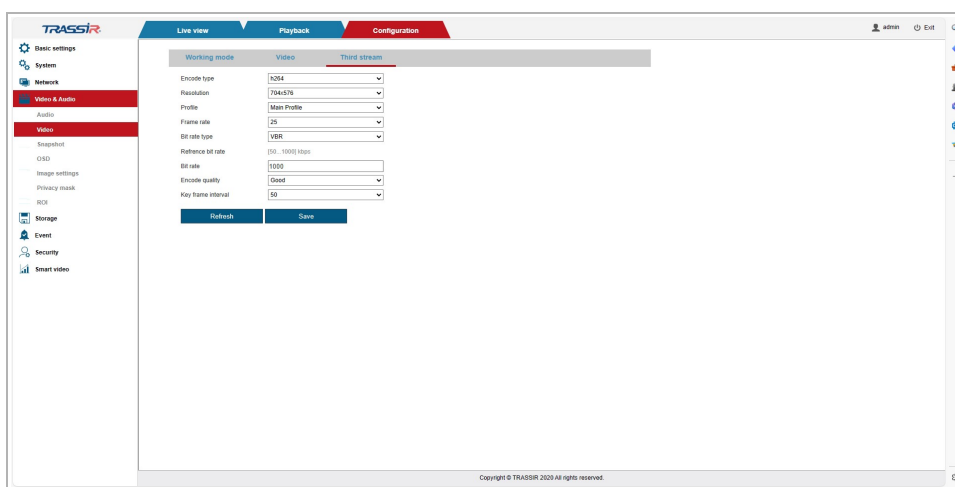
| Setting                   | Description                                                                                                                                                                                                                                                                                                                                   |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Encode type</b>        | Video stream compression standard: <b>H264</b> or <b>H265</b> .                                                                                                                                                                                                                                                                               |
| <b>Resolution</b>         | Video stream resolution.<br>Main stream: <b>1280x720</b> , <b>1280x960</b> , <b>1920x1080</b> .<br>Sub stream: <b>352x288</b> , <b>640x360</b> , <b>640x480</b> or <b>704x576</b> .<br>Third stream: <b>352x288</b> , <b>640x360</b> , <b>640x480</b> or <b>704x576</b> .<br><b>Available resolutions may vary depending on camera model.</b> |
| <b>Profile</b>            | Select a video compression profile: <b>Baseline</b> , <b>Main Profile</b> , <b>High Profile</b> .<br>Profiles allow to increase the compression efficiency of a video stream in different conditions. The higher the profile value is, the higher is the clarity of video transmission.                                                       |
| <b>Frame rate</b>         | The interval at which frames containing one key frame will be grouped. The lower the value is, the more often the keyframe will follow.                                                                                                                                                                                                       |
| <b>Bitrate type</b>       | Video stream compression type: <b>VBR</b> / <b>CBR</b> .                                                                                                                                                                                                                                                                                      |
| <b>Reference bit rate</b> | If CBR is selected, the setting value is used as the maximum value of the compression rate of the video stream.<br>Main stream: from <b>256 kbit/s</b> to <b>8000 kbit/s</b> .<br>Sub streams: from <b>50 kbit/s</b> to <b>1000 kbit/s</b> .                                                                                                  |
| <b>Bit rate</b>           | Video stream compression rate value..                                                                                                                                                                                                                                                                                                         |
| <b>Encode Quality</b>     | If VBR is selected the setting value will define the transmitted image quality: from <b>1</b> to <b>6</b> .<br>The higher the value is, the higher is the image quality.                                                                                                                                                                      |

| Setting                   | Description                                                                                                                                                                                                                                                   |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Key frame interval</b> | Video capturing speed, the number of frames per second, captured by IP camera.<br>The value is selected ranging from <b>5 fps</b> to <b>100 fps</b> , depending on selected resolution.<br><b>Maximum parameter value may vary depending on camera model.</b> |
| <b>Enable audio</b>       | Set the flag to switch the sound on main or sub stream.                                                                                                                                                                                                       |

Press **Save** to save the changes.

## 3.4.4.2.3 "Third stream" tab

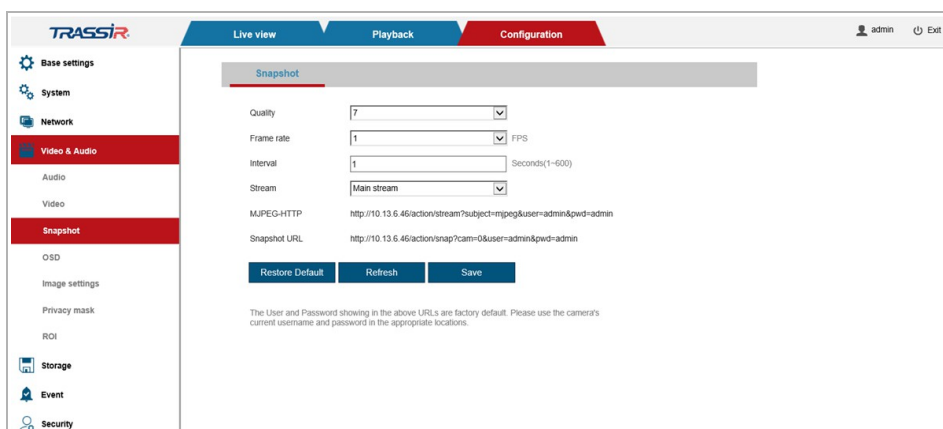
Open the **Third Stream** tab in order to set up the camera third stream.



The third stream is configured the same way as video stream (see section 3.4.4.2.2).

## 3.4.4.3 "Snapshot" menu

Go to the **Snapshot** section of **Video & Audio** settings menu to open the menu.



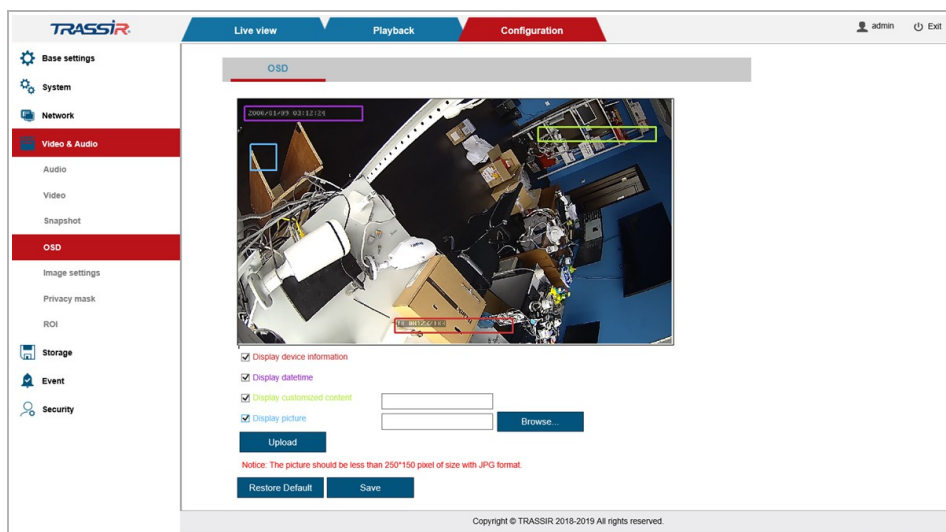
| Setting           | Description                                                                                                                                                       |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Quality           | The image quality: from 1 to 7.<br>The higher the value is, the better is the image quality.                                                                      |
| Frame rate        | Video capture rate, the number of frames per second captured by the IP camera.<br>Select values ranging from 1 fps to 5 fps depending on the selected resolution. |
| Snapshot interval | The interval between saved snapshots, from 1 to 600 s.                                                                                                            |
| Snapshot type     | Select snapshot stream: Main stream or Sub stream.                                                                                                                |
| MJPEG-HTTP        | RTSP video URL.                                                                                                                                                   |
| Snapshot URL      | RTSP snapshot URL.                                                                                                                                                |

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

### 3.4.4.4 OSD menu

Go to **OSD** section of **Video & Audio** menu to open the menu.



| Setting                           | Description                                                                                                                          |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>Display device information</b> | Set the flag to display system information.                                                                                          |
| <b>Display Datetime</b>           | Set the flag to display date and time.                                                                                               |
| <b>Display Customized Content</b> | Set the flag to display your text on video. Enter your text into the adjacent field.                                                 |
| <b>Display picture</b>            | Set the flag to display your watermark on video.<br>Press <b>Browse</b> to locate the watermark image and then press <b>Upload</b> . |

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

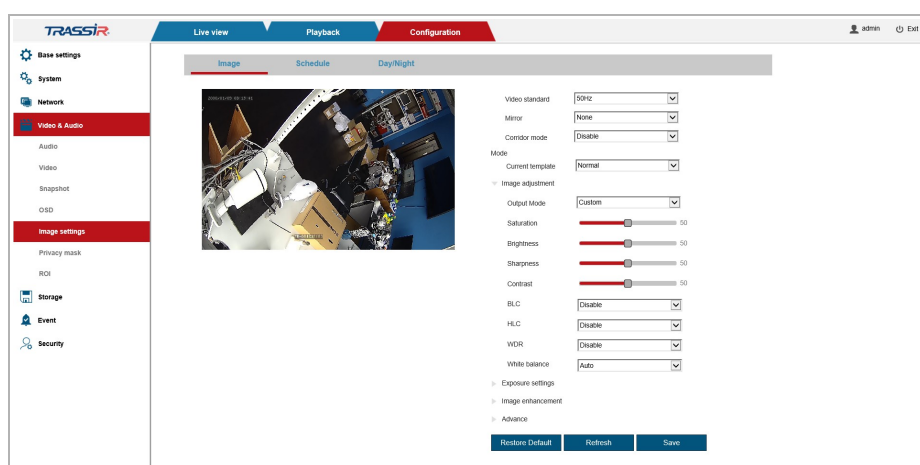
## 3.4.4.5 "Image settings" menu

The menu consists of the additional tabs which allow to:

- ◆ **Image** —configure basic image parameters (see section 3.4.4.5.1);
- ◆ **Schedule** —configure settings modes (see section 3.4.4.5.2);
- ◆ **Day/Night** —configure transition to night settings mode (see section 3.4.4.5.3).

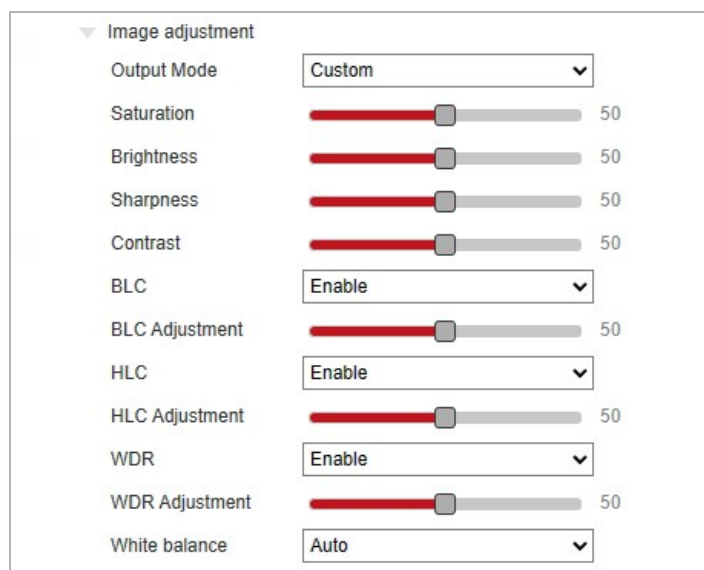
## 3.4.4.5.1 "Image" tab

In order to set up image transmitted by IP camera, open the **Image** tab in the **Image settings** menu.



| Setting                 | Description                                                                                                                                                                                                                                                     |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Video Standard</b>   | The electricity network frequency ( <b>50Hz</b> or <b>60Hz</b> ) to which the IP camera is connected.                                                                                                                                                           |
| <b>Mirror</b>           | Image mirroring: <ul style="list-style-type: none"> <li>◆ <b>None</b> - disabled.</li> <li>◆ <b>Vertical</b> —vertical axis;</li> <li>◆ <b>Horizontal</b> —horizontal axis;</li> <li>◆ <b>Horizontal&amp;Vertical</b> —horizontal and vertical axes.</li> </ul> |
| <b>Corridor mode</b>    | Enable/disable corridor mode. It rotates image to 90 degrees, changing standard horizontal orientation to vertical.<br><b>Corridor mode is not compatible with Video analysis module (see section 3.4.8).</b>                                                   |
| <b>Current template</b> | Select template to save current settings: <ul style="list-style-type: none"> <li>◆ <b>Normal</b>;</li> <li>◆ <b>Day</b>;</li> <li>◆ <b>Night</b>.</li> </ul> <b>Other settings will be applied to the selected template.</b>                                    |

### ◆ Image adjustment block



▼ Image adjustment

Output Mode: Custom ▼

Saturation: 50

Brightness: 50

Sharpness: 50

Contrast: 50

BLC: Enable ▼

BLC Adjustment: 50

HLC: Enable ▼

HLC Adjustment: 50

WDR: Enable ▼

WDR Adjustment: 50

White balance: Auto ▼

| Setting              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Output mode</b>   | <p>Select the coloring mode:</p> <ul style="list-style-type: none"> <li>◆ <b>Standard</b>;</li> <li>◆ <b>Bright</b>;</li> <li>◆ <b>Vivid</b>;</li> <li>◆ <b>Gentle</b>;</li> <li>◆ <b>Custom</b>.</li> </ul> <p>Saturation, brightness, sharpness and contrast settings will be applied automatically, in accordance with the selected mode.<br/>Settings are customized manually if you select the <b>Custom</b> mode.</p>                                                                                                                                                                                                                                                             |
| <b>BLC</b>           | <p>Enable/disable backlight compensation option on video.<br/>An adjustment slider appears when this option is enabled.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>HLC</b>           | <p>Enable/disable highlight compensation option on video.<br/>An adjustment slider appears when this option is enabled.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>WDR</b>           | <p>Enable/disable wide dynamic range option.<br/>An adjustment slider appears when this option is enabled.<br/>This option is effective when shooting in difficult lighting conditions when it is necessary to distinguish an object from a light source (for example, a person's face against a background of a window illuminated by sunlight).</p>                                                                                                                                                                                                                                                                                                                                   |
| <b>White Balance</b> | <p>Customize white balance in accordance with shooting area lighting conditions:</p> <ul style="list-style-type: none"> <li>◆ <b>Auto</b> — automatic selection of white balance, while the camera itself chooses a setting at which the best video stream quality will be transmitted;</li> <li>◆ <b>Out door</b> — automatic white balance selection adapted for outdoor shooting;</li> <li>◆ <b>Indoor</b> — automatic white balance selection adapted for outdoor shooting;</li> <li>◆ <b>Fluorescent lamp</b> — automatic selection of white balance adapted for shooting objects lit by a fluorescent lamp;</li> <li>◆ <b>Manual</b> — manual white balance selection.</li> </ul> |

◆ **Exposure settings** block

▼ Exposure settings

Exposure mode

Auto

▼

Shutter

1/25(50Hz)1/30(60Hz)

▼

Exposure mode

Fixed

▼

Shutter

1/25(50Hz)1/30(60Hz)

▼

Analog gain

1

Digital gain

1

| Setting              | Description                                                                                                              |
|----------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>Exposure mode</b> | Select exposure mode: <b>Auto/Fixed</b> .                                                                                |
| <b>Shutter</b>       | Select IP camera maximum shutter value.                                                                                  |
| <b>Analog gain</b>   | Use the slider to set the gain value for the signal from the matrix before its digitization. (only in <b>Fixed</b> mode) |
| <b>Digital gain</b>  | Use the slider to set the gain value for the digitized signal. (only in <b>Fixed</b> mode)                               |

◆ **Image enhancement** block

▼ Image enhancement

Light metering

Global

▼

Auto IRIS

Enable

▼

Defog

Disable

▼

2D NR

Enable

▼

NR adjustment

50

3D NR

Enable

▼

| Setting               | Description                                                                                       |
|-----------------------|---------------------------------------------------------------------------------------------------|
| <b>Light metering</b> | Exposure determination type on IP camera: <b>Global</b> or <b>Middle</b> .                        |
| <b>Auto IRIS</b>      | Enable/disable automatic iris control.                                                            |
| <b>Defog</b>          | Enable/disable antifog feature which prevents, which prevents blurring in bad weather conditions. |
| <b>2D NR</b>          | Enable/disable 2D NR to reduce noise.                                                             |
| <b>NR adjustment</b>  | Eliminate image noise. The higher the value is, the cleaner is the image.                         |
| <b>3D NR</b>          | Enable/disable 3D NR to reduce image noise.                                                       |

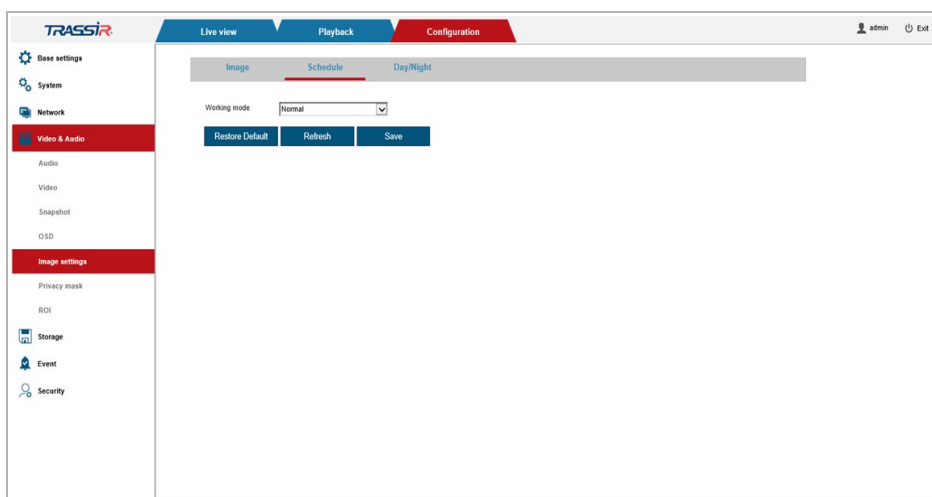
You can see the changes of the applied settings in the preview window.

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

### 3.4.4.5.2 "Schedule" tab

To select the image modes open the **Schedule** tab in the **Image settings** menu.



Select the settings mode that will be applied to the image from the dropdown list in **Working mode** field:

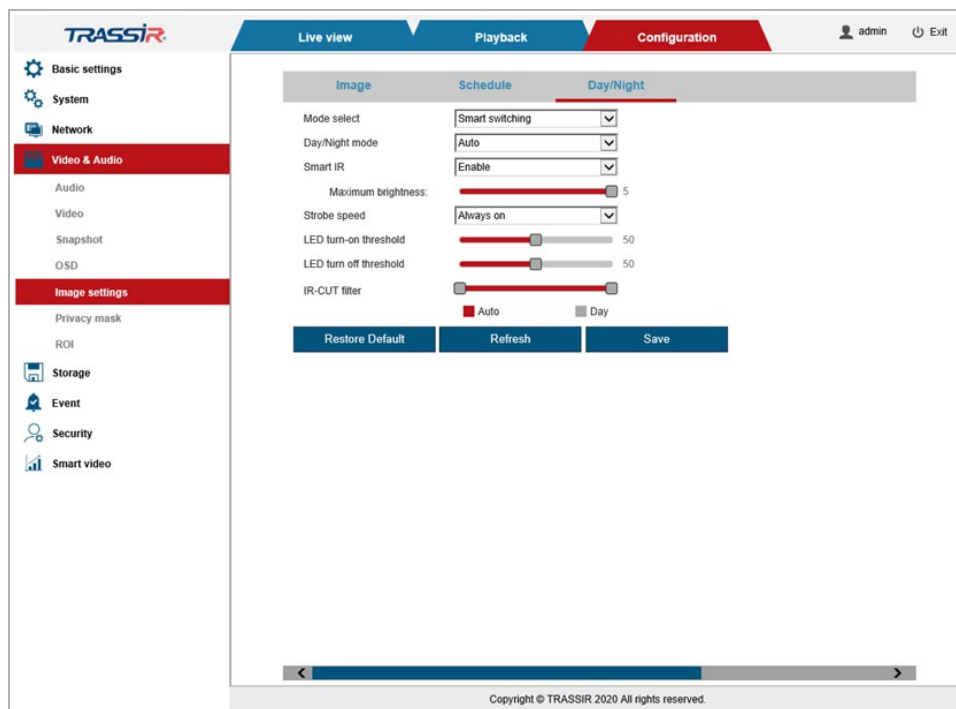
- ◆ **Normal** — activate standard settings mode;
- ◆ **Day** — activate day mode;
- ◆ **Night** — activate night mode;
- ◆ **Timing** — the day mode will be activated on schedule;
- ◆ **Auto** — day and night modes will replace each other according to the time of day.

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

## 3.4.4.5.3 "Day/Night" tab

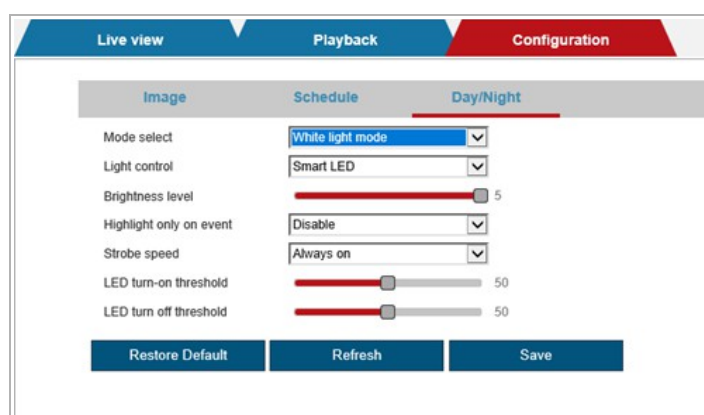
In order to set day and night mode switching, as well as turning on and adjusting the IR illumination, go to the **Schedule** tab in the **Image settings** menu.



| Setting               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Mode select</b>    | <p>Select the illumination operation mode:</p> <ul style="list-style-type: none"> <li>◆ <b>Smart switching</b>: The IR illumination is switched on when there is insufficient light. When a person appears in the frame, it automatically changes to LED illumination. When a person leaves the frame, the LED illumination changes back to IR illumination.</li> <li>◆ <b>Infrared light mode</b>: IR illumination.</li> <li>◆ <b>White light mode</b>: LED illumination.</li> <li>◆ <b>Turn off the lights</b>: The illumination is off.</li> </ul>                                                                                                                                                                                                                          |
| <b>Day/Night mode</b> | <p>Select day/night operation mode:</p> <ul style="list-style-type: none"> <li>◆ <b>Auto</b>: automatic activation of B/W mode, depending on the level of illumination of the shooting area;</li> <li>◆ <b>Day</b>: B/W mode is off / Day;</li> <li>◆ <b>Night</b>: B/W mode is on / Night;</li> <li>◆ <b>By time</b>: activation of the color mode on schedule Set the time period during which the color mode will be activated in the <b>Period setting</b> opened field;</li> <li>◆ <b>Auto(Inter sync)</b>: automatic activation of B / W mode, depending on the level of illumination of the shooting area. Set the illumination values at which color and black and white mode will switch in the <b>THR. of day</b> and <b>THR. of night</b> opened fields.</li> </ul> |
| <b>Light control</b>  | <p>Select the operating mode of the IR illumination with the selected day and night change mode:</p> <p><b>Smart LED, Enable, Disable</b> or <b>LED by time</b>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Setting                | Description                                                                                                                                                                                                                                                                    |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Smart IR               | Enable/Disable the Smart IR function, which allows you to adjust the intensity of the camera LEDs to compensate for the distance to the object. When the function is enabled - the <b>[Brightness level]</b> adjustment changes to the <b>[Maximum brightness]</b> adjustment. |
| IR brightness          | Use the slider to adjust the IR brightness.                                                                                                                                                                                                                                    |
| LED turn on threshold  | Use the slider to adjust the LED turning on threshold.                                                                                                                                                                                                                         |
| LED turn off threshold | Use the slider to adjust the LED turning off threshold.                                                                                                                                                                                                                        |
| IR-CUT Filter          | Use the slider to set up the IR filter activation time.                                                                                                                                                                                                                        |

The cameras with LED backlighting do not have infrared sensors and use LEDs when working in low-light conditions or in the dark. The LEDs can also be used to highlight alarm events.



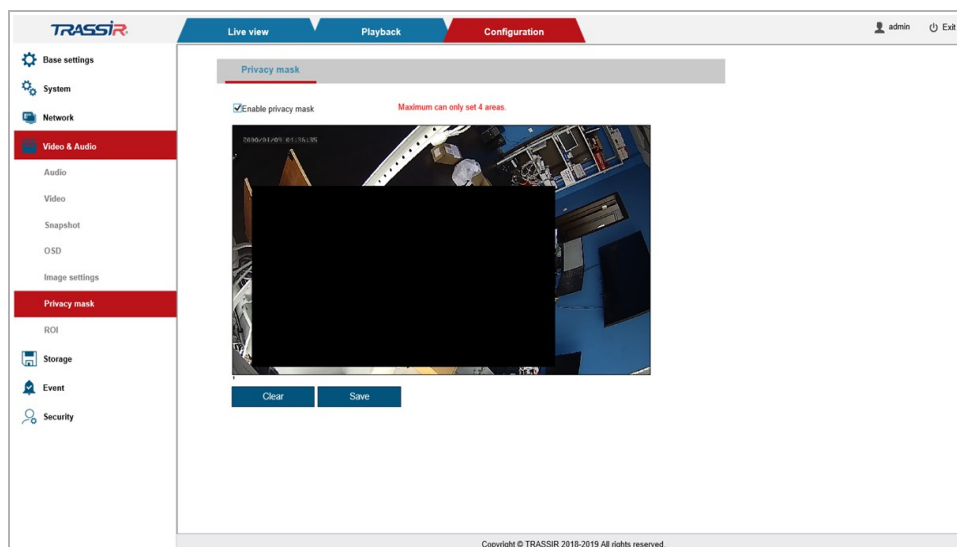
| Setting                 | Description                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Light Control           | <b>Available only for cameras featuring LED lighting.</b><br>Select LED lighting mode: <ul style="list-style-type: none"> <li>◆ <b>Smart LED</b>: automatic control of lighting intensity depending on the distance to the object.</li> <li>◆ <b>Enable</b>: LED lighting is on;</li> <li>◆ <b>Disable</b>: LED lighting is off;</li> <li>◆ <b>LED by time</b>: LED lighting turns on and off depending on the period selected by the sliders.</li> </ul> |
| Brightness level        | Manual LED illumination brightness adjustment.                                                                                                                                                                                                                                                                                                                                                                                                            |
| Highlight only on event | Turn the illumination on/off when an alarm event is detected.                                                                                                                                                                                                                                                                                                                                                                                             |
| Strobe speed            | Choose the frequency at which the strobe will operate.                                                                                                                                                                                                                                                                                                                                                                                                    |
| LED turn-on threshold   | Select the lighting level at which the LED will automatically turn on.                                                                                                                                                                                                                                                                                                                                                                                    |
| LED turn off threshold  | Select the lighting level at which the LED will automatically turn off.                                                                                                                                                                                                                                                                                                                                                                                   |

Press **Restore Default** to restore the default settings.

Press **Save** to save the changes.

## 3.4.4.6 "Privacy mask" menu

Open **Privacy Mask** section to set up masking zones on you IP camera.



Select an area on video that you want to hide, and use the left mouse button to draw a masking zone. Use masking zones to hide some areas on video, for example, the dial pad of the combination lock.

**NOTE.**

You can customize up to 4 masking zones.

**WARNING!**

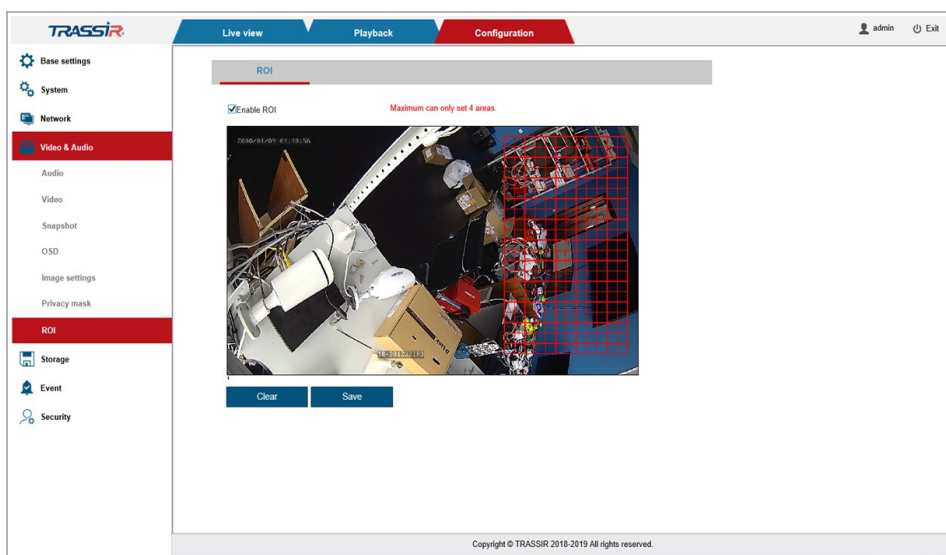
Masking zones are superimposed on the transmitted video stream, that is, they are recorded in the archive and superimposed on the image snapshots. The image hidden under such zones will be impossible to view even after disabling masking zones.

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

### 3.4.4.7 "ROI" menu

Open **ROI** section in order to customize zones of interest.



ROI zones or zones of interest allow you to highlight areas of the image that will be recorded with improved image quality settings. In this case, the areas outside the zones will be saved with poorer image quality parameters.

#### NOTE.

You can create up to 4 zones of interest.

To define the zones, left click on image and select one or several zones of interest.

Press **Clear** to reset the settings.

Press **Save** to save the changes.

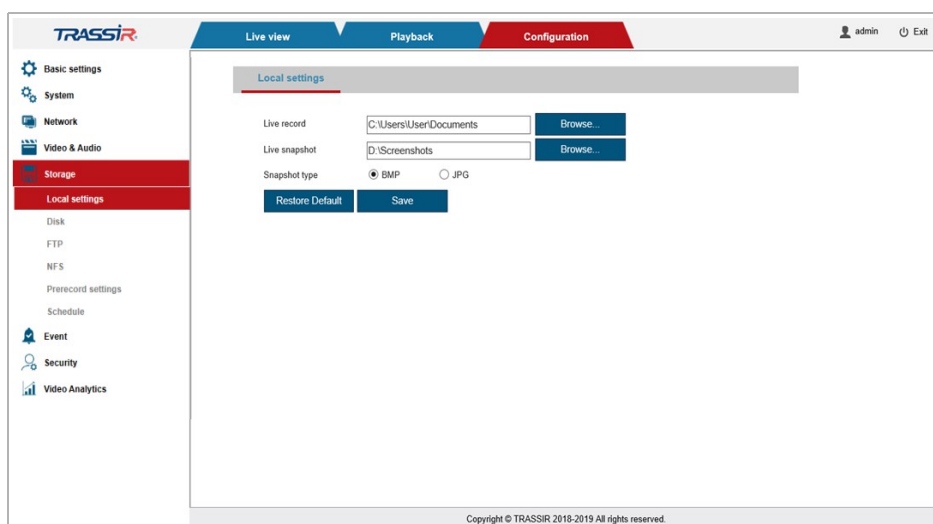
### 3.4.5 "Storage" menu

The menu consists of the sections which allow to:

- ◆ **Local settings** —set up local archive recording (see section 3.4.5.1);
- ◆ **Disk** —check the archive state and configure archive recording to disk (see section 3.4.5.2);
- ◆ **FTP** —set up archive recording to FTP server (see section 3.4.5.3);
- ◆ **NFS** —set up archive recording to NFS server (see section 3.4.5.4);
- ◆ **Prerecord settings** —configure a time period before the event detection to record (see section 3.4.5.5);
- ◆ **Schedule** —schedule data recording to the archive ( see section 3.4.5.6).

#### 3.4.5.1 "Local settings" menu

Go to the **Local settings** section of the **Storage** menu to open.



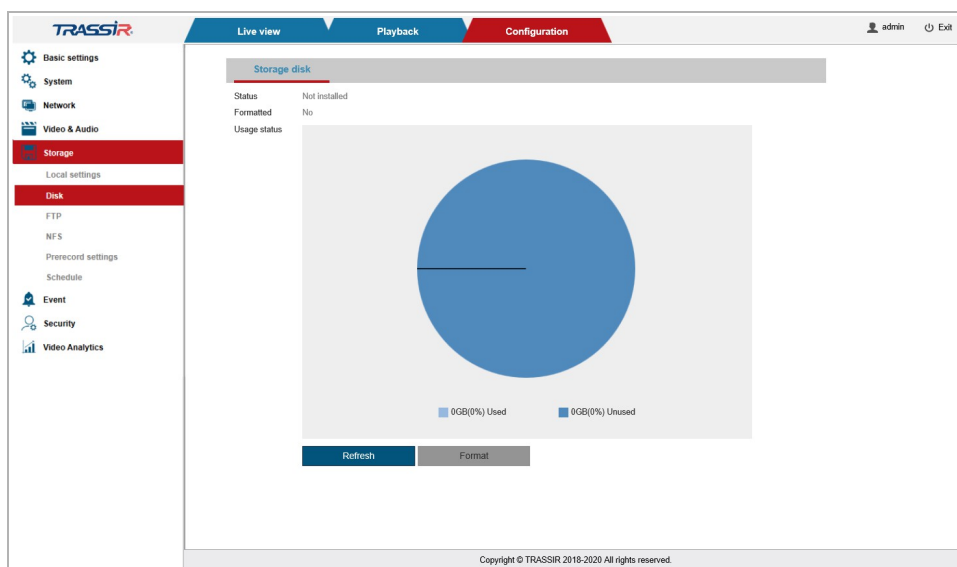
Click **Browse...** to set video and snapshot saving path.

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

### 3.4.5.2 "Disk" menu

Open the **Storage disk** tab in the **Disk** settings menu.



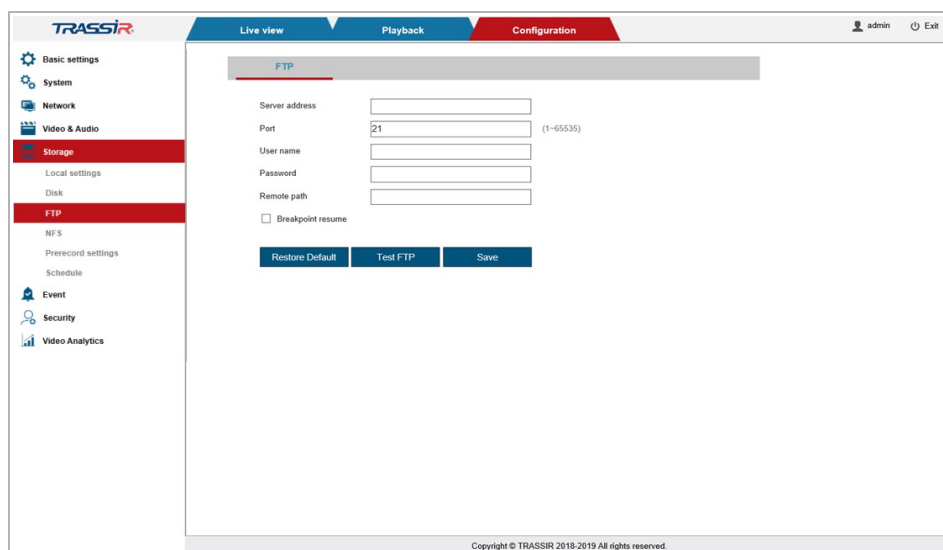
This menu lets you check status of the built-in archive and the amount of free space on it, as well as format the built-in archive to use IP camera.

#### NOTE.

Format built-in storage upon the first connection of memory card or USBHDD by pressing **Format**.

## 3.4.5.3 "FTP" menu

Go the **FTP** section of the **Storage** settings menu to open the menu.



| Setting                  | Description                                                                                                           |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------|
| <b>Server Address</b>    | Name or IP address of FTP server.                                                                                     |
| <b>Server Port</b>       | FTP server access port number.                                                                                        |
| <b>Username</b>          | User name to authorize on FTP server.                                                                                 |
| <b>Password</b>          | Password to authorize on FTP server                                                                                   |
| <b>Remote Path</b>       | The directory where messages from the camera will be saved.<br>The default one is: <b>FTP server root directory</b> . |
| <b>Breakpoint Resume</b> | Set the flag to resume uploading the file to FTP server in case of disconnection.                                     |

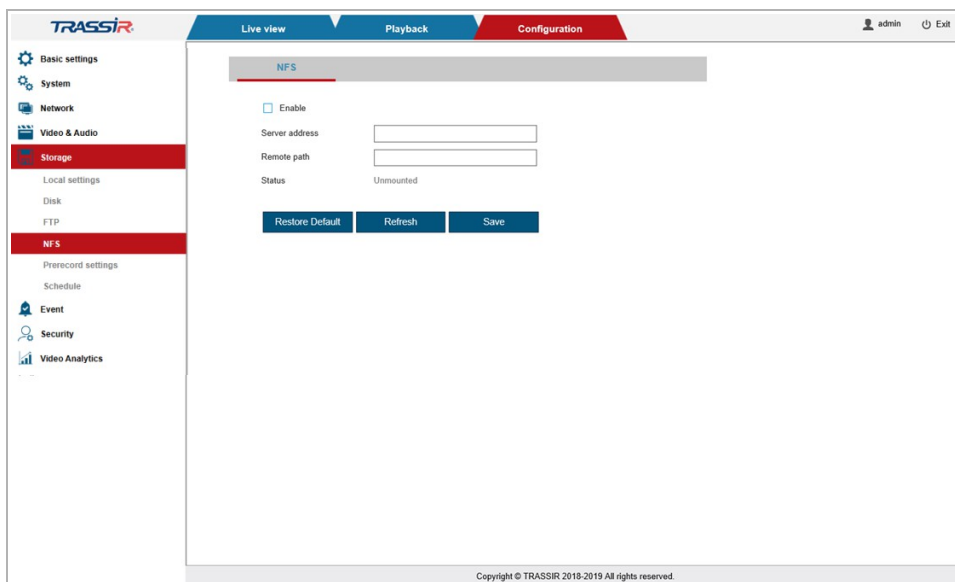
Upon configuration completion click **Test FTP** to establish test connection.

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

### 3.4.5.4 "NFS" menu

Go to the **NFS** section of the **Storage settings** menu to open the menu.



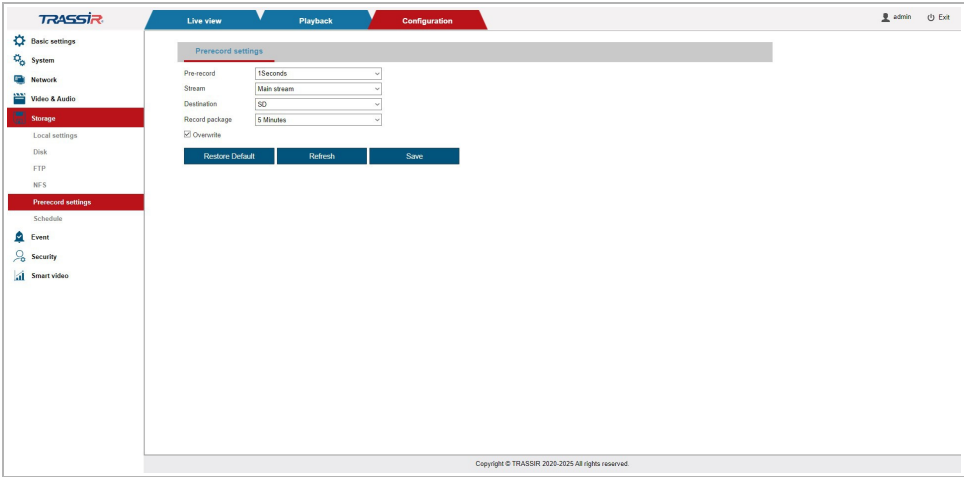
| Setting               | Description                           |
|-----------------------|---------------------------------------|
| <b>Enable</b>         | Set the flag to activate the setting. |
| <b>Server address</b> | Remote server address.                |
| <b>Remote path</b>    | Archive saving path.                  |
| <b>Status</b>         | Server connection status.             |

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

3.4.5.5 "Prerecord settings" menu

This menu allows you to configure the time period before the event detection that will be recorded to the archive.



| Setting        | Description                                                                                                                      |
|----------------|----------------------------------------------------------------------------------------------------------------------------------|
| Pre-record     | The time period from 0 to 3 s before the event triggering during which the video will be triggering.                             |
| Stream         | Select stream to record to the archive: Main stream or Sub stream.                                                               |
| Destination    | Specify the archive saving path: SD or NFS.                                                                                      |
| Overwrite      | Set the flag to overwrite the built-in storage in case of overflow. In this case, older files will be overwritten with new ones. |
| Record package | Maximal size of the recorded file: 3min, 5min or 10min.                                                                          |

Press **Save** to save the changes.

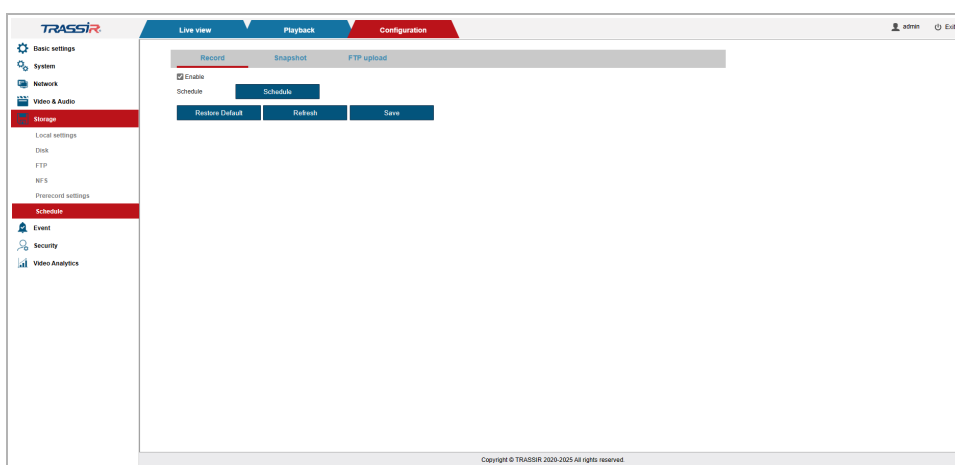
### 3.4.5.6 "Schedule" menu

The menu consists of the additional tabs which allow to:

- ◆ **Record**—configure video record to the archive (see section 3.4.5.6.1);
- ◆ **Snapshot**—configure snapshot saving (see section 3.4.5.6.2);
- ◆ **FTP upload**—configure archive uploading to FTP (see section 3.4.5.6.3).

#### 3.4.5.6.1 "Record" tab

In order to schedule data recording to the archive open the **Record** tab in the **Schedule** settings menu.



Set the **Enable** flag to activate the setting.

Click the **Schedule** button to set the schedule for recording video to the archive.

In the opened window select how the recording will be carried out by putting flags in the corresponding fields:

- ◆ **7\*24 Hours** — there will be permanent record to the archive;
- ◆ **Schedule** — recordings will be carried out on the selected dates and time periods.



In order to set the time intervals, click **Setup** opposite to the desired day of the week and set up to six time intervals, indicating the start and end times.

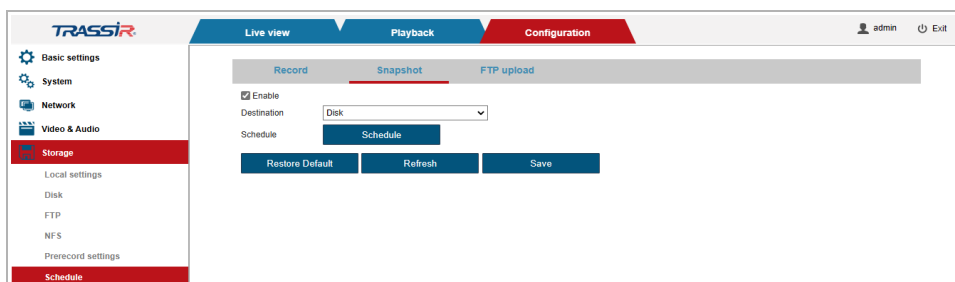
Set the flags in front of the required days of the week or set the **Select all** flag in order to copy settings to the other days.

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

### 3.4.5.6.2 "Snapshot" tab

Go to the **Snapshot** tab in the **Schedule** settings menu to open the menu.



Set the **Enable** flag to activate the setting.

Set snapshot saving path in the **Destination** field:

- ◆ **SD** — save to SD card;
- ◆ **NFS** — save to NFS server.

The snapshot saving schedule is configured the same way as on the **Record** tab (see section 3.4.5.6.1).

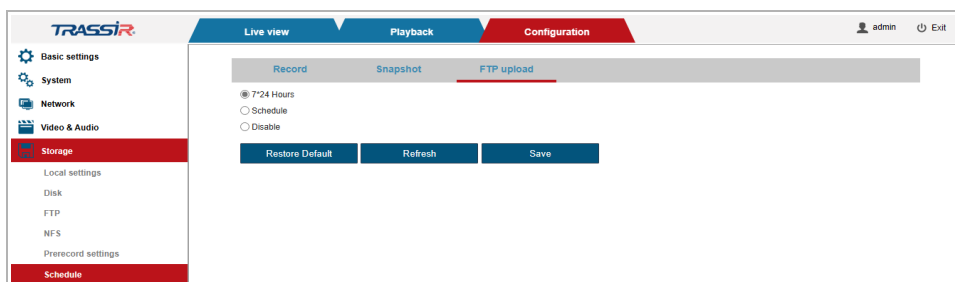
#### NOTE.

If the **Snapshot** flag is set in the event settings (see section 3.4.6) the snapshot will be saved regardless of the schedule settings.

You can set up the interval between the saved snapshots in the **Snapshot** section (see 3.4.4.3).

## 3.4.5.6.3 "FTP Upload" tab

Open **FTP Upload** in the **Schedule** settings menu to set up archive upload to FTP.



Configure FTP upload settings:

- ◆ **7\*24 Hours** —upload will be performed permanently;
- ◆ **Schedule** — upload will be performed on schedule;
- ◆ **Disable** — FTP upload will not be performed.

**NOTE.**

The snapshot FTP upload schedule is configured the same way as on the **Record** and **Snapshot** tabs (see sections 3.4.5.6.1 and 3.4.5.6.2).

**NOTE.**

If the **FTP upload** flag is set in the event settings (see section 3.4.6) the upload will be performed regardless of the schedule settings.

### 3.4.6 "Event" menu

Open the **Event** menu.

The menu consists of the following sections which allow to:

- ◆ **Motion Detection** —set up motion detector (see section 3.4.6.1);
- ◆ **I/O alarm** —set up alarm inputs/outputs (see section 3.4.6.2);
- ◆ **PIR** —configure PIR (see section 3.4.6.3);
- ◆ **Abnormality** — set up reactions in case of the camera malfunctions (see section 3.4.6.4).

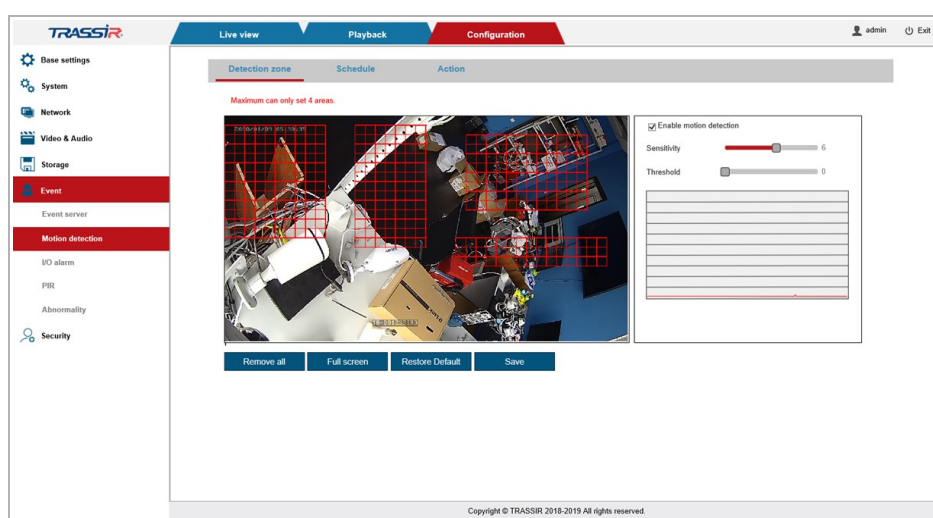
### 3.4.6.1 "Motion detector" menu

The menu consists of the following sections which allow to:

- ◆ **Detection zone** — set up motion detector zones (see section 3.4.6.1.1);
- ◆ **Schedule** — set up motion detector schedule (see section 3.4.6.1.2);
- ◆ **Action** — set up reactions for motion detector triggering ( see section 3.4.6.1.3).

#### 3.4.6.1.1 "Detection zone" tab

In order to set up shooting areas in which the reaction will trigger upon motion detection, got to the **Detection zone** in the **Motion Detection** settings menu.



#### NOTE.

You can create up to 4 detection zones.

In order to define the motion detector zones, left click on the image and highlight the zones in which motion detection is required.

Use **Sensitivity** parameter to customize motion detector sensitivity in all created zones. The higher the value is, the more sensitive is the detector.

Set the detector confidence level from **0** to **100** in the **Threshold** parameter. The higher the value is, the lower is the probability of false triggerings, especially when working outdoors.

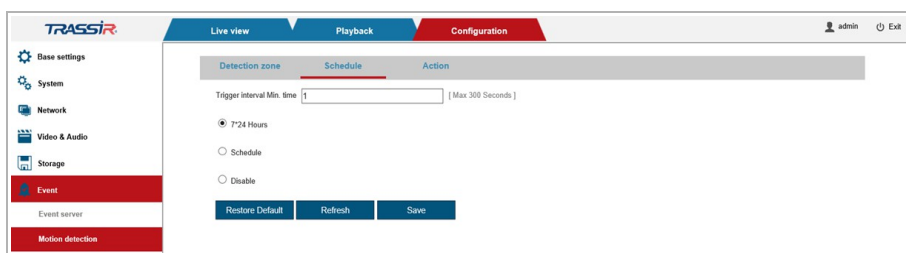
Press **Full screen**, to select the entire shooting area as the detection zone.

Press **Remove all** to remove all created zones.

Press **Save** to save the changes.

### 3.4.6.1.2 "Schedule" tab

Go to the **Schedule** tab to open the menu.



Specify time which will define the event occurrence from **0 to 300 s** in the **Trigger Interval Min. time** field. If an alarm event lasts less than the specified time, it is considered not to have occurred.

In the lower block select schedule for recording to the built-in storage (see section 3.4.5.1):

- ◆ **7\*24 hours Record** —the record will be performed permanently;
- ◆ **Schedule Record** —the video stream will be recorded on schedule;
- ◆ **Disable** —disable option.

#### NOTE.

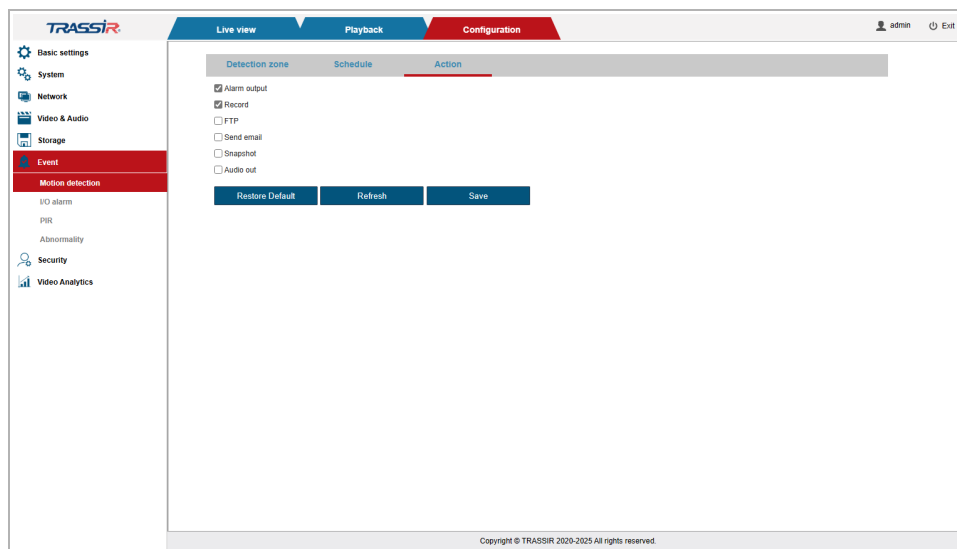
If the **Record** flag is set in the event settings (see section 3.4.6) the record will be performed regardless of the schedule settings.

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

## 3.4.6.1.3 "Action" tab

In order to set up reaction on motion detector triggering go to the **Action** tab in **Motion detection** settings menu.



Select one or several actions that the IP camera will perform upon motion detection:

- ◆ **Alarm output** —close alarm output.(see section. 3.4.6.2).
- ◆ **Record** —record video to the archive. See description of the schedule settings in 3.4.6.1.2.
- ◆ **FTP** — upload video file or image to FTP server. See description of FTP server settings in 3.4.5.3.
- ◆ **To send email**. Email settings are described in 3.4.3.5.
- ◆ **Snapshot** —save snapshot to the archive (see section 3.4.4.3).
- ◆ **Audio**. Audio settings are described in 3.4.4.1.

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

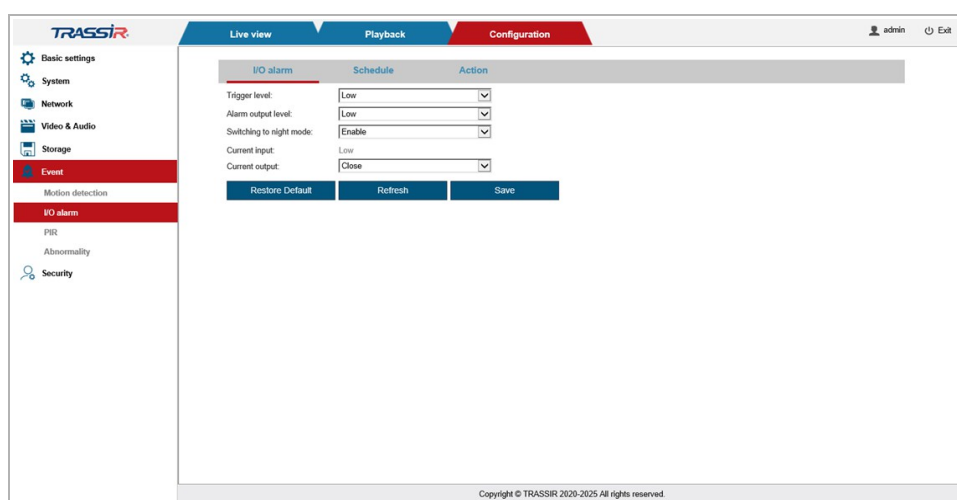
### 3.4.6.2 "I/O Alarm" menu

The menu consists of the additional tabs which allow to:

- ◆ **I/O Alarm** —configure alarm inputs and outputs (see section 3.4.6.2.1);
- ◆ **Schedule** —set up schedule of alarm inputs and outputs operation (see section 3.4.6.2.2);
- ◆ **Action** —set up reactions to the alarm input and output triggering (see section 3.4.6.2.3).

#### 3.4.6.2.1 "I/O Alarm" tab

Go to the **I/O Alarm** tab to open the menu.



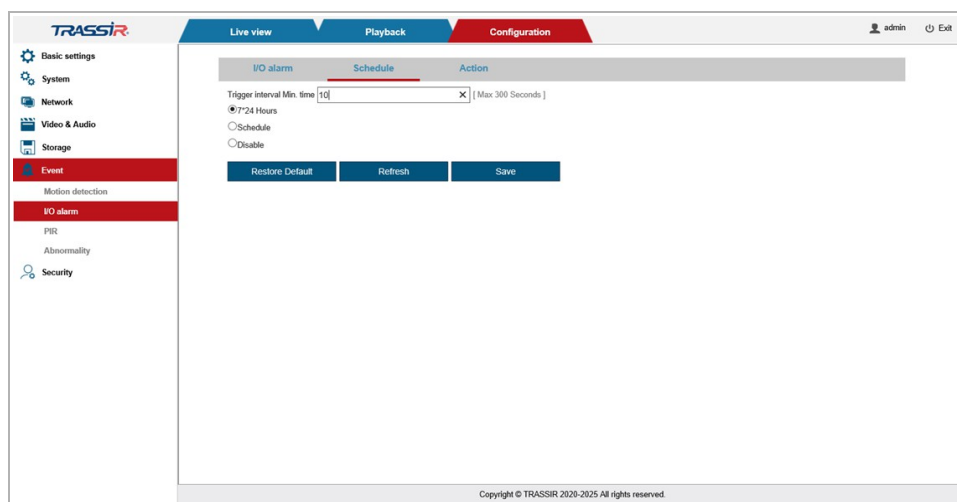
| Setting                            | Description                                                                                                                                                                                                                                                                                                                       |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Trigger level</b>               | <p><b>High</b> —an alarm event will occur <b>when 5V voltage appears on the contacts of the alarm input.</b></p> <p><b>Low</b> —an alarm event will occur <b>when the 5V voltage on the contacts of the alarm input disappears.</b></p>                                                                                           |
| <b>Alarm output level</b>          | <p><b>High</b> —when an alarm event occurs, <b>up to 5V voltage will be applied to the contacts of the alarm output.</b></p> <p><b>Low</b> —when an alarm event occurs, the alarm output contacts <b>will be de-energized.</b></p>                                                                                                |
| <b>Switching to the night mode</b> | Select <b>Enable</b> to let the camera automatically switch to black and white mode when the status of the alarm input changes.                                                                                                                                                                                                   |
| <b>Current input</b>               | Current alarm input state.                                                                                                                                                                                                                                                                                                        |
| <b>Current output</b>              | <p>Select the camera alarm output state that corresponds to the alarm event occurrence:</p> <ul style="list-style-type: none"> <li>• <b>Low</b>;</li> <li>• <b>High</b>;</li> <li>• <b>Schedule</b> - The alarm input will operate according to the schedule;</li> <li>• <b>Close</b> - The alarm input is turned off.</li> </ul> |

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

#### 3.4.6.2.2 "Schedule" tab

Go to the **Schedule** tab in the **I/O Alarm** settings menu to set up alarm inputs and outputs schedule.

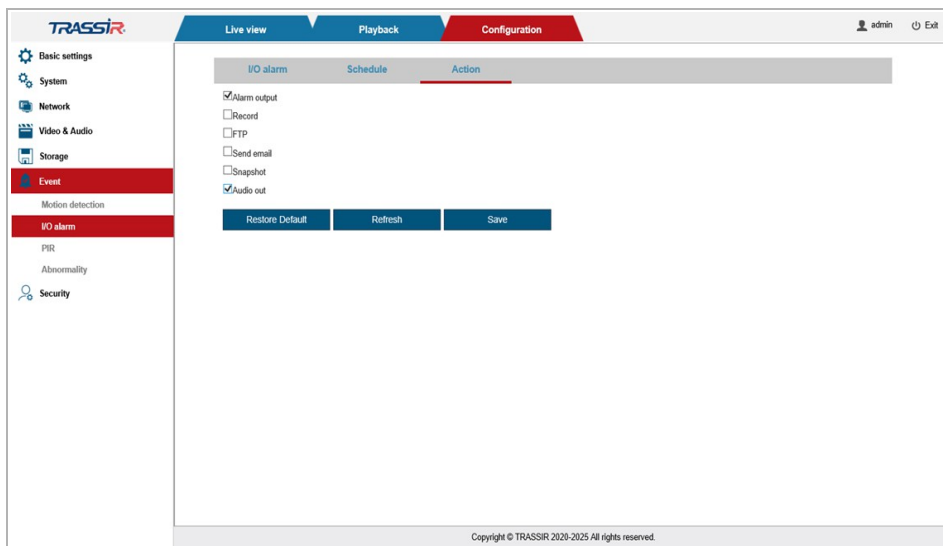


#### NOTE.

Alarm inputs and outputs operation schedule is configured the same way as in **Motion detection** section (see section 3.4.6.1.2).

### 3.4.6.2.3 "Action" tab

Go to the **Action** tab in the **I/O Alarm settings** menu in order to set up reactions on alarm inputs and outputs triggering.



#### NOTE.

The reactions on alarm inputs and outputs triggering are configured the same way as in **Motion detection** section (see 3.4.6.2.3).

## 3.4.6.3 "PIR" menu

**WARNING!**

**Not supported on these devices.**

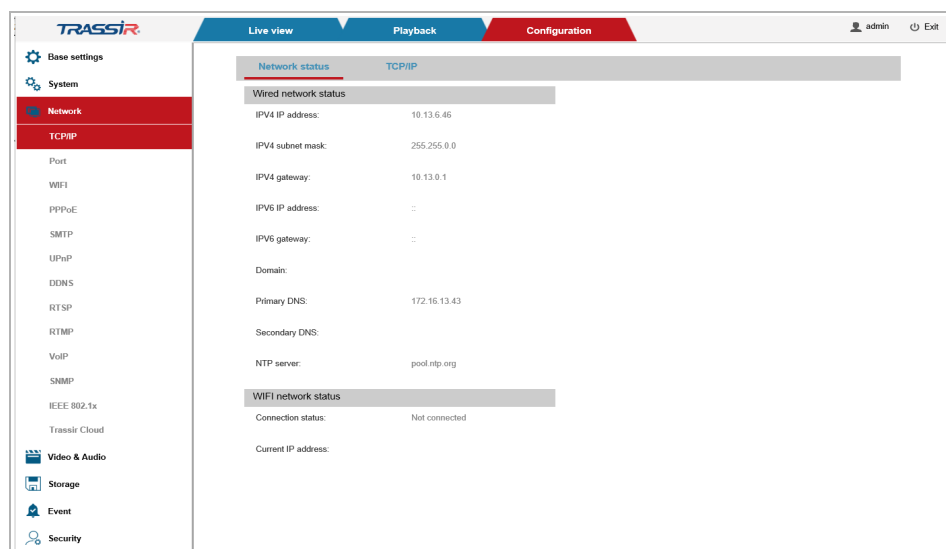
## 3.4.6.4 "Abnormality" menu

The menu consists of the additional tabs which allow to:

- ◆ **Network disconnection** —configure actions in case of network disconnection (see section 3.4.6.4.1);
- ◆ **Device startup** — configure action on the device start (see section 3.4.6.4.2).

## 3.4.6.4.1 "Network disconnection" tab

In order to set up reactions in case of device connection loss, go to the **Network disconnection** tab in the **Abnormality** settings menu.



Set the **Enable** flag to activate the setting.

Specify time which will determine the event occurrence, from **0** to **300** seconds in the **Trigger Interval Min.** time field. If an alarm event lasts less than the specified time, then it is considered not to have occurred.

Select one or several reactions on camera connection loss by checking the corresponding boxes:

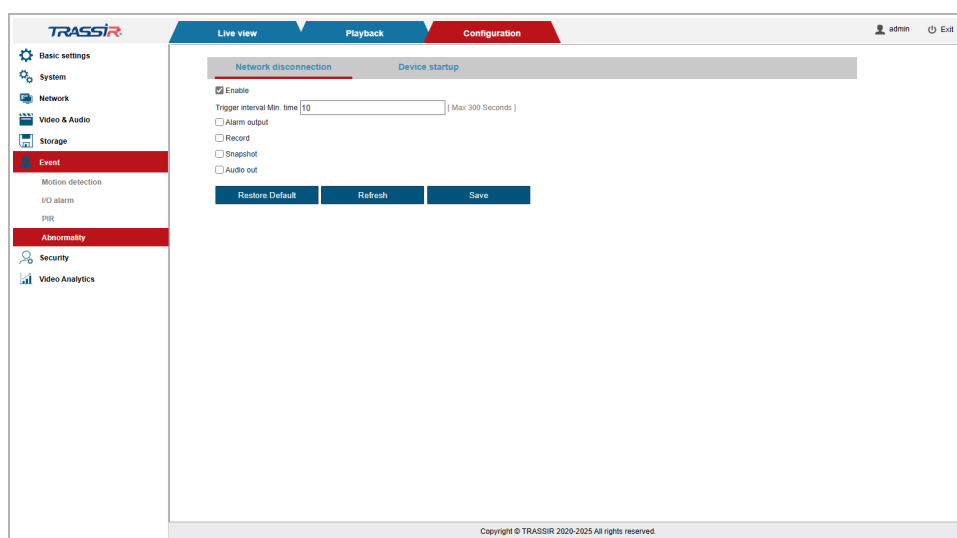
- ◆ **Alarm output** —close alarm output (see 3.4.6.2).
- ◆ **Record** —record video to the archive. You can see record settings description in 3.4.6.1.2.
- ◆ **Snapshot** —save snapshot to the archive (see 3.4.4.3).
- ◆ **Audio out** —Enable alarm sound. You can see audio settings description in 3.4.4.1.

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

### 3.4.6.4.2 "Device startup" tab

In order to set up reactions on device startup go to the **Device startup** tab in the **Abnormality** settings menu.



Set the **Enable** flag to activate the setting.

Select one or several reactions on the camera startup by checking the corresponding boxes

#### NOTE.

The reactions are configured the same way as in **Motion detection** section (see 3.4.6.2.3).

### 3.4.7 "Security" menu

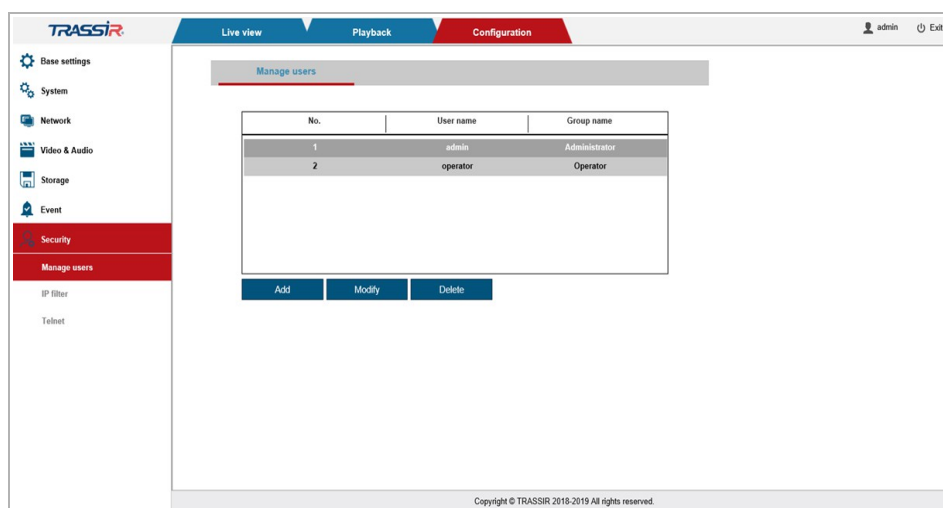
Open the **Security** menu.

The menu consists of the following sections which allow to:

- ◆ **Manage Users** —configure IP camera access parameters (see section 3.4.7.1);
- ◆ **IP Filter** —restrict access to the IP camera from one or several network devices (see section 3.4.7.2);
- ◆ **Telnet** —set up Telnet connection (see section 3.4.7.3).

#### 3.4.7.1 "Manage users" menu

Go to the **Manage Users** section in the **Security** settings menu.



This group of settings lets you create a new user, set up access password and customize user access to the IP camera settings.

In order to modify user settings or delete a user select it from the list and press **Modify** or **Delete** correspondingly.

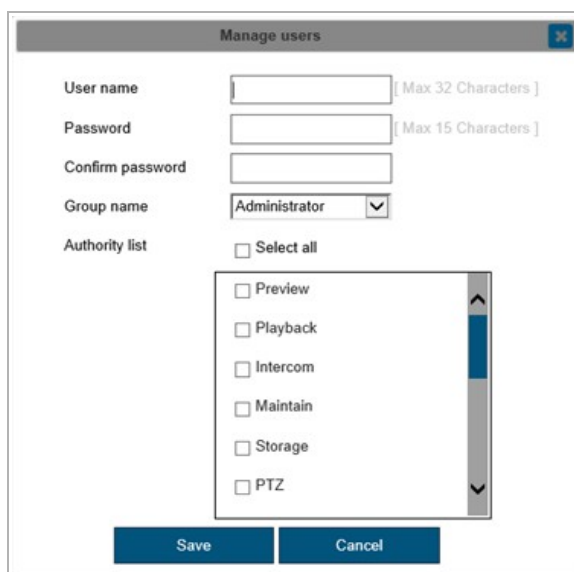
#### NOTE.

There is already a user with the **Administrator** rights in the IP camera settings by default.

#### WARNING!

We strongly recommend to change the Administrator rights upon first connection to the IP camera web interface.

Press **Add** to create a new user.



| Setting                 | Description                                                                                                                                                                                                                                                  |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Username</b>         | User name to authorize.                                                                                                                                                                                                                                      |
| <b>Password</b>         | Password to the IP camera web interface.                                                                                                                                                                                                                     |
| <b>Confirm Password</b> | Enter IP camera web interface password again.                                                                                                                                                                                                                |
| <b>User Group</b>       | User group to which current user belongs to: <ul style="list-style-type: none"> <li>◆ <b>Administrator</b> — full user;</li> <li>◆ <b>Operator</b> — user with operator rights;</li> <li>◆ <b>Viewer</b> — user with the rights to view log only.</li> </ul> |
| <b>Authority list</b>   | Set the corresponding flags to set up user rights.                                                                                                                                                                                                           |

Uncheck the corresponding boxes to change the current user authority list.

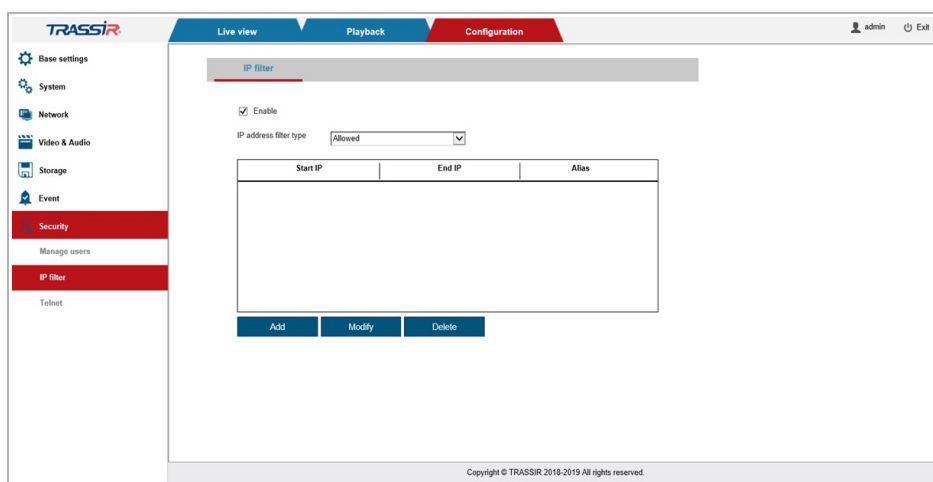
Press **Save** to save the changes.

## 3.4.7.2 "IP filter" menu

**WARNING!**

Before starting to configure IP filtering make sure the IP address of the PC where the IP camera is being set up is in the address white list. Otherwise access to the further IP camera settings will be blocked.

Go to the **IP Filter** section in the **Security** settings menu to open the menu.



Use IP filtering settings to restrict access to the IP camera from one or several network devices.

Select **Enable IP Filtering** to activate the setting.

In order to add the IP address to the allowed or forbidden addresses list select **Allowed** or **Forbidden**, respectively, in the **IP address filter type** block and press **Add**.

The **IP Filter** window will open. Enter the **Start IP** and **End IP** of the range into the corresponding fields. Enter the name of the IP address range in the **Alias** field.

Press **Save** to save the changes.

In order to modify or delete the created filter select it from the list and press **Modify** or **Delete** correspondingly.

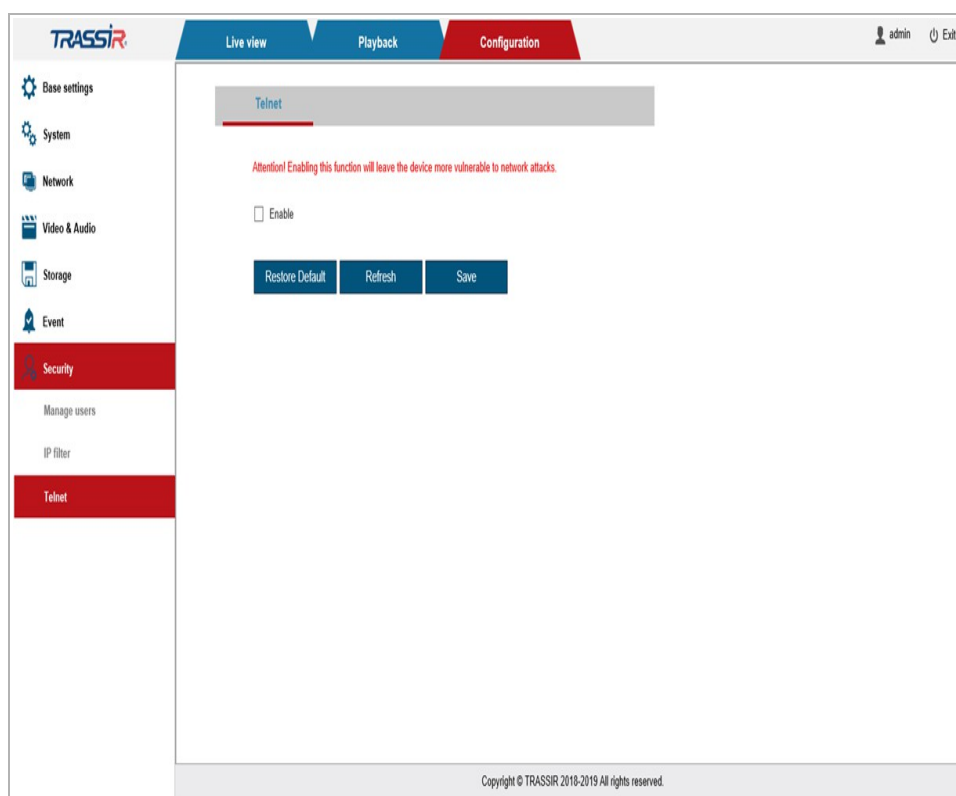
## 3.4.7.3 "Telnet" menu

**WARNING!**

It is recommended to enable this feature only in case of emergency, since when it is turned on, the device may not be protected from attacks from the network.

The Telnet feature may be necessary to remotely connect to the camera through the service console.

Open the **Telnet** section in the **Security** settings menu to configure connection via Telnet.



Set the **Enable** flag to allow remote connection to the camera.

Press **Restore default** to restore the default settings.

Press **Save** to save the changes.

### 3.4.8 "Video analytics" menu

Open **Video analysis** menu. It consists of the following sections which allow to:

- ◆ **Facial detection** —configure main facial detection parameters (see section 3.4.8.1);
- ◆ **People Counting** —set up counting the number of people crossing the board in one of the preset directions (see section 3.4.8.2);
- ◆ **Human Detection** —configure human detection (see section 3.4.8.3);
- ◆ **Vehicle Detection** —set up vehicle detection (see section 3.4.8.4);
- ◆ **Line-crossing Detection** —configure detection of people crossing the line in one of the preset directions (see section 3.4.8.5);
- ◆ **Intrusion Detection** —configure detection of intrusion to the preset area (see section 3.4.8.6);
- ◆ **Loitering** —set up detection of loitering people in the preset area (see section 3.4.8.7).

#### WARNING!

Simultaneous use of Video analytics, WIFI, TRASSIR Cloud and HTTPS can lead to unstable operation of the following camera models: TR-D2121CL3W, TR-D2121IR3Wv3, TR-D2121IR3Wv3, TR-D3121IR2Wv3, TR-D7121IR1Wv3, TR-D8121IR2Wv3.

### 3.4.8.1 "Facial detection" menu

This menu allows configuring main facial detection and recognition parameters.

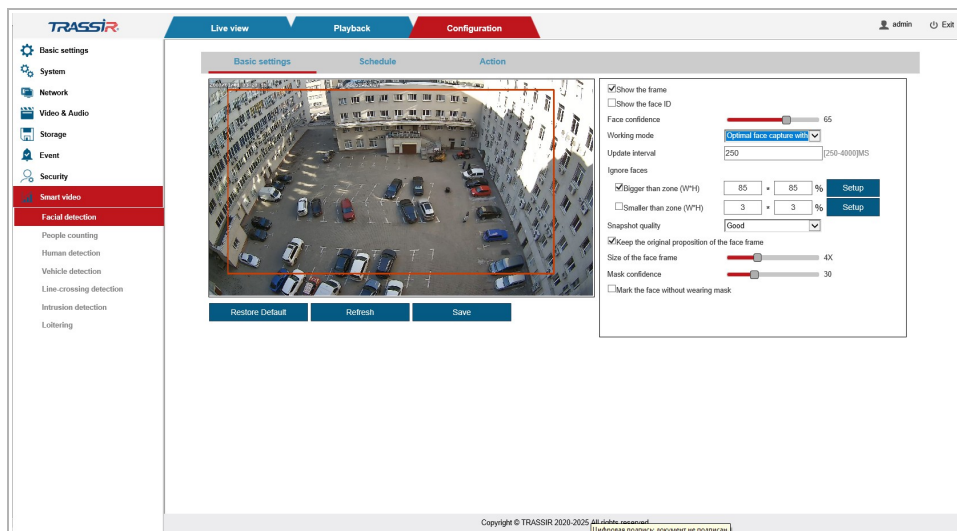
Go to **Facial Detection** section in the **Video analysis** to open.

The menu consists of additional tabs which allows to:

- ◆ **Basic settings** —configure basic facial detection parameters (see 3.4.8.1.1);
- ◆ **Schedule** —set up detector schedule (see 3.4.8.1.2);
- ◆ **Action** —set up actions upon facial detection (see 3.4.8.1.3).

## 3.4.8.1.1 "Basic settings" tab

Open the **Basic settings** tab in the **Facial detection** settings menu in order to set up basic detection parameters.



| Setting                                         | Description                                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Show the frame                                  | Set the flag to highlight recognized people on video with a frame.                                                                                                                                                                                                                                                  |
| Show the face ID                                | Set the flag to display unique ID on a recognized person on video.                                                                                                                                                                                                                                                  |
| Face confidence                                 | Configure detector confidence threshold. The higher the value is, the lesser is the probability of false positives.                                                                                                                                                                                                 |
| Working mode                                    | Detector working mode: <ul style="list-style-type: none"> <li><b>Optimal face capture with specified time intervals</b>—the detector will search for faces within a set period of time.</li> <li><b>Optimal face capture in a specified area</b>—the detector will search for faces in a specified zone.</li> </ul> |
| Update interval                                 | The time period, after which the detector restarts searching for faces in the frame, in seconds, for <b>Optimal face capture with specified time intervals</b> working mode.                                                                                                                                        |
| Min stay time                                   | Set the minimal time of a person in the frame, in seconds, after which the detector will be triggered, for <b>Optimal face capture in a specified area</b> working mode.                                                                                                                                            |
| Capture delay time                              | The time period, recorded upon the detector triggering, for <b>Optimal face capture in a specified area</b> working mode.                                                                                                                                                                                           |
| Ignore faces                                    | Set the flag for detector to ignore the objects of specified size: <b>Bigger than zone W*H</b> or <b>Smaller than zone W*H</b> . Press <b>Setup</b> to save changes.                                                                                                                                                |
| Snapshot quality                                | Select the snapshot quality.                                                                                                                                                                                                                                                                                        |
| Keep the original proposition of the face frame | Set the flag to keep the proportions of the recognized face when you increase the size of the frame.                                                                                                                                                                                                                |
| Size of the face frame                          | Set the frame size in relation to the recognized face.                                                                                                                                                                                                                                                              |

| Setting                            | Description                                                                                                                                                  |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mask confidence                    | Set the threshold of confidence that there is a protective mask on a recognized face. The higher the value is, the lower is the probability of false alarms. |
| Mark the face without wearing mask | Set the flag for the detector to detect and highlight faces without protective mask on video.                                                                |

Press **Restore Default** to restore the default settings.

Press **Save** to save the changes.

#### 3.4.8.1.2 "Schedule" tab

Open the **Schedule** tab in the **Facial Detection** settings menu to set up facial detection schedule.

#### NOTE.

The facial detection schedule is configured the same way as on the **Schedule** tab in **Motion detection** section (see section 3.4.6.1.2).

#### 3.4.8.1.3 "Action" tab

In order to set up reactions on human detection open the **Action** tab in the **Facial detection** settings menu.

#### NOTE.

The reactions upon the detector triggering are configured the same way as on the **Action** tab in the **Motion detection** settings menu (see section 3.4.6.1.3).

### 3.4.8.2 "People counting" menu

This menu allows configuring the counting of the amount of people crossing the border in one of the preset direction.

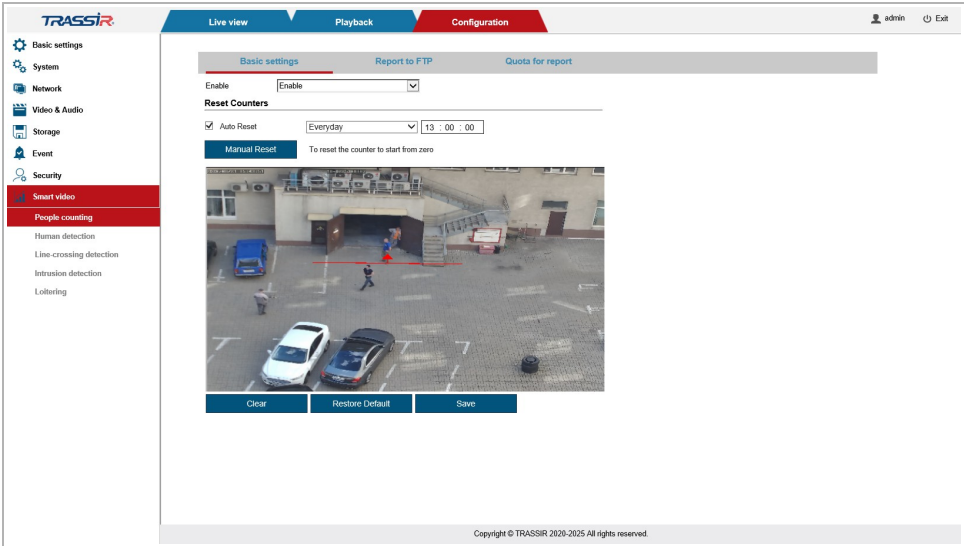
Go to the **People Counting** section in the **Video analysis** menu to open.

The section consists of the following tabs which allow to:

- ◆ **Basic settings** —set up border for people counting (see section 3.4.8.2.1);
- ◆ **Report to FTP** —configure report to FTP sending (see section 3.4.8.2.2);
- ◆ **Quota for report** —check the statistics of the reports sent ( see section 3.4.8.2.3).

3.4.8.2.1 "Basic settings" tab

In order to set up border for counting people open the **Basic settings** tab in the **People Counting** settings menu.



Select **Enable** from the dropdown menu in order to activate the setting.

Left-click on the preview window and draw the border. Only one border can be drawn.

Upon the border crossing the amount of crossings in both directions will be displayed on the preview window and the alarm signal will blink, as well (see section 3.2).



There is a **Reset counters** field that lets you select the way to reset the border crossing counter:

| Setting      | Description                                                                                 |
|--------------|---------------------------------------------------------------------------------------------|
| Auto Reset   | Set the flag for automatic reset. Set the day and time of the reset in the adjacent fields. |
| Manual reset | Press the button to reset the counter manually.                                             |

Press **Clear** to remove the border.

Press **Restore Default** to restore the default settings.

Press **Save** to save the changes.

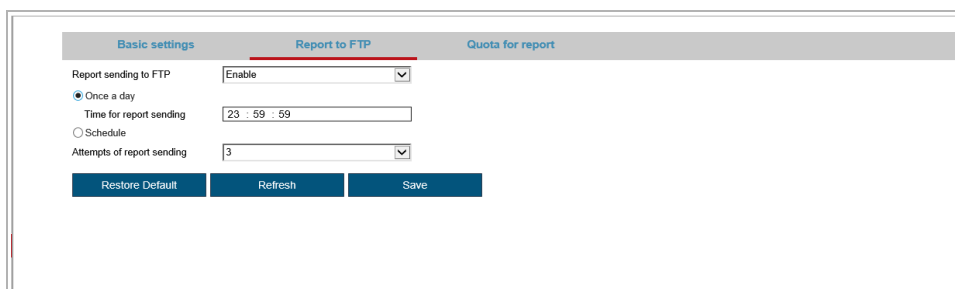
### 3.4.8.2.2 "Report to FTP" tab

#### NOTE.

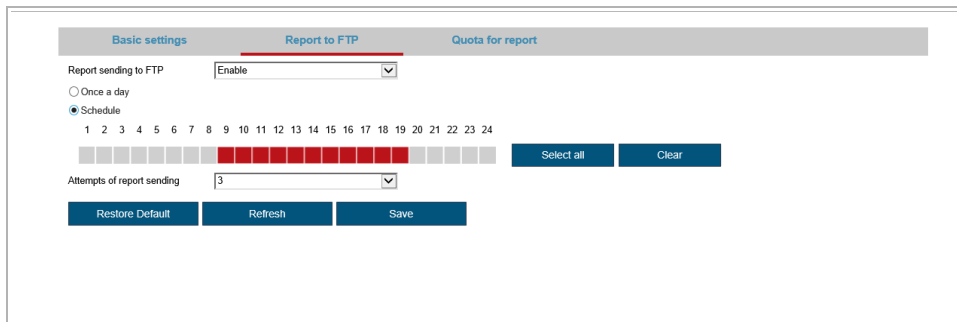
You can read about FTP settings in section 3.4.5.3.

Open the **Report to FTP** tab in the **People Counting** settings menu in order to configure people counting report settings.

Set the **Enable** value in the **Report to FTP** dropdown list, in order to use the setting, and select the way to send the report:



| Setting                           | Description                                                                                 |
|-----------------------------------|---------------------------------------------------------------------------------------------|
| <b>Once a day</b>                 | Set the flag to send the report once a day and select the time of sending in the box below. |
| <b>Time for report sending</b>    | Set up time of report sending.                                                              |
| <b>Attempts of report sending</b> | Set up number of attempts of the report sending, from <b>1</b> to <b>5</b> .                |



The screenshot shows the 'Report to FTP' configuration page. It has three tabs: 'Basic settings', 'Report to FTP' (active), and 'Quota for report'. Under 'Report to FTP', there is a 'Report sending to FTP' dropdown set to 'Enable'. Below this are two radio buttons: 'Once a day' (unselected) and 'Schedule' (selected). The 'Schedule' section shows a 24-hour grid where hours 9 through 18 are highlighted in red. To the right of the grid are 'Select all' and 'Clear' buttons. Below the grid is an 'Attempts of report sending' dropdown set to '3'. At the bottom are three buttons: 'Restore Default', 'Refresh', and 'Save'.

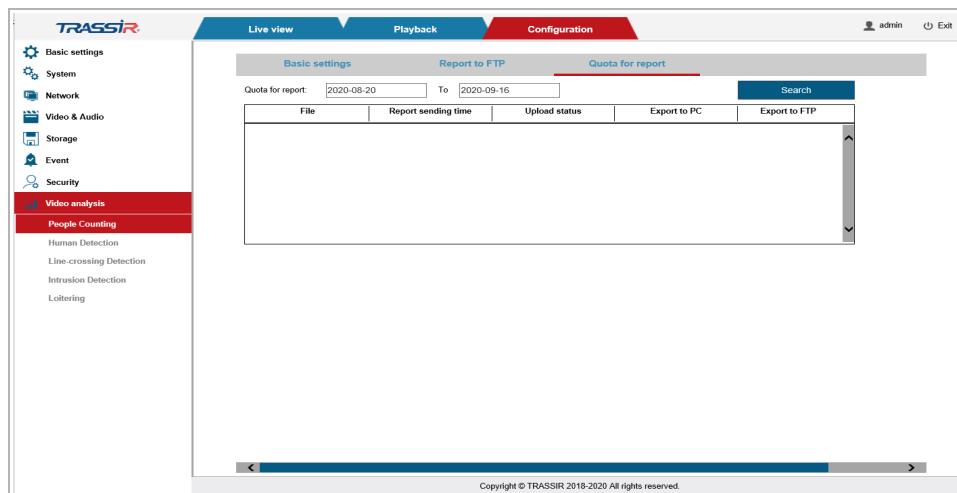
| Setting                           | Description                                                                                  |
|-----------------------------------|----------------------------------------------------------------------------------------------|
| <b>Schedule</b>                   | Set the flag to send the report by schedule. Set the sending time period in the opened menu. |
| <b>Attempts of report sending</b> | Set up number of attempts of the report sending, from <b>1</b> to <b>5</b> .                 |

Press **Restore Default** to restore the default settings.

Press **Save** to save the changes.

### 3.4.8.2.3 "Quota for Report" tab

In order to check the status of the sent reports open the **Quota for report** tab in the **People Counting** settings menu.



Set the time range for which you would like to check the reports in the **Quota for report** and **To** fields.

The information will be presented as the list of files. You can save the report to your PC or FTP by pressing **Export**.

### 3.4.8.3 "Human Detection" menu

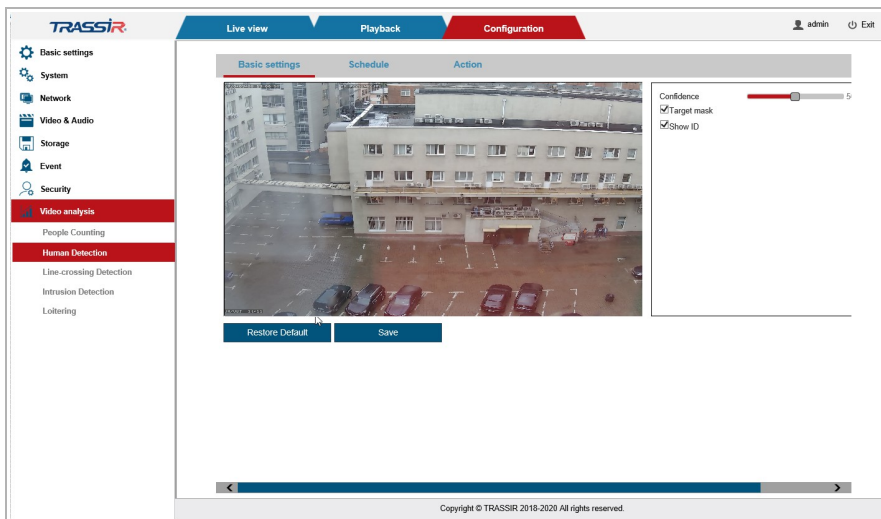
This menu allows you to set up human detection. Go to the **Human Detection** in the **Video analysis** menu to open.

The menu consists of the additional tab which allow to:

- ◆ **Basic settings** —configure basic detector settings (see section 3.4.8.3.1);
- ◆ **Schedule** —set up detector schedule (see section 3.4.8.3.2);
- ◆ **Action** —configure actions on human detection ( see section 3.4.8.3.3).

### 3.4.8.3.1 "Basic settings" tab

Open the **Basic settings** tab in the **Human Detection** settings menu to set up human detector.



| Setting            | Description                                                                                                         |
|--------------------|---------------------------------------------------------------------------------------------------------------------|
| <b>Confidence</b>  | Configure detector confidence threshold. The higher the value is, the lesser is the probability of false positives. |
| <b>Target mask</b> | Set the flag to highlight the recognized people on video with a frame.                                              |
| <b>Show ID</b>     | Set the flag to display a unique identifier above each recognized person.                                           |

Press **Restore Default** to restore the default settings.

Press **Save** to save the changes.

### 3.4.8.3.2 "Schedule" tab

Open the **Schedule** tab in the **Human Detection** settings menu to set up human detection schedule.

#### NOTE.

The human detector schedule is configured the same way as on the **Schedule** tab in **Motion detection** section (see section 3.4.6.1.2).

### 3.4.8.3.3 "Action" tab

In order to set up reactions on human detection open the **Action** tab in the **Human detection** settings menu.

#### NOTE.

The reactions upon the detector triggering are configured the same way as on the **Action** tab in the **Motion detection** settings menu (see section 3.4.6.1.3).

### 3.4.8.4 "Vehicle detection" menu

The menu allows you to set up vehicle detection.

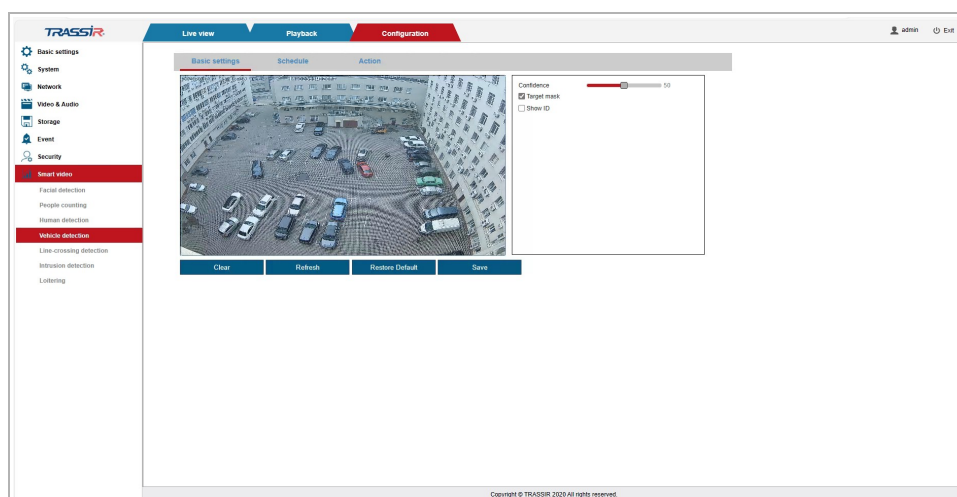
Go to **Vehicle Detection** of the **Video analysis** menu to open.

The menu consists of the additional tabs which allows you to:

- ◆ **Basic settings** —configure basic detector settings (see 3.4.8.4.1);
- ◆ **Schedule** —configure detector schedule (see 3.4.8.4.2);
- ◆ **Action** —set up actions upon vehicle detection (see 3.4.8.4.3).

#### 3.4.8.4.1 "Basic settings" tab

Open the **Basic settings** tab in the **Vehicle Detection** settings menu to set up vehicle detector.



Use left mouse button to define a detection zone on video. You can use the entire area as a zone, to do this press **Full screen**.

| Setting            | Description                                                                                                         |
|--------------------|---------------------------------------------------------------------------------------------------------------------|
| <b>Confidence</b>  | Configure detector confidence threshold. The higher the value is, the lesser is the probability of false positives. |
| <b>Target mask</b> | Set the flag to highlight the recognized vehicle on video with a frame.                                             |
| <b>Show ID</b>     | Set the flag to display a unique identifier above each recognized vehicle on video.                                 |

Press **Restore Default** to restore the default settings.

Press **Save** to save the changes.

### 3.4.8.4.2 "Schedule" tab

Open the **Schedule** tab in the **Vehicle Detection** settings menu to set up human detection schedule.

#### NOTE.

The vehicle detector schedule is configured the same way as on the **Schedule** tab in **Motion detection** section (see section 3.4.6.1.2).

### 3.4.8.4.3 "Action" tab

In order to set up reactions on human detection open the **Action** tab in the **Vehicle detection** settings menu.

#### NOTE.

The reactions upon the detector triggering are configured the same way as on the **Action** tab in the **Motion detection** settings menu (see section 3.4.6.1.3).

#### 3.4.8.5 "Line Crossing" menu

The menu allows to set up detection of the line crossing in one of the preset directions.

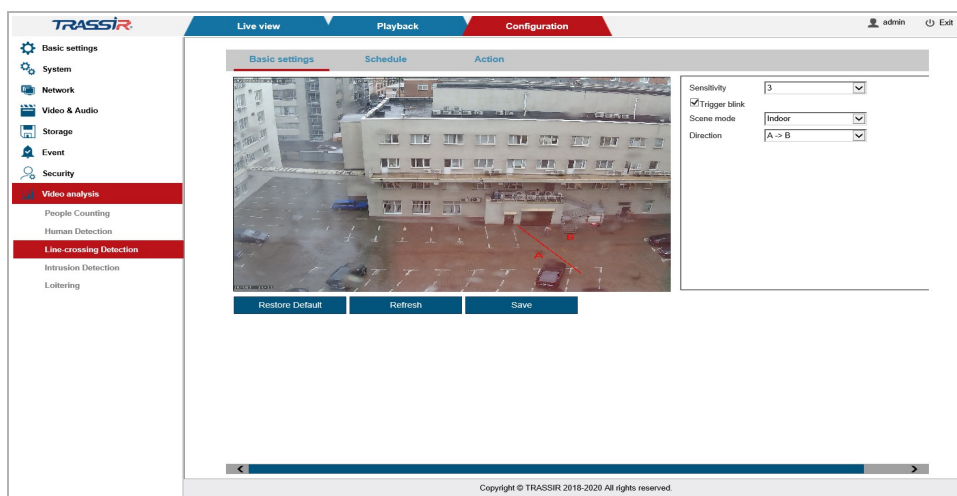
Go to the **Line crossing** section in **Video analysis** settings menu to open.

The menu consists of the additional tabs which allow to:

- ◆ **Basic settings** —set up basic parameters of line crossing detector (see section 3.4.8.5.1);
- ◆ **Schedule** —set up detector schedule (see section 3.4.8.5.2);
- ◆ **Action** —select actions upon the configured line crossing (see section 3.4.8.5.3).

## 3.4.8.5.1 "Basic settings" tab

To set up line crossing detector go to the **Basic settings** tab in **Line Crossing** settings menu.



Left-click on the preview window to draw the line. You can draw only one line and customize the following parameters:

| Setting              | Description                                                                                                                                                                                               |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Sensitivity</b>   | Set up the detector sensitivity threshold, from <b>1</b> to <b>4</b> . The higher the value is, the lesser is the probability of false positives.                                                         |
| <b>Trigger blink</b> | Set the flag to activate frame blinking upon the line crossing.                                                                                                                                           |
| <b>Scene mode</b>    | Select the detector scene mode: <b>Outdoor</b> or <b>Indoor</b> .                                                                                                                                         |
| <b>Direction</b>     | Select line crossing direction: <ul style="list-style-type: none"> <li>◆ <b>A&lt;-&gt;B</b> — both ways;</li> <li>◆ <b>A-&gt;B</b> — left to right;</li> <li>◆ <b>B-&gt;A</b> — right to left.</li> </ul> |

Press **Restore Default** to restore the default settings.

Press **Save** to save the changes.

#### 3.4.8.5.2 "Schedule" tab

Open the **Schedule** tab in the **Line Crossing** settings menu to set up line crossing detector schedule.

---

**NOTE.**

The line crossing detector schedule is configured the same way as on the **Schedule** tab in **Motion detection** section (see section 3.4.6.1.2).

#### 3.4.8.5.3 "Action" tab

In order to set up reactions on line crossing open the **Action** tab in the **Line Crossing** settings menu.

---

**NOTE.**

The reactions upon the detector triggering are configured the same way as on the **Action** tab in the **Motion detection** settings menu (see section 3.4.6.1.3).

### 3.4.8.6 "Intrusion Detection" menu

The menu allows to set up detection of unauthorized intrusion to a specific territory.

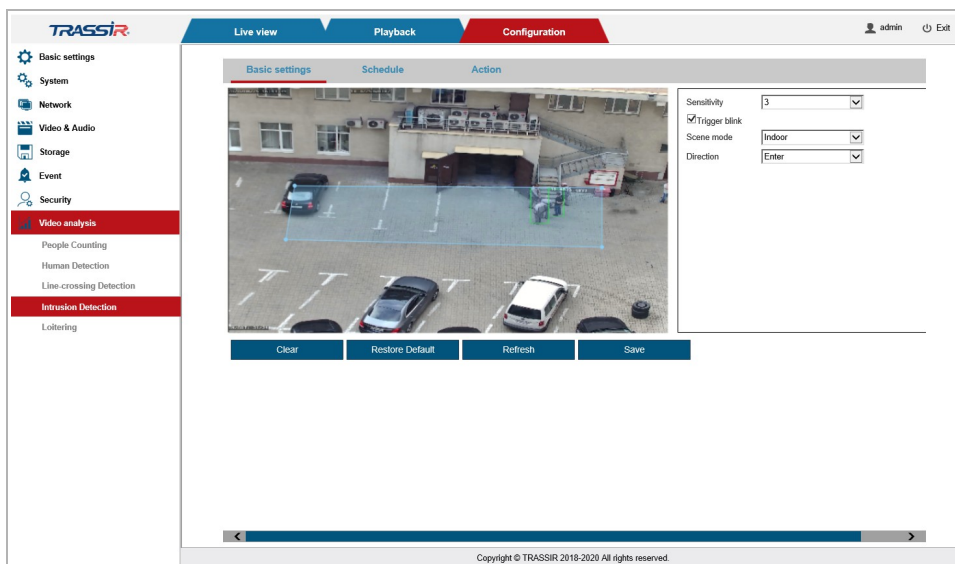
Go to the **Intrusion Detection** section in the **Video analysis** settings menu to open.

The menu consists of the additional tabs which allow to:

- ◆ **Basic settings** —configure basic detector parameters (see section 3.4.8.6.1);
- ◆ **Schedule** —set up detector schedule (see section 3.4.8.6.2);
- ◆ **Action** —select actions on intrusion detection (see section 3.4.8.6.3).

### 3.4.8.6.1 "Basic settings" tab

In order to configure the detector's settings open the **Basic settings** tab in the **Intrusion detection** settings menu.



Left-click on the preview window to specify the area which will be monitored. Set up the following parameters for this area:

| Setting              | Description                                                                                                                                            |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Sensitivity]</b>  | Set up the detector sensitivity threshold, from <b>1</b> to <b>4</b> . The higher the value is, the lesser is the probability of false positives.      |
| <b>Trigger blink</b> | Set the flag to activate frame blinking upon the specified area intrusion detection.                                                                   |
| <b>Scene mode</b>    | Select the detector scene mode: <b>Outdoor</b> or <b>Indoor</b> .                                                                                      |
| <b>Direction</b>     | Select the zone intrusion direction: <ul style="list-style-type: none"> <li>◆ <b>Left</b>;</li> <li>◆ <b>Enter</b>;</li> <li>◆ <b>Both</b>.</li> </ul> |

Press **Restore Default** to restore the default settings.

Press **Save** to save the changes.

### 3.4.8.6.2 "Schedule" tab

Open the **Schedule** tab in the **Intrusion Detection** settings menu to set up line crossing detector schedule.

#### NOTE.

The intrusion detector schedule is configured the same way as on the **Schedule** tab in **Motion detection** section (see section 3.4.6.1.2).

### 3.4.8.6.3 "Action" tab

In order to set up reactions on line crossing open the **Action** tab in the **Intrusion Detection** settings menu.

#### NOTE.

The reactions upon the detector triggering are configured the same way as on the **Action** tab in the **Motion detection** settings menu (see section 3.4.6.1.3).

### 3.4.8.7 "Loitering" Menu

The menu allows to configure the detection of loitering people on a specified area.

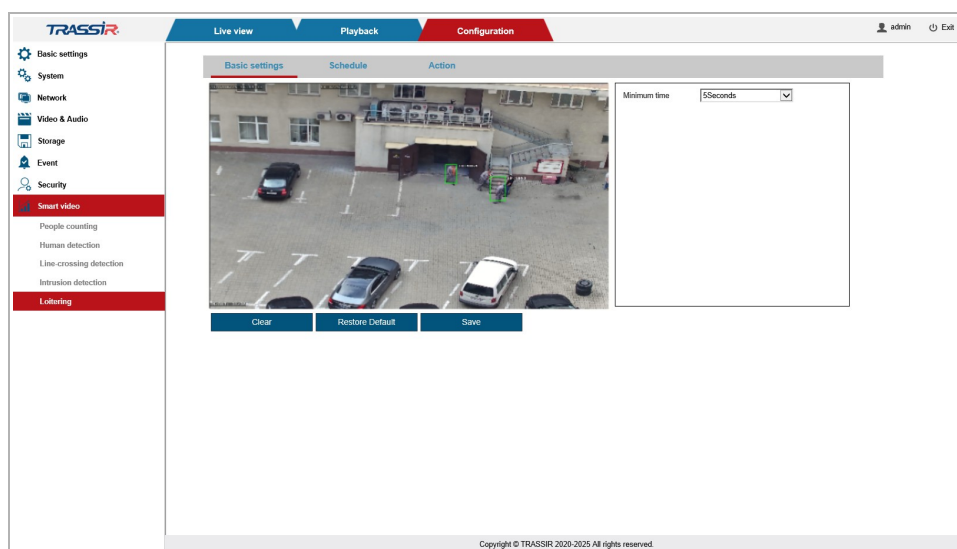
Go to the **Loitering** section in the **Video analysis** settings menu to open.

The menu consists of the additional tabs which allow to:

- ◆ **Basic settings** —configure basic detector parameters (see section 3.4.8.7.1);
- ◆ **Schedule** —set up detector schedule (see section 3.4.8.7.2);
- ◆ **Action** —select actions on intrusion detection (see section 3.4.8.7.3).

#### 3.4.8.7.1 "Basic settings" tab

In order to set up basic parameters of the loitering detector open the **Basic settings** tab in the **Loitering** settings menu.



Left-click to create loitering people detection zone on video preview. Set the time allowed on the specific territory in the **Minimum** time field - **5**, **10** or **15** s. Upon the expiration of this time the detector will trigger.

Press **Restore Default** to restore the default settings.

Press **Save** to save the changes.

### 3.4.8.7.2 "Schedule" tab

Open the **Schedule** tab in the **Loitering** settings menu to set up line crossing detector schedule.

#### NOTE.

The intrusion detector schedule is configured the same way as on the **Schedule** tab in **Motion detection** section (see section 3.4.6.1.2).

### 3.4.8.7.3 "Action" tab

In order to set up reactions on line crossing open the **Action** tab in the **Loitering** settings menu.

#### NOTE.

The reactions upon the detector triggering are configured the same way as on the **Action** tab in the **Motion detection** settings menu (see section 3.4.6.1.3).

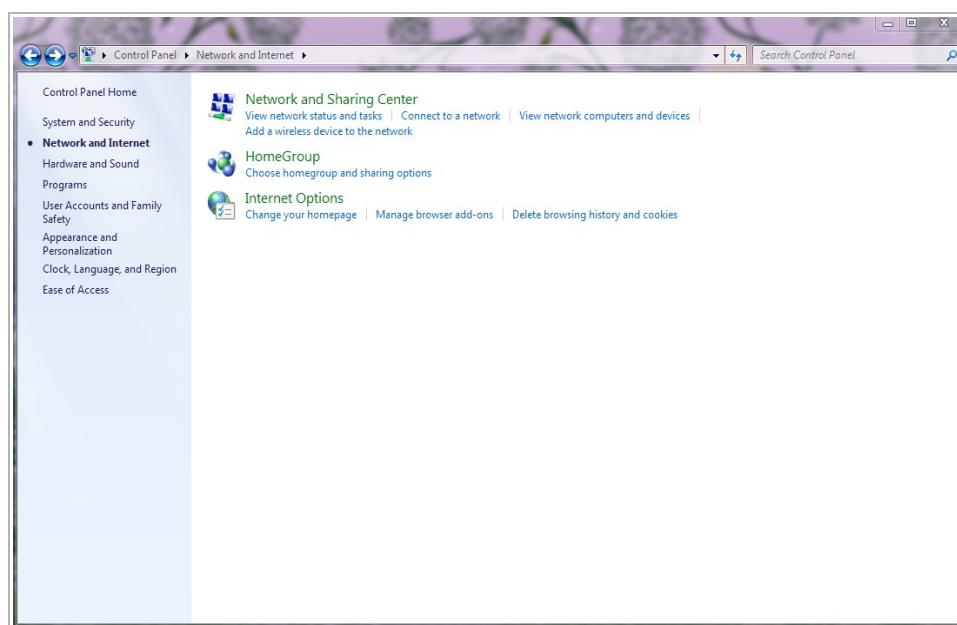
## SUPPLEMENT A. CONFIGURING NETWORK SETTINGS ON PC

### NOTE.

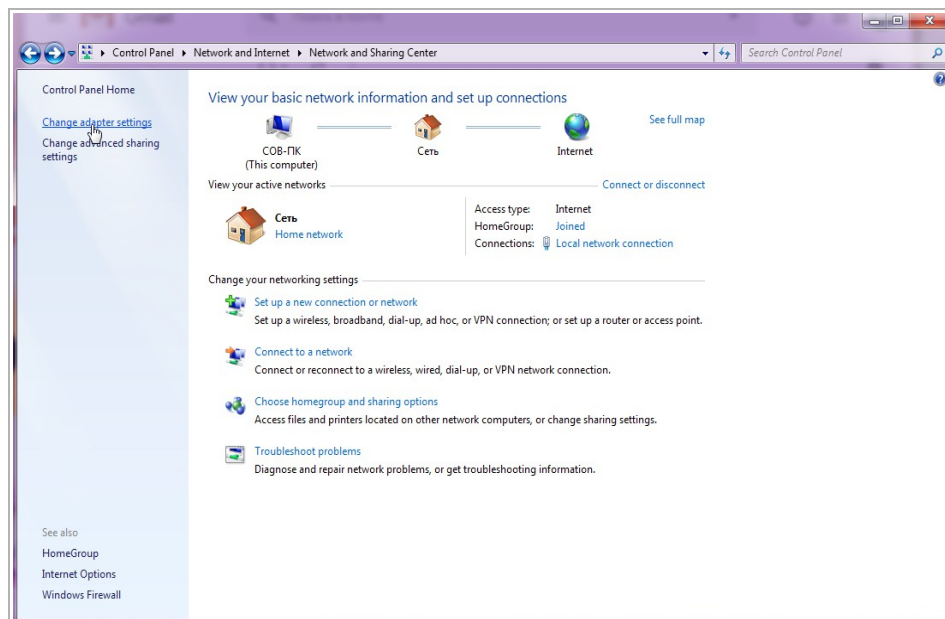
Description of network settings is presented on the example of Windows 7 operating system.

In order to access an IP camera, it is necessary that the PC and the camera are connected to the same subnet and have the corresponding IP addresses

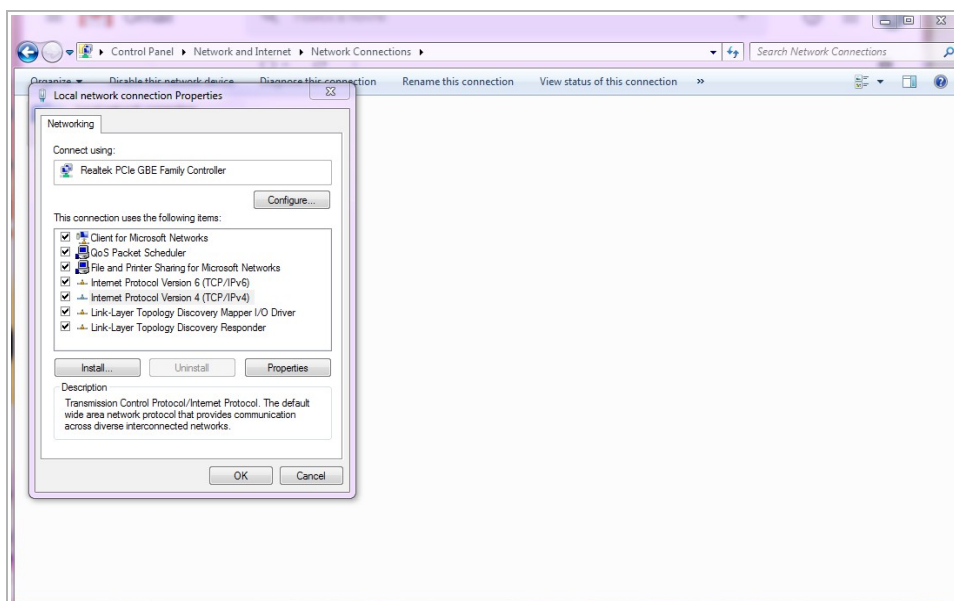
To do this, open **Control panel** (**Start** → **Control panel**) and run **Network and Internet**:



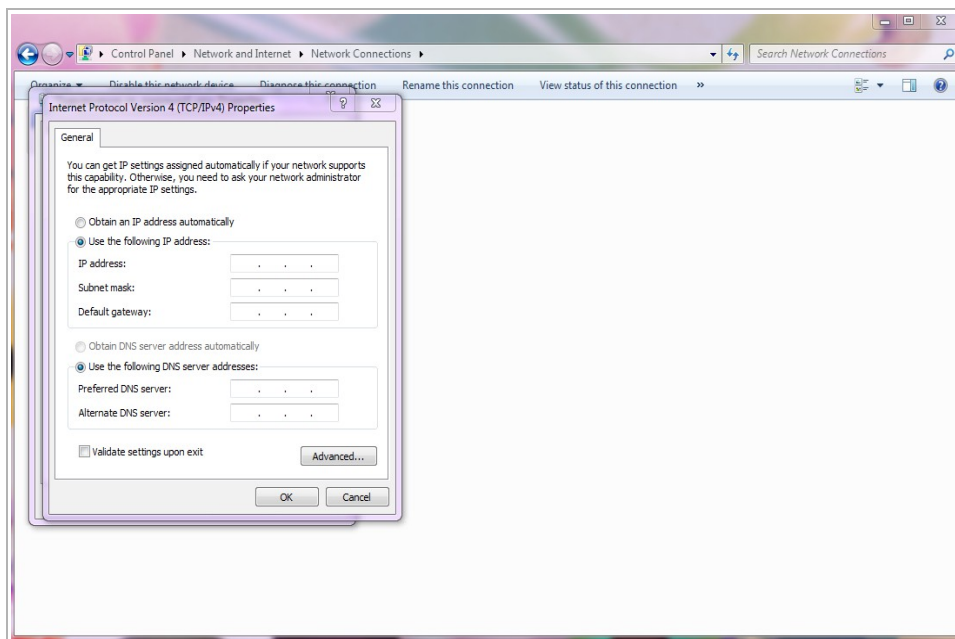
Go to the **Change adapter settings** menu:



Right click on adapter and press **Properties**:



In the opened window select **Internet Protocol Version 4 (TCP/IPv4)** and press **Properties**:



Select **Use the following IP address** and specify the required network settings (e.g. displayed on screenshot above).

Press **OK** in all opened windows to save the settings.

## SUPPLEMENT B. UTP CABLING

The IP camera is connected to the commutator (switch or router) using a «direct» cable with the following wiring:

|   |                                                                                   |              |              |                                                                                    |   |
|---|-----------------------------------------------------------------------------------|--------------|--------------|------------------------------------------------------------------------------------|---|
| 1 |  | white-orange | white-orange |  | 1 |
| 2 |  | orange       | orange       |  | 2 |
| 3 |  | white-green  | white-green  |  | 3 |
| 4 |  | blue         | blue         |  | 4 |
| 5 |  | white-blue   | white-blue   |  | 5 |
| 6 |  | green        | green        |  | 6 |
| 7 |  | white-brown  | white-brown  |  | 7 |
| 8 |  | brown        | brown        |  | 8 |

The IP camera is connected to the PC directly using «cross» cable with the following wiring:

|   |                                                                                     |              |              |                                                                                      |   |
|---|-------------------------------------------------------------------------------------|--------------|--------------|--------------------------------------------------------------------------------------|---|
| 1 |    | white-orange | white-green  |    | 1 |
| 2 |    | orange       | green        |    | 2 |
| 3 |    | white-green  | white-orange |    | 3 |
| 4 |    | blue         | blue         |    | 4 |
| 5 |   | white-blue   | white-blue   |   | 5 |
| 6 |  | green        | orange       |  | 6 |
| 7 |  | white-brown  | white-brown  |  | 7 |
| 8 |  | brown        | brown        |  | 8 |

## SUPPLEMENT C. ROUTER SETTINGS

If the IP camera and the computer from which the connection is established are located in different local networks (e.g., the connection is via the Internet), in order to gain access to the IP camera it is necessary to configure the forwarding of network ports on the NAT server or router.

The IP camera uses the following network ports by default:

| Port          |      |                          |
|---------------|------|--------------------------|
| Port settings |      |                          |
| HTTP port     | 80   | [1..65535, Default 80]   |
| RTSP port     | 554  | [1..65535, Default 554]  |
| Service port  | 6000 | [1..65535, Default 6000] |
| RTMP port     | 1935 | [1..65535, Default 1935] |

We will consider the configuration of port forwarding on the example of ZTE ZXHN F680 router.

Specify IP camera port random values. The port values for each IP camera should be unique and can't be used on the router for other services.

### NOTE.

See description of the network ports in 3.4.3.2.

For example, you can set the following values:

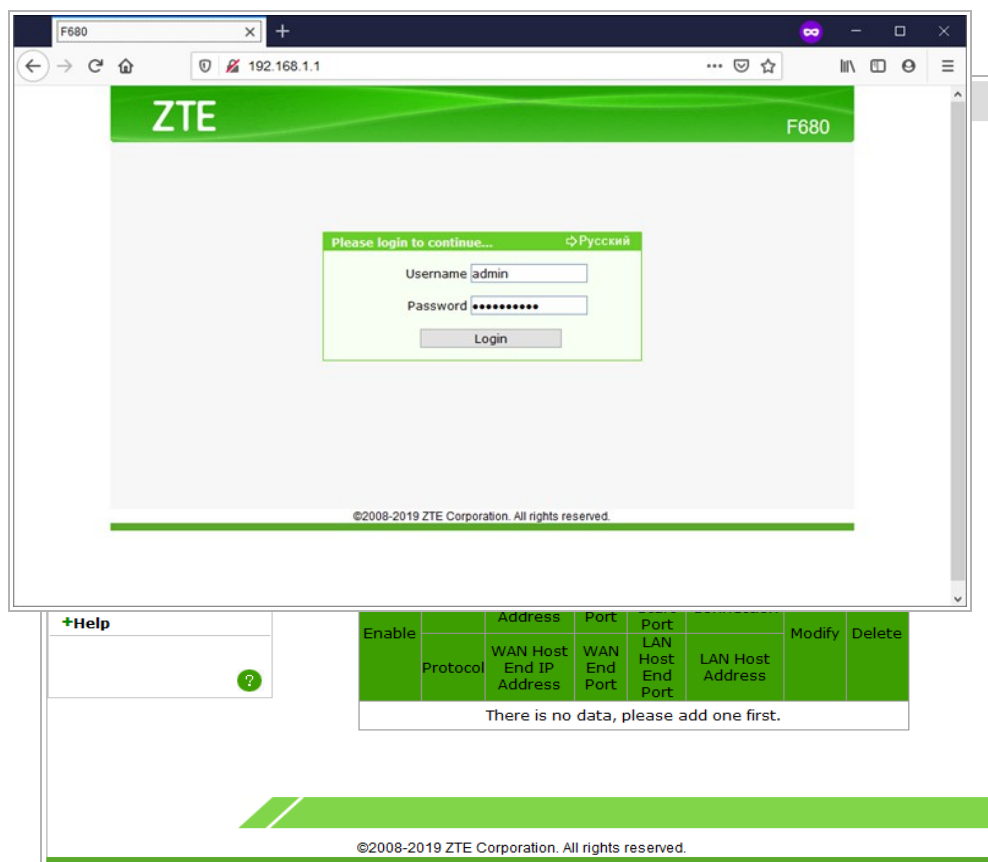
| Port          |      |                          |
|---------------|------|--------------------------|
| Port settings |      |                          |
| HTTP port     | 8080 | [1..65535, Default 80]   |
| RTSP port     | 554  | [1..65535, Default 554]  |
| Service port  | 60   | [1..65535, Default 6000] |
| RTMP port     | 5    | [1..65535, Default 1935] |

After that proceed to the router configuration.

### NOTE.

Your router settings may differ from the description below.

Start your web browser and enter the router IP address to access router administrator menu. As a result, the authorization window should appear:



Enter administrator login and password and press **Login**.

Go to the «Port forwarding» in the router settings menu (**Application → Port forwarding**):

As a result, a window for adding a forwarding port will open:

Path: Application-Port Forwarding русский [Logout](#)

Enable ☒

Name

Protocol

WAN Host Start IP Address

WAN Host End IP Address

WAN Connection

WAN Start Port

WAN End Port

Enable MAC Mapping ☐

LAN Host IP Address

LAN Host Start Port

LAN Host End Port

| Enable                                  | Name     | WAN Host Start IP Address | WAN Start Port | LAN Host Start Port | WAN Connection   | Modify | Delete |
|-----------------------------------------|----------|---------------------------|----------------|---------------------|------------------|--------|--------|
|                                         | Protocol | WAN Host End IP Address   | WAN End Port   | LAN Host End Port   | LAN Host Address |        |        |
| There is no data, please add one first. |          |                           |                |                     |                  |        |        |

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Enter a random forwarding name into the **Name** field.

Select **TCP/UDP** or **TCP** data transfer protocol in the **Protocol** field.

Specify http port to connect to the camera web interface which should be forwarded in the **WAN Start Port** and **WAN End Port** fields.

Specify camera internal IP address in the **IP address** field.

Press **Add** to save the forwarding rule.

Configure other port forwarding rules the same way:

|                           |                                                              |
|---------------------------|--------------------------------------------------------------|
| Enable                    | <input checked="" type="checkbox"/>                          |
| Name                      | <input type="text" value="Cam1_RTSP"/>                       |
| Protocol                  | <input type="text" value="TCP AND UDP"/>                     |
| WAN Host Start IP Address | <input type="text"/>                                         |
| WAN Host End IP Address   | <input type="text"/>                                         |
| WAN Connection            | <input type="text" value="Internet"/>                        |
| WAN Start Port            | <input type="text" value=""/> <small>(1 ~ 65535)</small>     |
| WAN End Port              | <input type="text" value=""/> <small>(1 ~ 65535)</small>     |
| Enable MAC Mapping        | <input type="checkbox"/>                                     |
| LAN Host IP Address       | <input type="text" value="192.168.25.32"/>                   |
| LAN Host Start Port       | <input type="text" value="5054"/> <small>(1 ~ 65535)</small> |
| LAN Host End Port         | <input type="text" value="5054"/> <small>(1 ~ 65535)</small> |

|                           |                                                              |
|---------------------------|--------------------------------------------------------------|
| Enable                    | <input checked="" type="checkbox"/>                          |
| Name                      | <input type="text" value="Cam1_TCP"/>                        |
| Protocol                  | <input type="text" value="TCP AND UDP"/>                     |
| WAN Host Start IP Address | <input type="text"/>                                         |
| WAN Host End IP Address   | <input type="text"/>                                         |
| WAN Connection            | <input type="text" value="Internet"/>                        |
| WAN Start Port            | <input type="text" value=""/> <small>(1 ~ 65535)</small>     |
| WAN End Port              | <input type="text" value=""/> <small>(1 ~ 65535)</small>     |
| Enable MAC Mapping        | <input type="checkbox"/>                                     |
| LAN Host IP Address       | <input type="text" value="192.168.25.32"/>                   |
| LAN Host Start Port       | <input type="text" value="5000"/> <small>(1 ~ 65535)</small> |
| LAN Host End Port         | <input type="text" value="5000"/> <small>(1 ~ 65535)</small> |

As a result you should see the following:

+Status
+Network
+Security
-Application
DDNS
DMZ Host
UPnP
UPnP Port Mapping
Port Forwarding
+DNS Service
USB Storage
FTP Application
Port Trigger
Port Forwarding ( Application List )
Application List
Samba Service
USB print server
+Administration
+Help

Path:Application-Port Forwarding
русский
Logout

Enable ☐
Name 
Protocol TCP
WAN Host Start IP Address 
WAN Host End IP Address 
WAN Connection Internet
WAN Start Port  (1 ~ 65535)
WAN End Port  (1 ~ 65535)
Enable MAC Mapping ☐
LAN Host IP Address 
LAN Host Start Port  (1 ~ 65535)
LAN Host End Port  (1 ~ 65535)
Add

| Enable | Name     | WAN Host Start IP Address | WAN Start Port | LAN Host Start Port | WAN Connection   | Modify | Delete |
|--------|----------|---------------------------|----------------|---------------------|------------------|--------|--------|
|        | Protocol | WAN Host End IP Address   | WAN End Port   | LAN Host End Port   | LAN Host Address |        |        |
| ✓      | TCP1     |                           | 5000           | 5000                | Internet         |        |        |
|        | TCP AND  |                           | 5000           | 5000                | 192.168.25.3     |        |        |
| ✓      | HTTP1    |                           | 8080           | 8080                | Internet         |        |        |
|        | TCP AND  |                           | 8080           | 8080                | 192.168.25.3     |        |        |
| ✓      | RTSP1    |                           | 5054           | 5054                | Internet         |        |        |
|        | TCP AND  |                           | 5054           | 5054                | 192.168.25.3     |        |        |

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In order to access IP camera from the Internet, enter **<external router IP address>:<camera web interface connection port>**.

Example: **http://88.100.20.44:8080**

## NOTE.

You can also configure control and alarm ports forwarding.

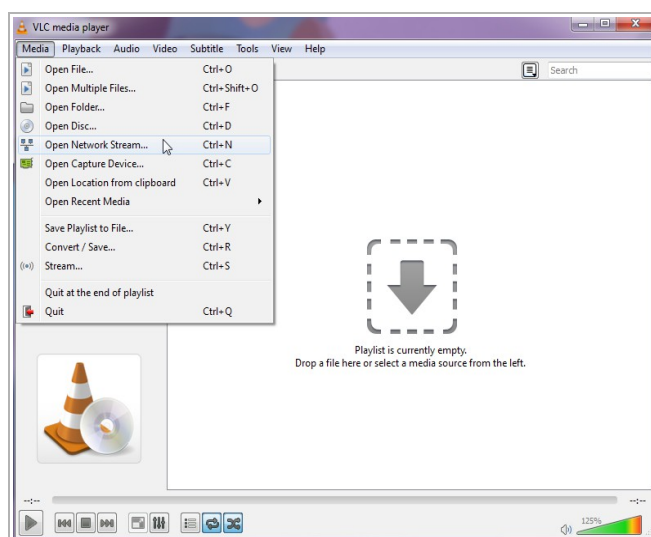
## SUPPLEMENT D. OPERATION ON RTSP AND ONVIF

### Connecting on RTSP protocol

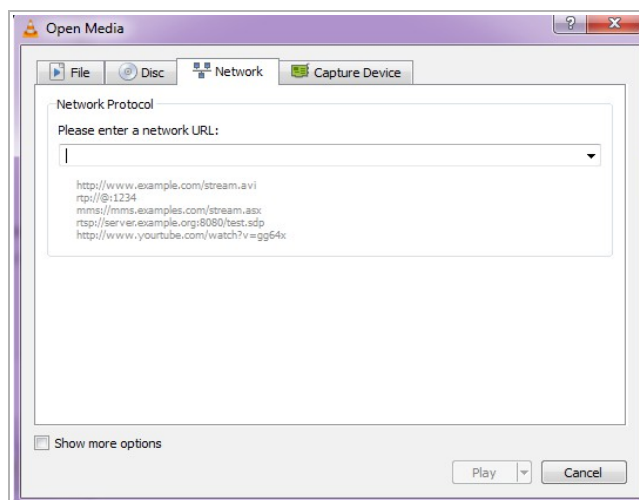
#### NOTE.

**VLC media player** (<http://www.videolan.org/vlc/>) will be used as an example for connection of an IP camera via RTSP. You can use any other media player with an option of video streaming.

Start media player and select network as a source. To do this select **Media** → **Open network stream....**



Enter RTSP request to the IP camera on the **Network** tab and press **Play**:



RTSP request to the IP camera should be in the following format:

main stream:

**rtsp://[login]:[password]@[ip address]:[rtsp port]/live/main**

sub stream:

**rtsp://[login]:password@[ip address]:[rtsp port]/live/sub**

third stream:

**rtsp://[login]:password@[ip address]:[rtsp port]/live/mobile**

where

**[ip address]** — camera ip address (see section 3.4.3.1 or 3.4.3.3);

**[rtsp port]** — IP camera rtsp port, which streams video (see section 3.4.3.2);

**[login]** and **[password]** — user name and password (see section 3.1);

**/live/main, /live/sub, live/mobile** — video stream request commands.

Example:

main stream:

**rtsp://admin:12345@192.168.25.32:554/live/main**

sub stream:

**rtsp://admin:12345@192.168.25.32:554/live/sub**

third stream:

**rtsp://admin:12345@192.168.25.32:554/live/mobile**

## Getting a snapshot from IP camera

In order to get snapshot from IP camera enter the following request in to the browser:

`rtsp://[ip address]:[port]/action/snap?cam=0&user=[login]&pwd=[password]`

where

`[ip address]` — camera ip address (see section 3.4.3.1 or 3.4.3.3);

`[port]` — http port used to connect to the IP camera (see section 3.4.3.2);

`[login]` and `[password]` — user name and password ( see section 3.1);

`/action/snap?cam=0` — snapshot request command.

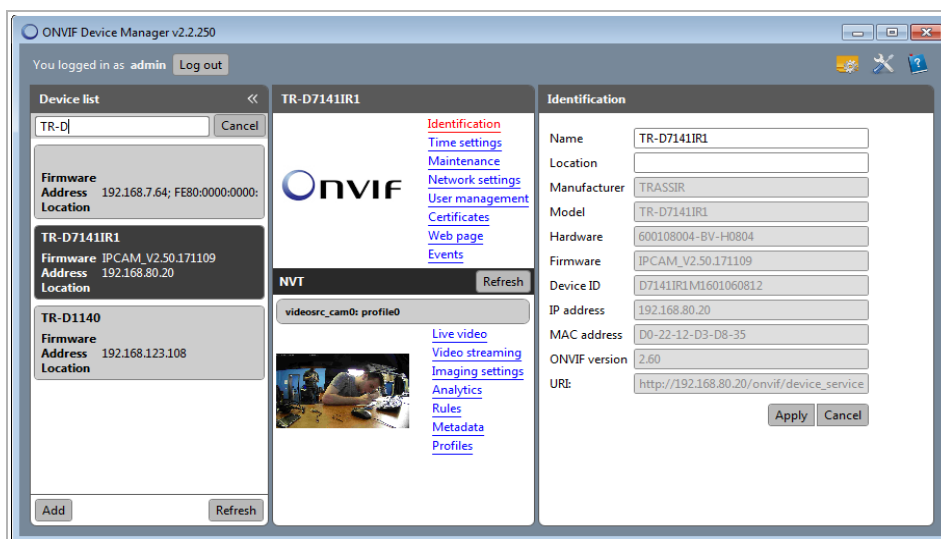
## Connecting on ONVIF standard

In order to connect an IP camera on ONVIF standard, the following data is required:

- ◆ Camera IP address (see section 3.4.3.1 or 3.4.3.3);
- ◆ video streaming port ( see section 3.4.3.2);
- ◆ user name and password, having access to the IP camera (see section 3.4.7.1).

### NOTE.

You can also use «ONVIF Device Manager» (<http://sourceforge.net/projects/onvifdm/>) utility to connect to IP camera on ONVIF standard.



## SUPPLEMENT E. IP CAMERA PLACEMENT

The correct IP camera placement is essential for proper video analysis module operation.

The camera installation parameters may vary depending on the focal length (more focal length - more distance of the camera from the detection zone).

The following requirements should be met in order to get the most accurate video information and increase the viewing angle:

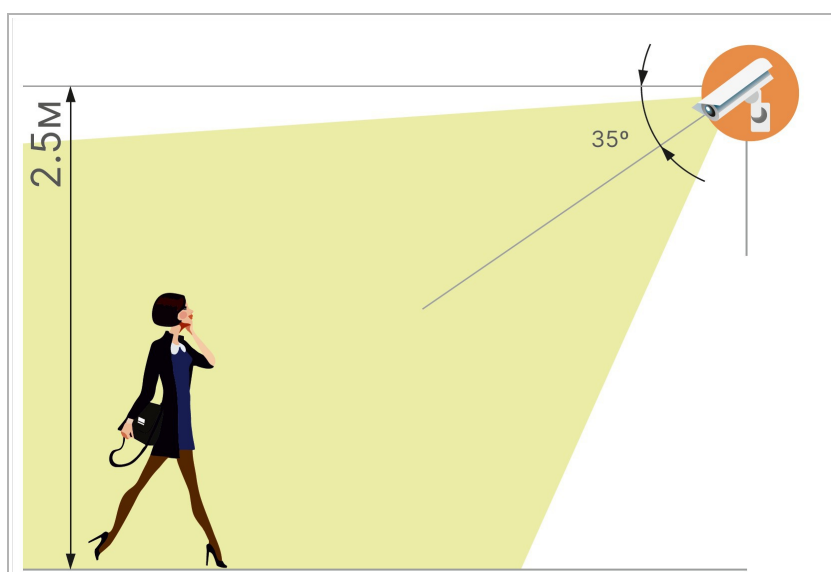
### NOTE.

The following installation parameters are recommended for cameras with focal length of 2.8 mm.

#### Placement:

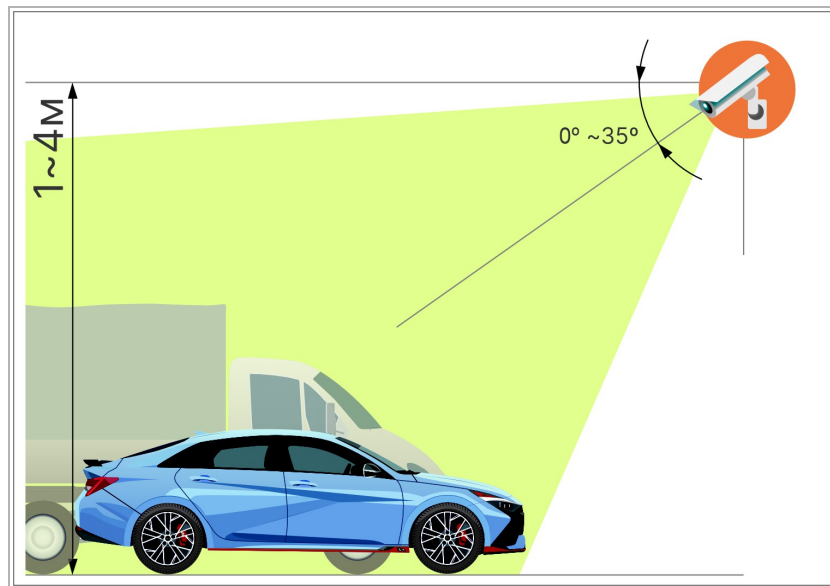
##### Line crossing

- ◆ The height is not less than 2,5 meters from the detected object;
- ◆ The tilt angle towards the detected object should not exceed 35° and should be adjusted depending on the installation height.



### Vehicle detector

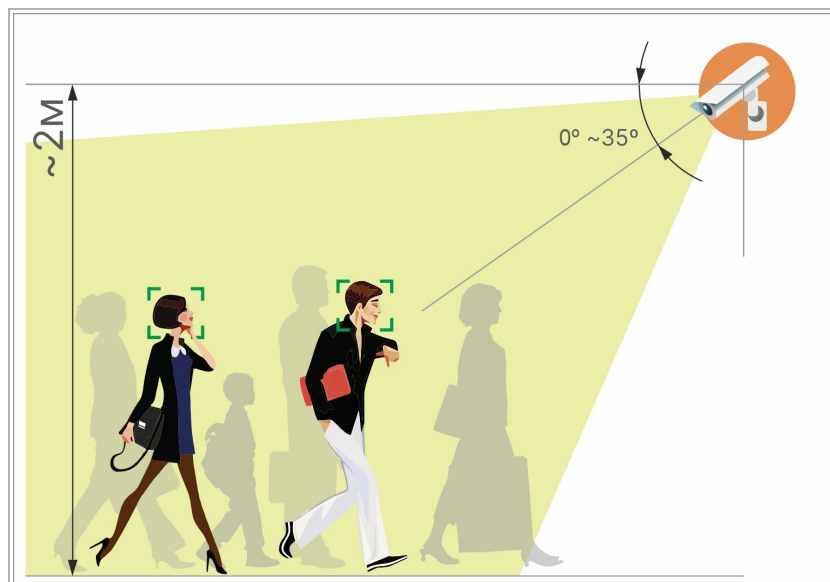
- ◆ Installation height 1-4m;



- ◆ The tilt angle towards the detected object should not exceed **35°** and should be adjusted depending on the installation height.

### Face detection

- ◆ Installation height 1-2 meters, tilt angle can be adjusted according to the installation height;
- ◆ It is recommended that the tilt angle towards the ceiling should not exceed 35 degrees.



**Shooting area and objects:**

- ◆ There should be enough free space in the intended detection area;
- ◆ The shooting area should have moderate lighting, without too bright or flickering light;
- ◆ The detected objects should be located at the sufficient distance which is not too far or too close to the camera;
- ◆ The detected objects should not move too quickly or change too often.

When installing the camera, you should take into account the external factors that can negatively affect the operation of the detectors or cause false alarms:

- ◆ Incorrect camera placement, when the objects of detection are located too close or too far from the camera;
- ◆ There are too many foreign objects in the intended detection area;
- ◆ There are too many fast moving objects in a frame;
- ◆ The lighting in the shooting area is too bright, or, on the contrary, is not sufficient;
- ◆ There are harsh shadows against bright sunlight when the camera is located outdoors;
- ◆ The unfavorable weather conditions such as gusts of wind or raindrops when the camera is located outdoors.

**NOTE.**

**In order to decrease the amount of the false alarms, change the detectors' sensitivity or decrease the size of the detection zones. Read more in 3.4.6.1, 3.4.8.2, 3.4.8.3, 3.4.8.5, 3.4.8.6, 3.4.8.7.**

## SUPPLEMENT F. IPC MANAGER

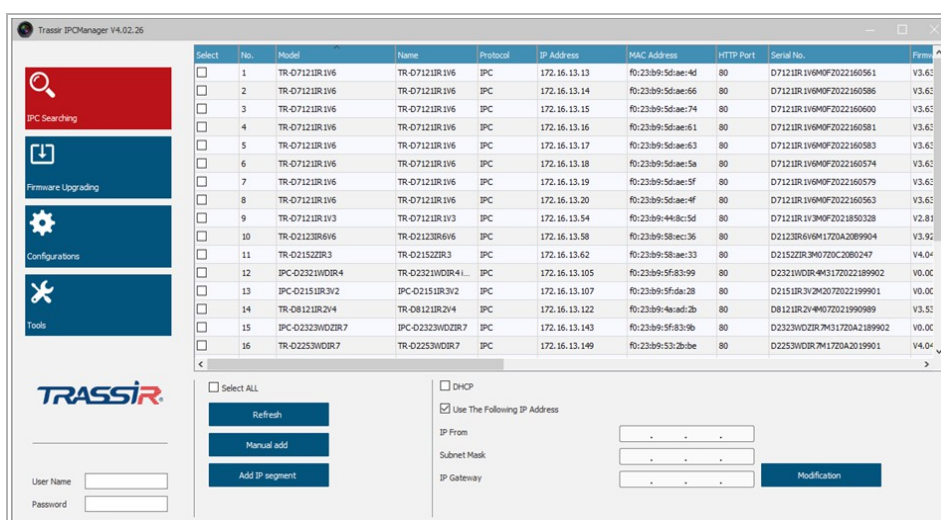
### Searching for IP-camera using TRASSIR IPCManager app

Use **TRASSIR IPCManager** utility to find the camera if the IP address is unknown.

#### NOTE.

You can download **TRASSIR IPCManager** utility on [www.dssl.ru](http://www.dssl.ru).

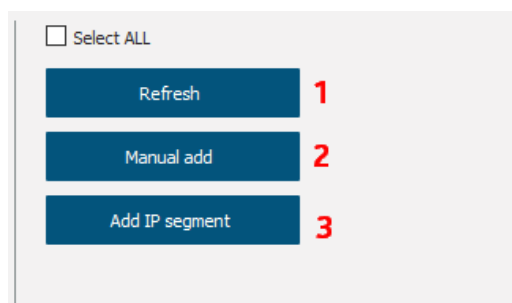
Upon the start the utility will search for IP cameras in local network automatically.



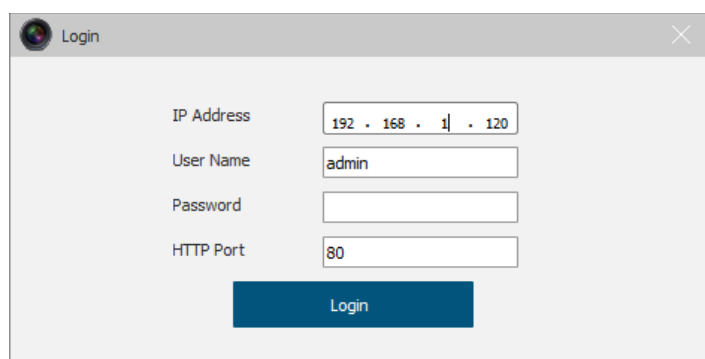
Find the IP camera in the displayed list, select and enter your user name and password in the lower left corner. Configure device basic network settings. This will allow you to access the IP camera's web interface.



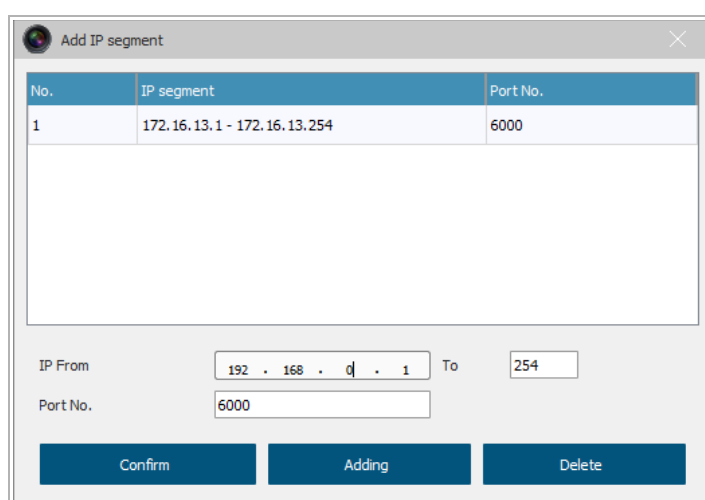
You can also:



1. Refresh the device list
2. Manual add — add camera manually. In the window that opens enter the camera data.



3. Add IP segment — add a network segment.



| No. | IP segment                  | Port No. |
|-----|-----------------------------|----------|
| 1   | 172.16.13.1 - 172.16.13.254 | 6000     |

IP From: 192.168.0.1 To: 254  
Port No.: 6000

Buttons: Confirm, Adding, Delete

## Additional menu for managing IP camera

Select the camera in the list and right-click.

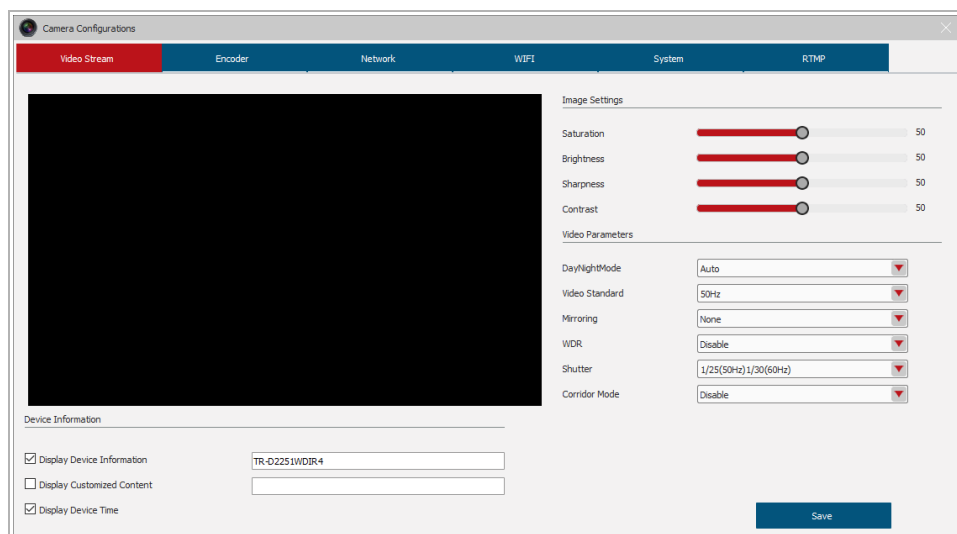
| Select                              | No. | Model           | Name               |
|-------------------------------------|-----|-----------------|--------------------|
| <input type="checkbox"/>            | 1   | TR-D7121IR1V6   | TR-D7121IR1V6      |
| <input checked="" type="checkbox"/> | 2   | TR-D            |                    |
| <input type="checkbox"/>            | 3   | TR-D            |                    |
| <input type="checkbox"/>            | 4   | TR-D            |                    |
| <input type="checkbox"/>            | 5   | TR-D            |                    |
| <input type="checkbox"/>            | 6   | TR-D            |                    |
| <input type="checkbox"/>            | 7   | TR-D            |                    |
| <input type="checkbox"/>            | 8   | TR-D            |                    |
| <input type="checkbox"/>            | 9   | TR-D            |                    |
| <input type="checkbox"/>            | 10  | TR-D2123IR6V6   | TR-D2123IR6V6      |
| <input type="checkbox"/>            | 11  | TR-D2152ZIR3    | TR-D2152ZIR3       |
| <input type="checkbox"/>            | 12  | IPC-D2321WDIR4  | TR-D2321WDIR4 i... |
| <input type="checkbox"/>            | 13  | IPC-D2151IR3V2  | IPC-D2151IR3V2     |
| <input type="checkbox"/>            | 14  | TR-D8121IR2V4   | TR-D8121IR2V4      |
| <input type="checkbox"/>            | 15  | IPC-D2323WDZIR7 | IPC-D2323WDZIR7    |
| <input type="checkbox"/>            | 16  | TR-D2253WDIR7   | TR-D2253WDIR7      |

Open Home 1  
Select ALL 2  
Refresh 3  
Export List 4  
Mainstream Viewing 5  
Substream Viewing 6  
Camera Configurations 7  
Find Your Password 8

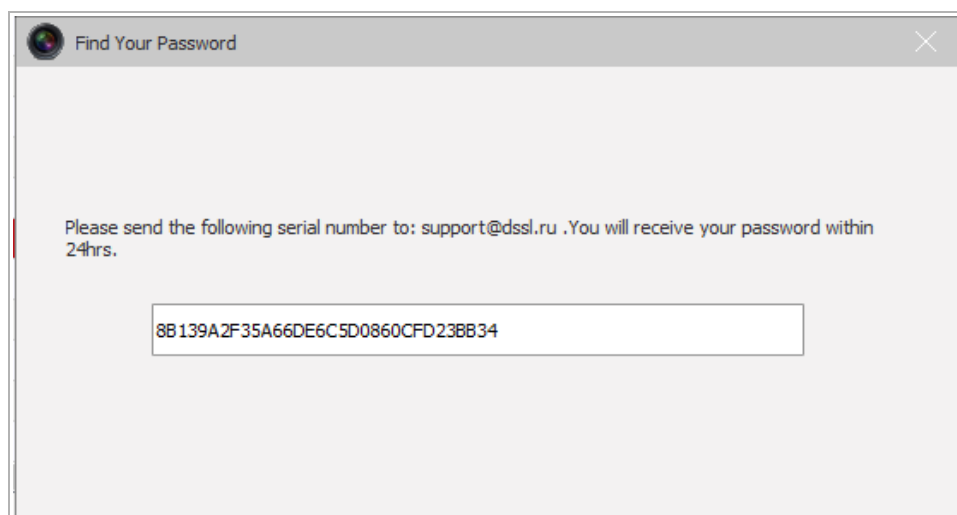
An additional menu will open, which allows you to:

1. **Open home** — open IP-camera web interface;
2. **Select all** — select all devices in the list;
3. **Refresh** — refresh the list of devices;
4. **Export list** — export list of the discovered devices;
5. **Mainstream Viewing** — open the camera main stream;
6. **Substream Viewing** — open the camera sub stream;

7. **Camera configurations** — open the IP-camera basic settings menu;

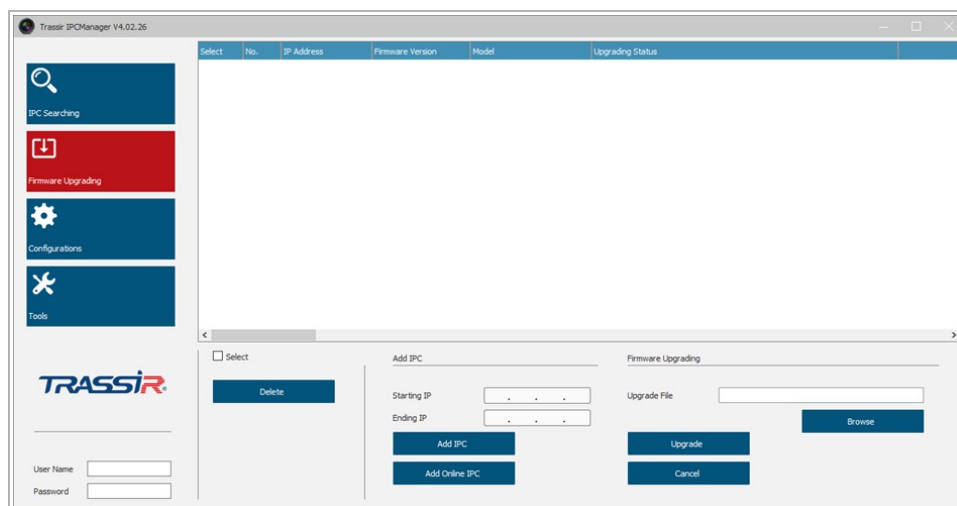


8. **Find your password** — IP camera password reset menu.



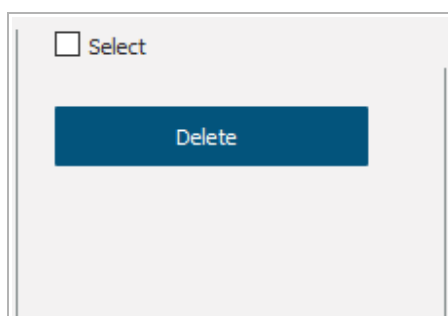
## Upgrading camera with IPC Manager

The IPC Manager utility lets you update the device firmware. To do this, open the **Firmware Upgrading** menu.

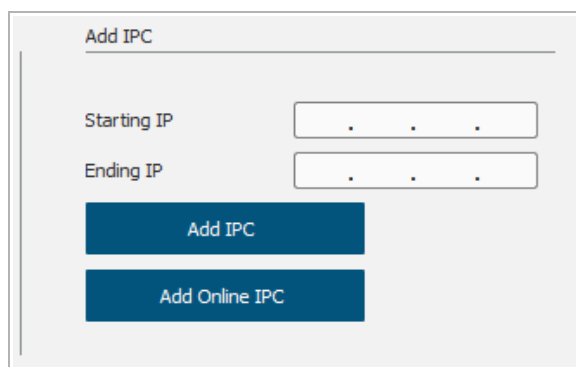


This menu lets you:

- ◆ Select all devices / Delete a device

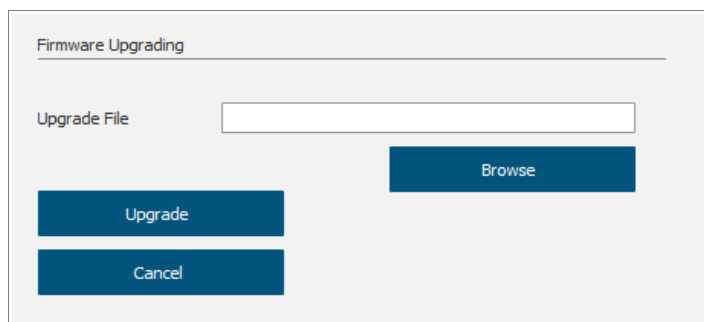


- ◆ Set a range of IP addresses for update.



If you specify a starting IP address and click Add IPC button - only the specified IP address will be added. If you specify a start and end IP addresses - the whole range of IP addresses will be added.

◆ Upgrade device firmware



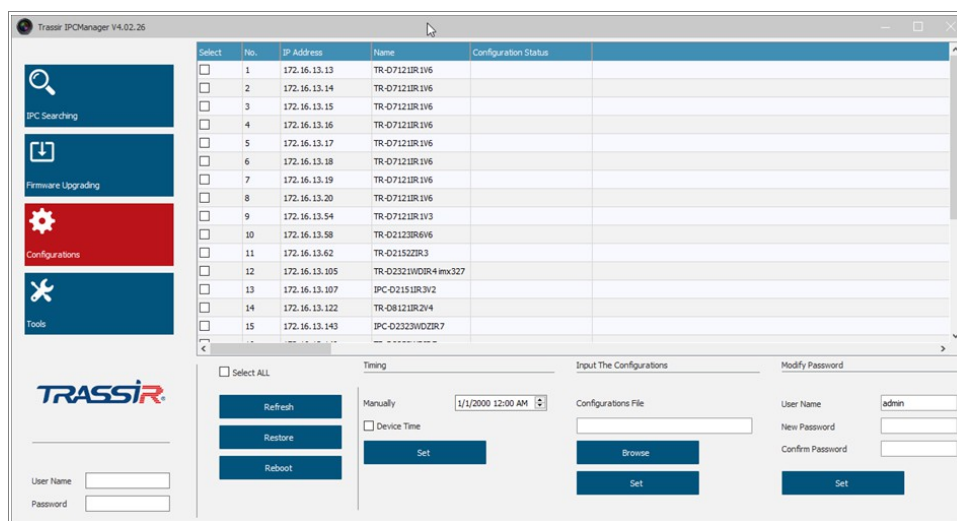
The dialog box titled "Firmware Upgrading" contains the following elements:

- A label "Upgrade File" followed by a text input field.
- A "Browse" button to the right of the input field.
- An "Upgrade" button below the input field.
- A "Cancel" button below the "Upgrade" button.

Press **Browse** to locate the firmware file and then press **Upgrade** to start the upgrading process.

## "Configurations" menu

Open the **Configurations** menu.



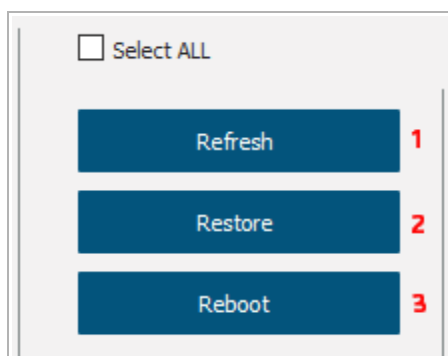
The main interface of TRASSIR IPC Manager V4.02.26 shows a sidebar with navigation options: IPC Searching, Firmware Upgrading, **Configurations** (highlighted in red), and Tools. The main area displays a table of IP cameras with columns: Select, No., IP Address, Name, and Configuration Status. Below the table are sections for "Timing" (with "Refresh", "Restore", "Reboot", and "Set" buttons), "Input The Configurations" (with a "Configurations File" input and "Browse" and "Set" buttons), and "Modify Password" (with "User Name", "New Password", "Confirm Password" inputs and a "Set" button).

| Select                   | No. | IP Address    | Name               | Configuration Status |
|--------------------------|-----|---------------|--------------------|----------------------|
| <input type="checkbox"/> | 1   | 172.16.13.13  | TR-07121LR1V6      |                      |
| <input type="checkbox"/> | 2   | 172.16.13.14  | TR-07121LR1V6      |                      |
| <input type="checkbox"/> | 3   | 172.16.13.15  | TR-07121LR1V6      |                      |
| <input type="checkbox"/> | 4   | 172.16.13.16  | TR-07121LR1V6      |                      |
| <input type="checkbox"/> | 5   | 172.16.13.17  | TR-07121LR1V6      |                      |
| <input type="checkbox"/> | 6   | 172.16.13.18  | TR-07121LR1V6      |                      |
| <input type="checkbox"/> | 7   | 172.16.13.19  | TR-07121LR1V6      |                      |
| <input type="checkbox"/> | 8   | 172.16.13.20  | TR-07121LR1V6      |                      |
| <input type="checkbox"/> | 9   | 172.16.13.54  | TR-07121LR1V3      |                      |
| <input type="checkbox"/> | 10  | 172.16.13.58  | TR-02123SR6V6      |                      |
| <input type="checkbox"/> | 11  | 172.16.13.62  | TR-02152ZR3        |                      |
| <input type="checkbox"/> | 12  | 172.16.13.105 | TR-02321WDR4 mx327 |                      |
| <input type="checkbox"/> | 13  | 172.16.13.107 | IPC-02151LR3V2     |                      |
| <input type="checkbox"/> | 14  | 172.16.13.122 | TR-08121LR2V4      |                      |
| <input type="checkbox"/> | 15  | 172.16.13.143 | IPC-02323WDR7      |                      |

This menu lets you additional parameters of IP-camera:

- ◆ Set up date and time;
- ◆ Import the configurations files for the selected device;
- ◆ Change IP-camera password;
- ◆ Save the camera configurations file.

You can also:

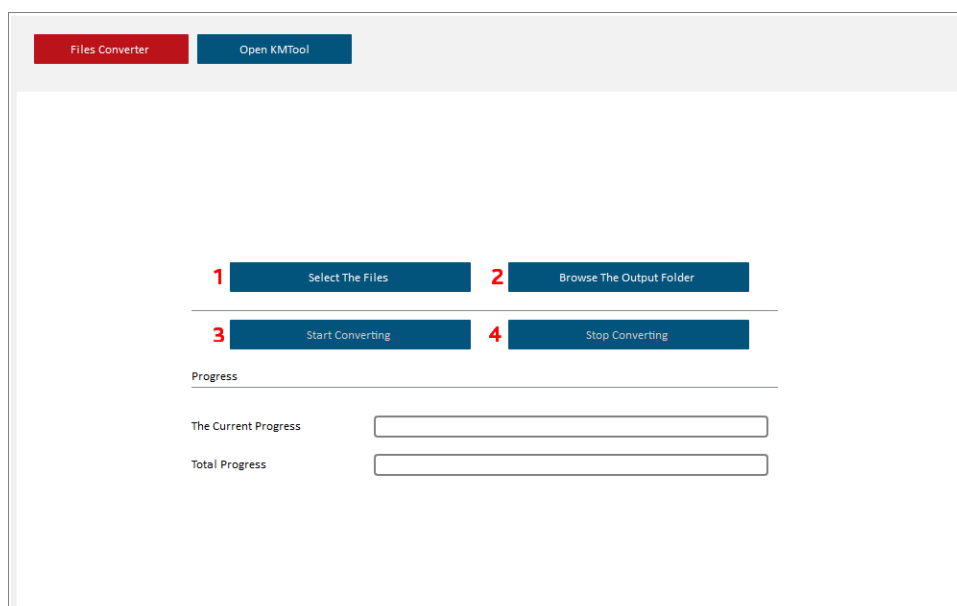


1. **Refresh** — refresh the device list;
2. **Restore** — restore the camera settings to defaults;
3. **Reboot** — reboot IP-camera.

## "Tools" menu

Open the **Tools** menu.

The **File Converter** lets you convert video files from IP-camera SD card to MP4.



1. **Select The Files** — open path to source files.
2. **Browse The Output Folder** — open path to the converted files.
3. **Start Converting**.
4. **Stop Converting** — stop the converting process.

The **KMTool** tab lets you activate analytics license.

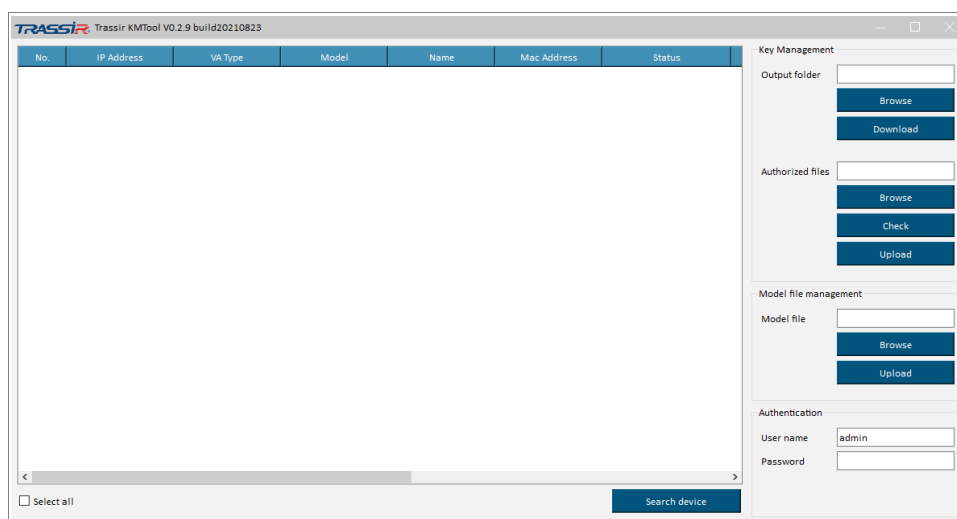
#### NOTE.

A license file is required for activation. To request a license file for analytics on cameras, you need to contact your manager.

There are three steps involved in activating the analytics license: collecting the necessary information about the camera, transmitting this information, and loading the license.

#### 1<sup>st</sup> step: Collecting the necessary information on camera:

1. Start IPC Manage and go to **Tools** section to **Open KMTool** tab.
2. In the opened window in **Authorization** block enter login and password to access the camera.



3. The **KMTool** will search for devices in the local network. You can also search for devices manually, by pressing **Search device**.
4. You can check the device state in the **Status** column: activated or deactivated. Select one or several devices to activate, by checking the corresponding flags.

5. Click Browse to specify the desired folder to save the device certificate file (the file name must contain the MAC address in the following format **aa:bb:cc:dd:ee:ff.dat**). Then click **Download** in **Output folder** block to save the device certificate file in the selected folder.

**2<sup>nd</sup> step: Providing information to technical support:**

1. Send the folder archive/device certificate file to your manager.
2. You will receive an email with a license file attached. It takes an average of 2-3 business days to process your request. In case of any difficulties, or long absence of response, please contact technical support.

**3<sup>rd</sup> step: Uploading license for camera:**

1. Click **Browse** in the Authorized Files block in **Open KMTTool** tab.
2. Click the **Upload** button. After that the tool will automatically find the necessary files on the devices and download them to the corresponding cameras.
3. Make sure that the license file was successfully added. Click Check: if the license file is correct, the Status column will display Activated. If the Status column still shows Authorization Error, contact the technical support.