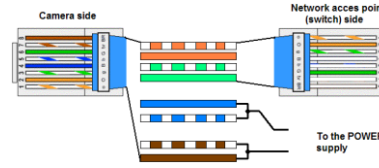


| CAMERA                   |   |
|--------------------------|---|
| Image Sensor             | Aptina 3 MP 1/3", WDR   |
| Sensitivity              | Day/Night/LED: 0.65 lux / 0.01 lux / 0 lux  |
| Shutter time             | 1/6 s – 1/20,000 s  |
| Day/night mode           | True  |
| WDR mode                 | Intellio WDR mode: 100 dB   |
| Available lenses         | W: 3-10.5 mm or T: 7-22 mm, motorized focus/zoom  |
| Angle of view            | IV-BULLET-425W model: Horizontal: 73-24°, Vertical: 58-18°;<br>IV-BULLET-425T model: Horizontal: 35-11°, Vertical: 27-8°  |
| VIDEO                    |   |
| Resolution               | 4:3: 2048x1536, 1920x1440, 1280x960; 640x480<br>16:9: 2048x1152, 1920x1080, 1280x720, 640x360   |
| Frame Rate               | H.264 4:3: 25 fps (2048x1536), 30 fps (1920x1440), 40 fps (1280x960), 55 fps (640x480)   H.264 16:9: 25 fps (2048x1152), 40 fps (1920x1080), 45 fps (1280x720), 65 fps (640x360)  |
| Image Settings           | Brightness, Contrast, Gamma, Saturation, Sharpness, Noise Filtering, 3D noise reduction, White balance (7 presets), Operation mode (gain/exp preference), Exposure control, Gain control, Anti-flickering (50Hz/60Hz), Image control speed, Backlight compensation (adjustable zones), WDR mode, Day/Night mode (Auto/Day/Night), Day/Night mode preference, Image Mirroring, IR illumination level |
| Encoder Settings         | I-frame Distance, Resolution, Frame Limit, Reduced Frame Rate Control, Bandwidth Limit, Pre- and Post-alarm, Reduced Frame Rate Control   |
| COMPRESSION              |   |
| Video Compression        | H.264 SVC – Hierarchical P encoding   |
| Bitrate                  | 500 Kbps – 18 Mbps  |
| Streaming                | Intellio Video Streaming, Dual streaming  |
| INTERFACE                |   |
| Ethernet                 | 10BaseT/100BaseTX, RJ-45 socket   |
| IO port                  | 4 wires (output: solid-state relay, max. 60V, 60mA; input: opto-coupled, max. 28V DC)   |
| Reset Button             | Reset To Factory Defaults   |
| Edge-storage             | Storage to microSD card or shared network folder via SMB protocol   |
| NETWORK                  |   |
| Protocols                | NTP, TCP/IPv4, DHCP, DNS  |
| Security                 | Camera User Name and Password   |
| GENERAL                  |   |
| Environmental Protection | IP67  |
| Operating Conditions     | With IR LED on: -40 °C - +40 °C; with IR LED off: -30 °C - +55 °C   |
| Power Supply             | PoE 802.3af, or 48 V DC   |
| Power Consumption        | max. 13 W   |
| Weight                   | 1380 g  |
| Certificates             | CE: EN 55022, EN 55024, RoHS, FCC compliant   |
| Compatibility            | Open API, ONVIF Profile S   |
| IR ILLUMINATION          |   |
| IR LED                   | 3 pcs IR LED  |
| IR illumination distance | 20 m (W)   60 m (T)   |
| Illumination angle       | 50° (W)   20° (T)   |
| CAMERA SOFTWARE          |   |
| Motion Detection         | 64 polygons per mask, 8 masks, All masks with adjustable sensitivity and motion percent parameters, Separated motion detector for monitoring and for recording  |
| INTELLIGENT VIDEO        |   |
| Object Tracker           | Automatic, 64 polygons for masking  |
| Onboard detectors        | Motion detector for live view and recording<br>Tampering detectors: Covering detection, Rotation detection, Focus change detection<br>Object based detector: Object removal / theft detection<br>Tracker based detectors: Intelligent motion detection, Tripwire detection, Entry detection, Direction detection  |

\* Please note the camera does not operate until its inner temperature reaches 10 °C which takes 5 minutes at -25 °C ambient temperature..

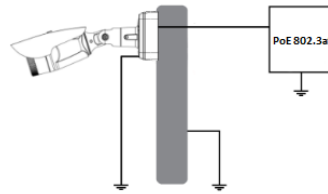
### Power the camera

Power the camera via the Ethernet cable. Use PoE power supply, or you can operate the camera from 48 VDC power supply with the following connection, regardless of polarity.



### Grounding the camera

The recommended camera grounding is as follows. The negative output of the power supply must not be grounded at the power supply! In case the camera is mounted on a metal pole, the pole is advised to be grounded, in any other cases, the camera bracket and the yellow wire of the IO port is recommended to be grounded. For optimal grounding, gently remove the paint coating at the holder's screw hole to be grounded.

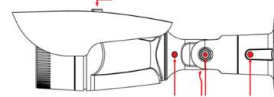


### Mounting the camera

The camera can be mounted using the three holes on the base of the camera bracket. The weight of the camera (760g) must be taken into account when mounting it on the wall by selecting the appropriate fixtures. The dowels and screws attached can be used for brick and concrete walls.

### Adjusting the direction of the camera

Use the hexagonal wrench attached to loosen the 4 grub screws (marked red in the image) while holding up the camera to prevent it from "nodding" down, then set the camera in the preferred position. When positioned properly, tighten all the screws on the console.



### Adjusting zoom and focus

The camera lens can be remote-controlled allowing the zoom and focus to be adjusted from the web interface of the camera or the Intellio management software (IVS 2.8 and newer). The lens must not be adjusted manually! After the field of view has been adjusted, the autofocus will automatically adjust the sharpness after a few seconds, which can later be modified in the web interface of the camera or the Intellio management software.

Please refer to the chapters on the camera web interface and the Intellio Video System users' guide for more detailed instructions on remote controlling the lens.

### Adjusting the sunshield

The sunshield has to extend 2 cm beyond the front of the camera. If it extends farther, spots will appear on the edges of the camera image and the IR light will be reflected back from it, which may result burn-in. You can fix the position of the sunshield with the screw on top of the camera.

### Description of the IO port

| OUTPUT   | Internal schematic: |
|--|---------------------|
| Relay (Solid State Relay) contact, polarity independent, "dry" contact |                     |
| Wire color: (1) Brown - (2) Orange                                     |                     |
| Max. switchable voltage: 60V   |                     |
| Max. current: 60mA   |                     |
| Closed contact resistance: 15 Ohm                                      |                     |
| INPUT  |                     |
| Opto-coupled input   |                     |
| Wire color: (3) Red (+) - (4) Black (-)                                |                     |
| Input HIGH level: 2-28V (max. 28V DC)                                  |                     |
| Input LOW level: 0-1V  |                     |
| Input current: 2-25mA (about 1.8kOhm input impedance)                  |                     |
| Ground wire: Yellow  |                     |

### Registering cameras with the Intellio Video System

When the cameras are operating you have to find them in the network and register them to an Intellio server. All individual cameras have its own serial number (MAC address) and IP address.

# VISUS Bullet iPoE – IV-BULLET-425W/T

You have to know the IP address of the cameras' before registering them into the Intellio Video System Software.

*Be careful!* In order to register cameras with the Intellio System Software, the cameras and the Intellio Video Servers have to be in the same IP range! Please check your OS network settings at Start menu/Settings/Network & Internet/Change adapter options/Local area Connection/Properties/Internet Protocol Version 4 (TCP/IP)/Properties and check your settings here.

### DHCP

By default, Intellio cameras get an IP address from a DHCP server. Using the router's built-in configuration panel the list of DHCP clients can be checked. In this list you can see those cameras which are connected to the network and already get an IP address from the DHCP server.

### Link-local IP address

In this case there is no DHCP in the network the cameras will get a default IP address based on their MAC address (Serial Number). For example: **The MAC address of the camera is 00-19-B4-00-42-1A, than its IP is 169.254.aa.bb; 'aa' is the decimal value of the digit one before the last in the MAC address (hexa 42, decimal 66), 'bb' is the decimal value of the last digit in the MAC address (hexa 1A, decimal 26), the IP is 169.254.66.26. It is necessary to check the free status of the factory IP address!**

### Scanning cameras

Go to System Configuration/Devices menu in the Intellio Video System, click the "Scan" button. Select the camera, and click the „Register" button. Sometimes the first attempt is unsuccessful, so make sure to press "Scan" repeatedly until it succeed. If the cameras still do not show up, make sure that a firewall is not blocking the multicast protocol. If Scan has no results, the cameras have to be added manually to the system.

### Adding the camera manually

If scanning is not working or the camera has an external IP address and a TCP Port is used the Intellio System Software will directly connect to the camera at the manually added network address. If the cameras get their default IP based on their MAC address, calculate their IP address. To add a camera manually:

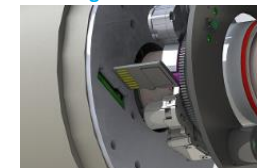
Go to System Configuration/Devices, Click the "Add" button. Select "Add Intellio ILD-xxx series" from the drop-down menu. Enter the IP address of the camera into the Host name field. Register the camera.

### Resetting the camera to factory default

If you have set a permanent IP address for the camera and then wish to use the camera in a network with dynamic IP addressing, the camera will not be found. In such cases push the reset button on the camera to have an IP address assigned to the camera from the DHCP. Keep the reset button pressed until the green LED switches to red, then release the reset button. In order to have free access to the reset button, first remove the sunshield, then unscrew the front cover of the camera.



### Inserting the microSD card



The microSD card slot is located next to the reset button.

**The camera must under no circumstances be disassembled, since it may result in loss of warranty and the damaging of the waterproof insulation!**

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