JI-112C – Video verification IP camera BULLET

The JI-112C IP camera is designed for the video verification of events from the JABLOTRON 100 alarm system. Video recording is captured in HD or FullHD resolution according to the settings. Video is transferred via a local LAN network and the Internet to a JABLOTRON Cloud secure storage. The MyJABLOTRON application provides access to live streaming for the end user. According to the type of pre-paid service (selected in MyJABLOTRON by a user) the user obtains access to continuously stored video recordings from the camera. The camera is equipped with an IR reflector to ensure recording under bad lighting conditions.

The camera has to be installed by a trained technician with a valid certificate issued by an authorised distributor.

Figure 1: Digital IP camera Bullet

Camera function

The camera is supplied fully configured by default and no other settings are needed. It allows immediate operation with MyJABLOTRON and the following services are provided:

‒ Live streaming
‒ Recording history – video recordings are stored on the server for a limited time (depending on the service type).
‒ Video sequence (video clip) – a 1 minute recording, consisting of a 30 sec before and a 30 sec after an event linked to an alarm system (alarm, setting, unsetting from a selected section). The maximum number of video sequences is limited according to the selected type of service.
‒ Connection to ARC – access to video data from the camera is granted to a security agency for visual verification of an alarm event.
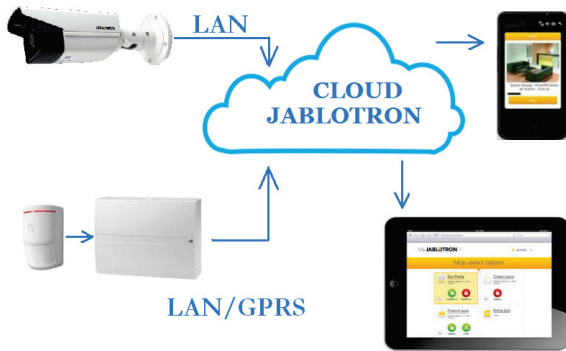

Figure 2: Diagram of JABLOTRON CLOUD functioning

Camera installation

The camera is designed to be used in an indoor and also an outdoor environment (IP 67 rating) where it can be installed on the wall. It is possible to easily set up camera's installation position owing to a joint holder which can be adjusted in all three axes (see the figure 3).
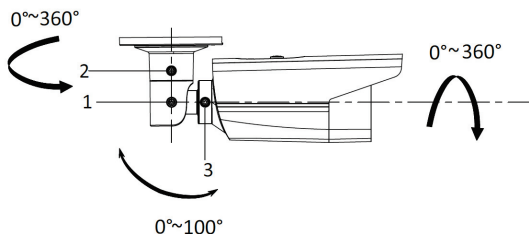

Figure 3: Camera adjustment in 3 axes; 1,2,3 – locking screws

Connection is performed by a cable with an RJ-45 connector to be connected to a LAN network and there is also a connector for a 12 V DC 500 mA power supply. There is a waterproof sheath for a LAN connector which protects the connector against air humidity. The camera can also be powered via a LAN using a PoE according to the 802.3af norm.
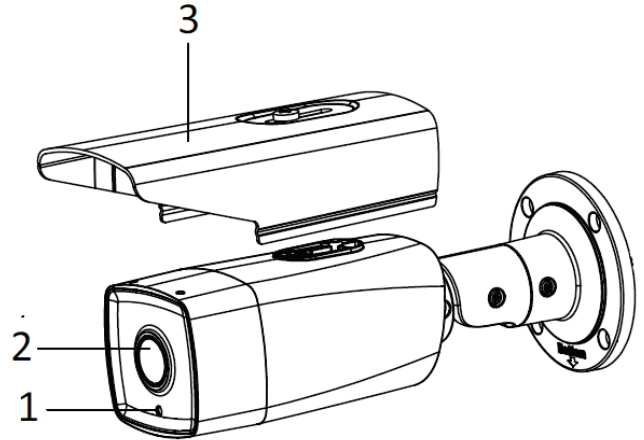

Figure 4: Description of individual Bullet camera parts
1 – Camera with a jointed holder; 2 - Lens;
3 – Protective lens shade against rain

Camera installation procedure using the mounting base:

If it is not possible to provide concealed and secure placement for the connecting cables (for example cables running out of a wall), then it is recommended to place them in a supplementary **mounting base** (included) onto which the camera will be fixed later on.
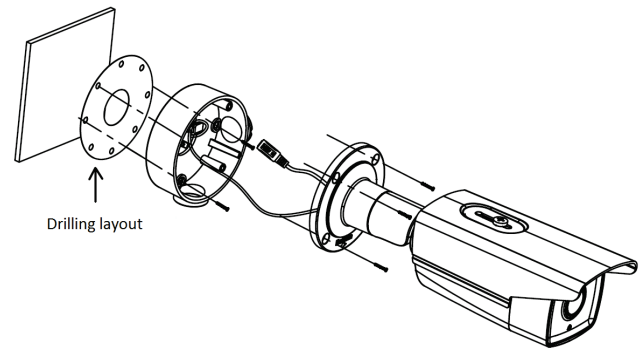

Figure 5: Camera installation on the wall using a mounting base

1. Select an adequate place considering the best camera view of the protected area and cable routing.
2. Use the sticker with the mounting base drilling layout to mark all mounting holes.
3. Using a Ø 6mm drill bit to drill the holes and put dowels from the accessory pack in them. Prepare a hole through which you will push the connecting cables (through the centre or from the side). Use a grommet for the prepared hole and put a blind flange into the unused hole.
4. Push the cable in the mounting base and screw it on using the four supplied screws. Camera orientation is marked by an arrow and a "TOP" label. If you want to use a grommet in the side of the mounting base, push the data cable through it first. Slide the connector sheath, sealing sleeve and a locking nut on the cable, see Figure 6. The last step is to take a crimping tool and press the RJ-45 connector onto the data cable.
5. It is possible to hang the camera on a hook by the rear side of the jointed holder using an included string.
6. Connect the RJ-45 connector to the camera. Fix the connection by a waterproof sheath with a bayonet closure (included in the accessory pack) and tighten the locking nut, see Figure 6. If the nearest router or switch used does not support the compatible PoE function (power over Ethernet), connect the camera via the power connector to 12 V DC / 500 mA external power supply.

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7. Fix the camera base to the mounting base using four metric screws and a Torx key. Mind the correct position of the camera to the mounting base.

8. Perform camera registration (see the chapter: Registration to a server) to obtain access to preview and align the camera in the required direction, allowed in three axes, see figure 3.

Installation of camera without a mounting base:

When the camera is going to be installed at a place where all the connecting cables are protected against tampering (for example a lowered ceiling, drywall ceilings and wall partitions etc.), then the camera can be mounted on a flat surface directly and cables with connectors put through the prepared hole.

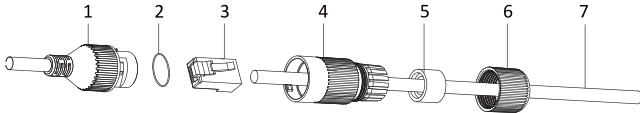*Warning:* A waterproof sheath (cover) has to be put on the cable before pressing the RJ-45 data connector.

Figure 6: Assembling the waterproof sheath of the LAN connector; 1 – camera connector (bayonet closure); 2 – O-ring; 3 – RJ plug/connector; 4 – waterproof sheath; 5 – sealing sleeve; 6 – locking nut; 7 - cable

Power

Permanent powering of the camera is required and can be realized in two ways:

a) Powering via data cable called PoE (Power over Ethernet), the switch or router has to support it. Alternatively a suitable PoE injector can be used. The voltage (48 V) is standardized by the IEEE 802.3af network norm. This has a big advantage; the camera is powered directly via the data cable.

b) An external 12 V/500 mA power supply connected to the 2.1 mm connector of a camera. This way requires an extra cable for powering separately to the data cable. The advantage is that the camera can be backed up by an appropriate backup power supply.
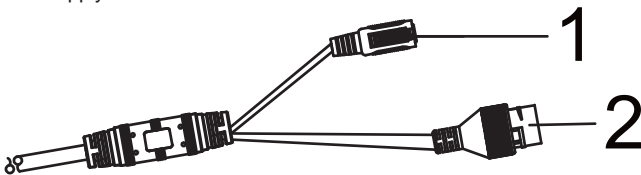

Figure 7: Camera connectors; 1 – External power connector 12 V DC; 2 – LAN connector

Caution: When a backup power supply is used to power the camera when a mains power outage occurs, it is also necessary to have all devices providing internet connection and data transfer to Internet backed up (routers, switches, modems, wireless transmitters, etc.).

Camera connection to LAN network

Video data transfer is based on continuous communication with the Jablotron server to which data is sent. Set up the DHCP function to be used in the local network. Communication ports between the camera and the JABLOTRON cloud are 443, 8883 and ports range from 8000 to 8500. Unless your network is pre-set with special restriction, it is usually not necessary to modify any parameters of the firewall or router.

Caution: The camera is not physically connected to the JABLOTRON 100 system, it doesn´t occupy any positions. Power from the alarm system is not required and the camera status is not monitored by the control panel.

Registration to a server

Registration can be performed from the web or a smart application for cell phones by entering the unique camera MAC address on the label stuck on camera body or on its box. It can also be scanned by QR code. Every camera can be registered to only one JALOTRON 100 system. Camera can be registered within 30 minutes after it was powered. When this time frame expires then registration can be repeated by voltage restart.

Registration procedure:

1. Connect the power to the camera (initialisation takes approx. 1 minute)
2. Log in to the MyCOMPANY application and open the „INSTALLATION MANAGEMENT" module.
3. Select the installation to which you want to register the camera.
4. Go to the CAMERAS tab and click onto REGISTER A CAMERA
5. Fill in or scan the MAC address of the camera and enter the name which will be displayed in MyJABLOTRON and click onto "REGISTER".
6. When registration is confirmed in MyCOMPANY, for possible adjustment in the following 24 hours the installer can watch a live preview from this camera. After that a permanent livestreaming is available in the MyJABLOTRON application for the end user only.

Caution: Because of security reasons it is impossible to record data to another storage system (like local NVR, etc.). Access to the camera's internal settings is not possible.

MyCOMPANY programmable options:

Click the configuration symbol of a specific camera in the list of available cameras.

There the following parameters are to be set:

The **Quality of videostreaming** option changes the image quality. By clicking the button a camera setting change is performed. The parameter has a big influence on the recorded video quality and the amount of data transfer to the server (uploading).

Activation of video sequence for a section – by checking those options you pre-set from which sections and for what type of events video sequences are stored.

Connect to ARC – this option sends a request for connection to a monitoring agency ARC.

Deactivate the camera – the button erases the camera and all the recorded data from the JABLOTRON Cloud secure server. The option can only be performed by the installation company which registered the camera. The camera cannot be erased with activated monitoring by an ARC.

Save configuration – send pre-set data to the cloud.

Recommendations

Up to twenty IP cameras can be used for one JA-100 system. Always depending on number of cameras and their settings check whether there is available corresponding data transfer from the premises to the Internet (upload).

Warning: The producer strictly warns users that due to the camera's ability to acquire video recordings, the camera has to be used within the limits given by national laws or norms, especially laws about the protection of personal privacy and credentials.

According to these regulations users have an obligation to ensure the approval of persons in range of the camera during the acquisition of video recordings or the obligation to indicate the image capture area by informative signs.

The manufacturer recommends that users should be aware of the legal obligations applicable to the operation of camera systems before installation and use of the camera.

Included items list

- Digital IP camera with prepared connectors on a 45 cm cable
- Mounting base (diameter 105 mm, height 37 mm)
- Waterproof sheath for LAN connector with seal
- Drilling template as a sticker for making four holes for camera installation on a wall
- Torx key T20
- 4x dowels (6 mm) with self-tapping screws (3 mm x 25 mm) to fix the camera or mounting base on a wall
- 4x metric screws (4 mm x 20 mm) to fix camera onto the mounting base
- Sticker with a warning that the area is protected / monitored by a camera system

Technical specifications

Powering by connector	12V DC
Alternatively from PoE adapter – 48 V (accoring to the 802.3af norm)	
Current consumption during the day (standby)	200 mA
Current consumption at night (with IR reflector)	350 mA
Pixels	2Mpix
Resolution	1920*1080 pix
Frames per second	8
Bullet lens	4 mm (view angle 90°)
Type of lens	M12
Sensor chip	1/3" CMOS
WDR – backlight compensation	120 dB
Camera alignment options	0°- 360°
Joint alignment options:	Horizontally: 0°- 360°, Vertically: 0° - 100°
Data transfer amount at 8 frames/sec	approx. 256 kbps/HD, approx. 512 kbps/FullHD
Communication interface	RJ-45 10M/100M Ethernet
IR reflector coverage	max. 50 m (2x IR LED)
IR reflector lighting angle	70°
Environment:	outdoor general
Operational temperature range (Bullet)	-30 to +60 °C, max. humidity 75%
IP covering	IP67
Dimensions, weight	300 x 90 x 90 mm, 500 g
Complies with	EN 55032:2015, EN 50130-4:2011+A1:2014, EN 61000-3-2:2014, EN 61000-3-3:2013, EN 50581:2012

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Hangzhou Hikvision Digital Technology Co., Ltd hereby declares that the JI-112C IPis in compliance with the relevant European Union harmonisation legislation: Directives No: 2014/53/EU, 2014/35/EU, 2014/30/EU, 2011/65/EU. The original of the conformity assessment can be found at www.jablotron.com - Downloads section.

Note: Although this product does not contain any harmful materials we suggest you return the product to the dealer or directly to the producer after use