2 Wire system

2 wire sytem

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Description of the system

The SW-01, SW-02 converters, and the SW-08, SW-10 switches are used to expand Ethernet IP signals through a two-wire cable in the existing two-wire network of the building.

Converters can be used when connecting, distributing, and converting signals for IP devices (call panels, internal monitors, etc.) through a two-wire cable with 128-bit AES and guaranteed QoS for loss-sensitive devices.

In addition, the system can connect to the Internet through the same converters.

The system is suitable for a modernization project in older buildings that use two-wire wiring. This can solve cabling and restoration infrastructure problems, as well as lower project costs.

Connection

Step 1. Inspection and preparation of equipment

Check that the equipment does not have external defects.
To organize the connection of the system should be prepared:
1) Network cable (UTP CAT5 or higher);
2) Two-core cable (minimum cross-section 0.205 mm or 24 AWG);

3) Power supply 48 V DC (please check cable length, specification and connection status);
4) 2.0 / 2.5 mm slotted screwdriver.

Step 2. Installation

The SW-02 converter has two interfaces: the LAN interface can be connected to the Internet, and the other interface is connected to
2-wire system.
The call panel is connected to a two-wire system through the SW-02 converter on one side and to the local network on the other (it is also possible to connect the patch cord directly to the internal monitor).
Connect the 48 V DC power supply to the SW-02 to provide power to the entire system, including the internal monitor (converters and switches support power transmission over PoE IEEE 802.3 af and at).

All devices are in 2Wire Link mode. They will find each other and establish basic low-level encryption.

3. LED indicator

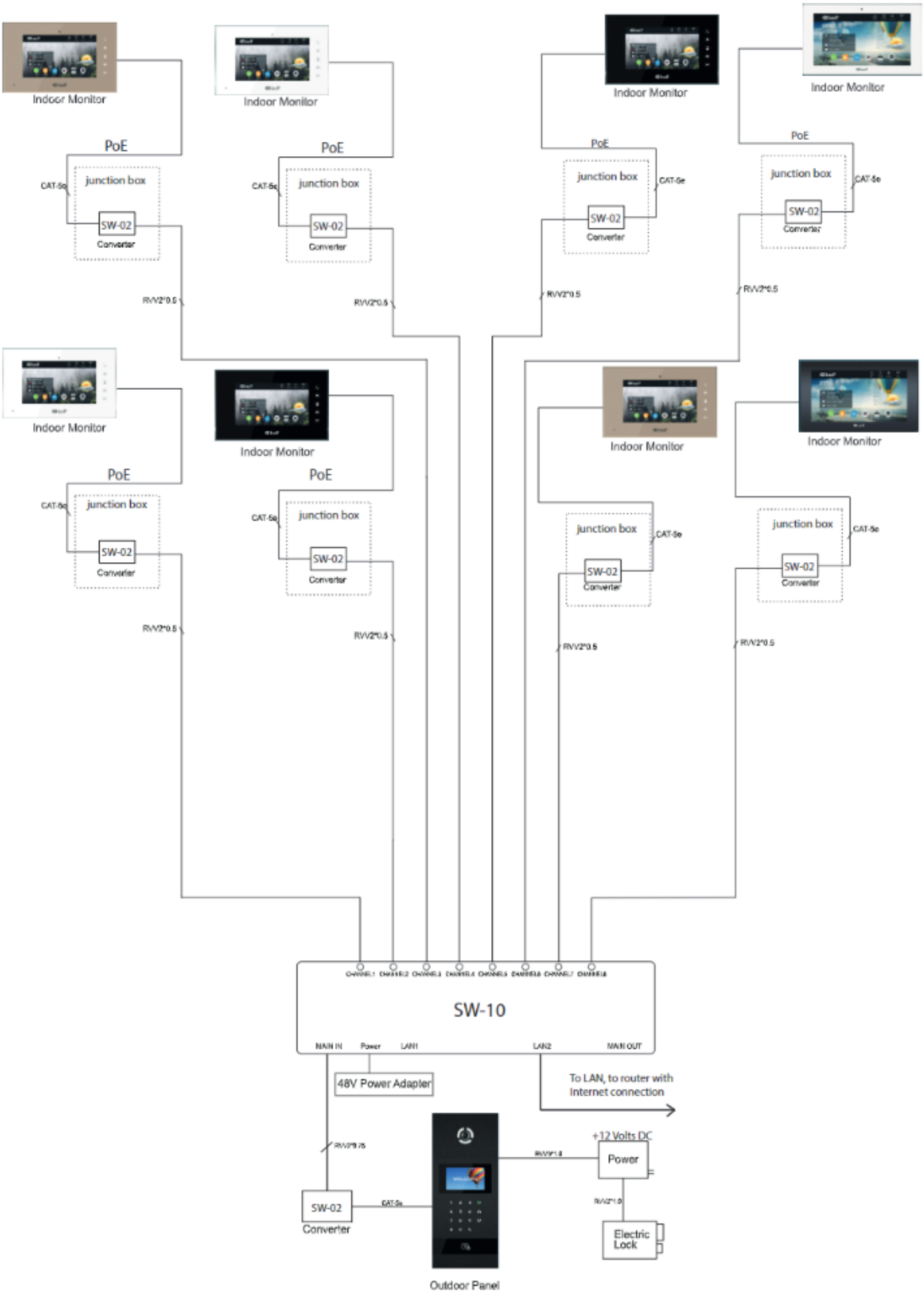
To show the operating status of the device, the converter has three LEDs.

Signals:
Power: The red LED is always on.
Two-wire connection: if the green LED is always on, it means that 2Wire Link mode is active. If the LED blinks slowly, it means the 2Wire Unlink mode is active.
LAN: green LED - Ethernet connection indicator. When the module transmits or receives data via Ethernet, the LED flashes with a period of 250 ms.

Below are typical schemes for connecting system components:

Connection scheme in an apartment building using various options for connecting modules.

When using this system, the connection of internal monitors can be carried out both on the same local network and using two-wire wiring.


Indoor Monitor
Indoor Monitor
Indoor Monitor
Indoor Monitor
PoE
junction box
SW-02
Converter
CAT-5e
RVV2*0.5
Indoor Monitor
Indoor Monitor
Indoor Monitor
Indoor Monitor
SW-10
MAIN IN
Power
LAN1
LAN2
MAIN OUT
48V Power Adapter
To LAN, to router with Internet connection
+12 Volts DC
Power
Electric Lock
Outdoor Panel

Technical parameters

The maximum number of devices in the system: 9999

Connection: Two-wire, Ethernet UTP CAT 5

Maximum cable length over two wires: 50 meters between two devices.

Maximum Ethernet cable length: 100 meters.

Converter SW-02

Power Supply: 48 Volts
Power Consumption: 1 Watt in standby mode, 7 Watt in operation.
One converter can be connected either to the internal monitor directly or to a local network using an Ethernet cable.
Support PoE IEEE 802.3 af / at.

Switch SW-08

Power Supply: 48 Volts
Power Consumption: 1 Watt in standby mode, 7 Watt in operation.
Up to 8 SW-02 converters and up to 4 SW-08 / SW-10 switches can be connected to one switch via two wires in cascade.
Support PoE IEEE 802.3 af

Switch SW-10

Power Supply: 48 Volts
Power Consumption: 1 Watt in standby mode, 7 Watt in operation.
Up to 8 SW-02 converters and up to 4 SW-08 / SW-10 switches can be connected to one switch via two wires in cascade. The switch also has two Ethernet ports for connecting to a local network or for connecting an SW-10 cascade.
Support PoE IEEE 802.3 af