Description

The U-PROX IP401 control panel is a device designed for access control to residential and industrial premises, as well as for recording passage times and events.

The control panel is supplied in a case with a built-in “request-to-exit” touch button, without a power supply unit.

The control panel operates with readers connected via an RS-232 interface (U-PROX readers only) or via an RS-485 interface using the OSDP protocol (U-PROX SE series readers or readers from other manufacturers with OSDP 2.2 support).

The U-PROX IP401 processes information received from the reader and, using two outputs, switches actuators (for example, locks or sirens).

The control panel has two inputs with fixed functions — a door sensor and a request-to-exit button.

The control panel can operate both autonomously and as part of a network. To combine control panels into an access control network, a Wi-Fi interface (wireless computer network) is used.

The control panel provides network configuration via a Bluetooth Low Energy (BLE) wireless interface with the mobile app U-PROX Config.

Firmware can be updated remotely via Wi-Fi.

Power supply — 12 V DC.

The U-PROX IP401 control panel controls a single door equipped with one reader and a request-to-exit button. The large amount of non-volatile memory allows the control panel to manage access for up to 10,000 identifiers.

Carefully designed technical and structural solutions, Wi-Fi communication, non-volatile memory, a real-time clock, and protection of reader ports against short circuits, overvoltage, and reverse polarity make this control panel suitable for building various access-control and management systems.

Device Purpose

The U-PROX IP401 cloud control panel is designed to operate within access-control systems (ACS) of various scales — from small offices to large enterprises.

Specifications

Power supply: external 12V source; current consumption (with no load) — no more than 100 mA; ripple amplitude — no more than 500 mV.

Reader connection:

- RS232 – up to 10 m (contactless U-PROX identifiers)
- RS485 (OSDP2.2) – up to 1000 m

Built-in touch button: request for exit function.

Inputs: door contact (DC) and request to exit button (RTE).

Tamper contact: for enclosure opening detection.

Outputs: one solid state relay (NO/NC, COM) — 1 A @ 30 V; alarm output (open collector) — 12V @ 160 mA.

Wireless interface: Wi-Fi 2.4 GHz, 802.11b/g/n, supports Open/WPA/WPA2/WEP.

Cloud ACS operation: U-PROX ACS Cloud.

Local ACS operation: U-PROX WEB.

Configuration: full configuration is performed via ACS software through a computer network.

Real-time clock.

Non-volatile memory:

- Identifiers — 10,000
- Events — 20,000
- Time zones — 250
- Weekly schedules — 250
- Holidays — 250
- Temporary identifiers — 1,000

Terms

Identifiers: In access control systems, each user has a unique code. It can be plastic cards, key fobs, etc.

Reader: Devices that read codes and connect to the ACS control panel. The Wiegand RS232 or

OSDP interfaces are used.

PIN code: A code entered with the reader keypad; may function independently or as an addition to a card or key fob.

Door: An access control point (e.g., door, turnstile). Access point — a logical unit of the system.

Access point: See “Door.”

Passage point: A logical ACS unit that controls passage through a door in one direction; includes a reader, control panel (or its part), and actuator. A single-point door is one-way; two-point — two-way.

Exit request button: Used to exit a room.

Door contact: An input for connecting magnetic, rotary, or other sensors to monitor door state.

“Passage time” interval: The time after a user passes during which the door is not monitored even if the contact is triggered.

Identifier attempt detection: If several unregistered identifiers are presented consecutively, the control panel switches to alarm mode.

Schedules: Time intervals and schedules that define access rights. The control panel can store up to 250 time intervals, 250 weekly schedules, and 250 holidays.

Time zones: Time intervals used for organizing access schedules.

Download: The process of transferring configuration data from a computer to the control panel after programming.

Description and Operation

Control panel Structure

The device is shown in Fig. 1.

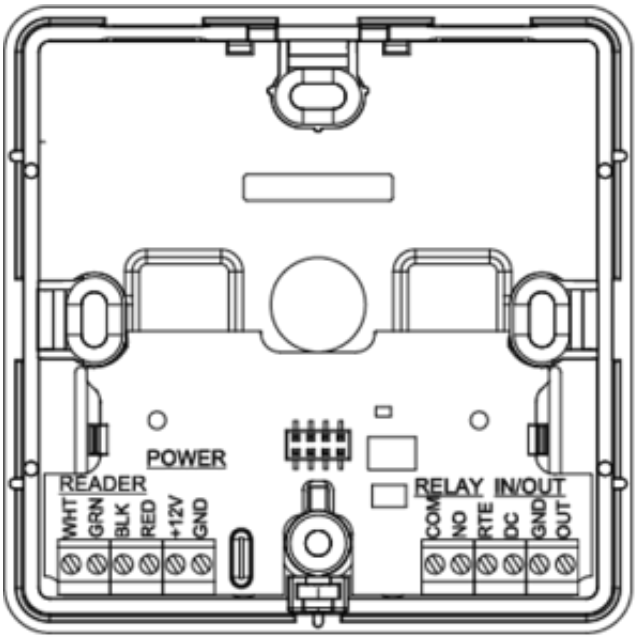
The control panel consists of the following components:

- Upper part of the device case
- Request to exit touch button
- Bottom part of the case
- Mounting screw
- Device board with terminal blocks

Fig. 1. Appearance of the U-PROX IP401

Terminal Block Layout

The layout of the connectors on the bottom board of the device is shown in Fig. 2.



Control panel Terminal Functions

Terminal	Label	Description

GND	–	External power supply connection V-
+12V	–	External power supply connection V-
NO/NC	Normal open/Normal closed	Relay contacts
COM	Common	Relay contacts
RED	+12V	Reader V+
BLK	GND	Reader V-
GRN	Data 0	Reader Data 0
WHT	Data 1	Reader Data 1
GND	Ground	Ground
DC	Door contact	–
RTE	Exit request button	–
OUT	Alarm output	–

Control panel Indication

Access mode indication is performed by the reader connected to the control panel. Default settings are as follows:

- **Standby mode:** no sound, red flashing once per second
- **Night mode or Lock:** no sound, red-yellow flashing once per second
- **Alarm:** no sound, solid red
- **Card registration:** no sound, green flashing once per second
- **Initialization:** no sound, no light indication
- **Data read/upload, firmware update:** no sound, solid red
- **Access granted:** short beep, steady green; 5 seconds before door timeout — short beep once per second
- **Access denied:** continuous sound, solid red

The touch button LED indicates button pressing only!

Control panel Operation

Control panels are supplied in an unloaded (factory) state, in which the red LED flashes once per second.

To operate, the control panel must be configured using setup software on a mobile device. After the configuration is uploaded and all connections are correct, the control panel switches to “Standby” mode.

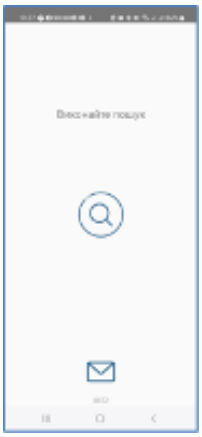
The control panel can manage one passage point that operates in four modes: “Standby”, “Alarm”, “Block”, and “Free Passage”. The “Free Passage” mode has the highest priority (e.g., firealarm), followed by “Block”, “Alarm”, and “Standby”.

Control panel Programming

Connect to the control panel using U-PROX Config software via Bluetooth Low Energy (BLE). Supported devices: Android 5.0+ and iOS 8.0+ with Bluetooth 4.0+ (BLE).

1. **Launch U-PROX Config:**

   Launch U-PROX Config on your mobile device. If Bluetooth is disabled, enable it (for Android 6.0 and higher — enable location services). Tap “Search” to detect nearby devices.



2. **Connect to the control panel:**

   Select the U-PROX IP401 control panel from the list and press “Connect.”

3. **Enter the engineering code:**

   After selecting the device, you’ll be prompted to enter an engineering code. Enter the default code (1234) or another code provided by the manufacturer.

4. **Configure network parameters:**

Using U-PROX Config, configure Wi-Fi, DNS, IP address (or enable DHCP), and the port used to connect to the ACS server or cloud system.

Default code — 1234

5. Add the control panel to access control system (ACS) according the ACS manual
6. **Register identifiers and create users:**

   Using the access control system (ACS), add identifiers (contactless cards, PIN codes, mobile identifiers) and assign appropriate access rights and schedules.

7. **Upload configuration:**

   After completing all settings upload the configuration to the control panel. The device will switch to standby mode.

Control panel Firmware Update

After connecting to Wi-Fi, the “Firmware Update” option will appear in the control panel’s settings menu. Tap this option, choose the update type (from the default server or via a custom link), and the firmware will download in the background. The control panel will update automatically (the process takes approximately 5 minutes).

Maintenance

Factory Reset

- Disconnect power from the control panel
- Remove the upper cover of the control panel
- Short the OUT and DC contacts
- Place the upper cover back
- Apply power and wait until the beep ends (about 40 seconds)
- Power off the control panel, remove the cover, and remove the OUT and DC contacts

Engineer Password Reset

- Disconnect power from the control panel
- Remove the upper cover of the control panel
- Short the OUT and RTE contacts
- Replace the upper cover
- Apply power and wait for 40 seconds
- Power off the control panel, remove the cover, and break apart the OUT and RTE contacts

Factory Settings

- **Communicator:** Wi-Fi — not configured, DHCP enabled, cloud ACS server address: *acs-panels.u-prox.systems*
- **Inputs (loops):** DC — door contact; RTE — exit request button
- **Outputs:** Relay — lock mode (inversion disabled), OUT — “Alarm”
- **Reader:** OSDP

Warranty

The manufacturer guarantees that the U-PROX IP401 control panel complies with the parameters described in this manual when properly stored and operated.

- Storage warranty period — 6 months from the date of manufacture
- Operational warranty period — 24 months from the date of commissioning
- Delivery, personnel training, installation, commissioning, and warranty service are carried out by the manufacturer or authorized organizations
- In case of a defect caused by the manufacturer, correction is performed within 10 days
- Warranty service is not provided in cases of:
    - Incorrect connection,
    - Failure to follow this manual,
    - Mechanical damage,
    - Natural disasters.
- The manufacturer reserves the right to make design modifications that do not affect key specifications or reliability.

Training and Technical Support

Training courses covering installation and usage of the U-PROX IP401 control panel are conducted by “Limited Liability Company Integrated Technical Vision.” For additional information, please contact the company’s staff at the phone numbers listed below.

Technical support:
+38 (091) 481 01 69
support@u-prox.systems
https://t.me/u_prox_support_bot

This support is intended for trained specialists. End users should contact their dealers or installers before reaching out to “Limited Liability Company Integrated Technical Vision.”

Technical information is available at: www.u-prox.systems

Certification

“Limited Liability Company Integrated Technical Vision” declares that U-PROX IP401 complies with the Electromagnetic Compatibility Directive 2014/30/EU and Directive 2011/65/EU (RoHS). The original Declaration of Conformity is available at www.u-prox.systems in the “Certificates” section.

www.u-prox.systems

U-PROX IP401 Cloud Access Control panel