



# IXP110 Controller

## Product Specification Catalogue

The **ImproX IXP110 Controller** is a fully featured Controller that forms part of the IXP110 Software System. The Controller's applications include access control (of up to 900 users through a single door) and alarm control. The IXP110 Controller is available in three different models to best suit the needs of your application.

Instead of using a traditional key to open the door, users present a valid Tag to an Antenna Reader. Advanced security features prevent intruders from opening the door latch even if they tamper with the wiring or try to substitute one Antenna Reader for another Antenna Reader.

For added security, you can program the System to request a 4-digit Personal Identification Number (PIN-code) as well as presenting a valid Tag. This alternative requires a Keypad Antenna Reader. A more cost effective alternative allows the use of a 5-digit Personal Access Code (PAC-code) in place of a Tag. The System needs to be programmed to accept PAC-codes.

The System provides for three Tagholder levels: User (entry during specified time periods only), Supervisor (entry at all times) and Administrator (entry at all times and permission to program the System).

The IXP110 System provides a variety of features while remaining easy to use. You can program basic features using a Keypad Antenna Reader and more advanced features using the PC Software program.

## Key Features

### Hardware

- Installation friendly using a robust aluminium extrusion.
- Pluggable terminal blocks.
- Utilizes Quick Click Glands.
- Two Anti-tamper switches.
- Connection to up to two Antenna Readers per Controller.
- Supports all ImproX Antenna Readers (XTT901 – XTT909).
- In-field Firmware upgrades.

## ImproX IXP110

### Controller

IXP904-1-0-GB-XX

IXP905-1-0-GB-XX

IXP906-1-0-GB-XX

### Hardware (Continued)

- Read/Write capability using the following Impro Tags: Slim Tags and Omega Tags (Read Only). WriTag 128 and WriTag 2048 (Read/Write).
  - Reads HID 125 kHz Tags.
- NOTE: HID is a registered trademark of HID Global Corporation (an ASSA ABLOY Group Brand).*
- Authorized Tagholders ("Administrator or Supervisor") are able to arm and disarm a separate alarm panel by means of the Antenna Readers Keypad.
  - Two independent single-pole, double-throw (SPDT) Relay Outputs allowing you to interface to door strikes and magnetic locks.
  - An Alarm Relay which can be configured for alarm control.
  - Runs off AC power (16 V AC), charges a 12 V Sealed Lead Acid Battery, therefore no need for an external battery backed-up Power Supply.
  - Supports 9 V DC to 24 V DC.

### System

- Self-contained system.
- Supports Anti-passback (APB) Mode.
- Three user-tag levels comprising of: User, Supervisor and Administrator.
- A unique 4-digit PIN-code per Tagholder.
- Operates as a simple intrusion alarm, whereby a siren activates when a door open sensor is triggered.
- A maximum of 900 Tagholders with a maximum of 950 transactions stored in the Transaction Buffer.
- Lost Tags can be voided from the System without having to change locks, or having any impact on other Tagholders.
- Two Dry Contact Digital Inputs which are user configurable and can perform specific tasks such as:
  - Door Open Sensing.
  - Request to Exit.
- The Door Open Sensing (DOS) input is Software configurable in Normal Sensing Mode and in End of Line (EOL) Sensing Mode.
- Supports Time Management Reporting.

## Physical Specifications

### IXP904 IXP110 Controller with RS232 Connectivity

Length	: 104 mm (4 in).
Width	: 150 mm (6 in).
Height	: 54 mm (2 in).
Approximate Weight	: 505 g (18 oz).
Cabinet Material	: Aluminium.
Colour	: Black.

### IXP905 IXP110 Controller with USB Connectivity

Length	: 104 mm (4 in).
Width	: 150 mm (6 in).
Height	: 54 mm (2 in).
Approximate Weight	: 503 g (18 oz).
Cabinet Material	: Aluminium.
Colour	: Black.



## IXP906 IXP110 Controller with Ethernet Connectivity

Length	: 104 mm (4 in).
Width	: 150 mm (6 in).
Height	: 54 mm (2 in).
Approximate Weight	: 510 g (18 oz).
Cabinet Material	: Aluminium.
Colour	: Black.

## Environmental Specifications

Operating Temperature	: -25°C to +60°C (-13°F to +140°F).
Storage Temperature	: -40°C to +80°C (-40°F to +176°F).
Humidity Range	: 0 to 95% relative humidity at +40°C (+104°F) non-condensing.

### Approvals

CE Approval	: EN 300 330-1 and EN 301 489-3.
FCC Approval	: Pending.
Dust & Splash Resistance	: Designed to work in an indoor (dry) environment similar to IP40. The Controllers are not sealed against water.
Drop Endurance	: 2 m (7 ft) drop (in packaging).

## Electrical Specifications

### Power

Input Voltage using a Sealed Lead Acid Backup Battery, Connected to the Battery Input and or Strike Lock Connected to the Power Output	: 14 V AC to 18 V AC. 18 V DC to 24 V DC.
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Input Voltage NOT using a Sealed Lead Acid Backup Battery and or Strike Lock	: 9 V AC to 18 V AC. 9 V DC to 24 V DC.
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**NOTE:** Battery Charging Voltage and Power Output Voltage are set at between 13.6 V DC and 13.8 V DC.

**NOTE:** This current is measured using 18 V DC Input Voltage.

IXP110 with two Antenna Readers Connected	: 135 mA (2.43 W).
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**NOTE:** Each Relay draws an extra 120 mA.

**NOTE:** The IXP110 current limits the charging current into the Sealed Lead Acid Battery to a maximum of 350 mA.

**NOTE:** The maximum size Sealed Lead Acid Battery that can connect to the Battery Input is 12 V, 7 Ahr.

**NOTE:** The maximum current that can be drawn from the Power Output is 250 mA. (If using a Maglock or high current Strike Lock, connect the Lock to a separate power supply).

### Permissible Input Supply

Ripple Voltage (Max)	: 1 V <sub>pp</sub> at 50 Hz.
Power Input Protection	: Reverse polarity, over-voltage and over-current protection are provided on the Controller.

### Controller Bus

#### USB Port

Connection	: USB, Type-B, female connector, USB 2.0 compliant 12 Mbps.
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#### Ethernet Port

Connection	: Standard Ethernet RJ45 connector. 10/100 Mbps, half or full duplex.
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#### RS232 Port

Connection	: 9-Way, D-type, male connection.
Default Baud Rate	: 115 200.

## Digital Inputs

DOS Input	: Dry contact, non-potential sensing or 4 V to 30 V potential sensing. Input protection to 50 V DC (continuous).
RTE Input	: Dry contact, non-potential sensing. Input protection to 50 V DC (continuous).

## Relays

Relay Output	: 2 Relays, each with NO, COM and NC contacts.
Contact Ratings	: 5 A at 28 V DC, 1.5 A at 220 V AC, 5 A at 120 V AC.

## Other

Anti-tamper Switch	: 2 Anti-tamper switches provided.
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## Factory Defaults

### Beep Codes

Fails Power-on Self-test	: Continuous beep for 2 seconds.
Passes Power-on Self-test	: Two short beeps of 200 ms duration, separated by a 200 ms inter-beep pause.

## User Interfaces

### Controller

#### Status Indicator

Status LED	: Green LED (externally visible).
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#### Antenna Readers x 2

Status LED	: Bi-colour, Red or Green LED.
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Buzzer Volume and Tone	: 4-Step adjustable volume, single tone.
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## Related Information

For extra information relating to this product refer to the:

- IXP110 Controller Hardware Installation Manual (IXP343-0-0-GB-XX).
- ImproX IXP110 System User Manual (IXP342-0-0-GB-XX).

## Ordering Information

Order the ImproX IXP110 Controller using the following Part Numbers:

- IXP904-1-0-GB-XX: IXP110, RS232 connection to the Host PC.
- IXP905-1-0-GB-XX: IXP110, USB connection to the Host PC.
- IXP906-1-0-GB-XX: IXP110, Ethernet connection to the Host PC.

## Warranty Details

**CAUTION:** We reserve the right to nullify the products warranty where you have not properly installed the Metal-oxide Varistors.

This product conforms to our Warranty details on [www.impro.net](http://www.impro.net).

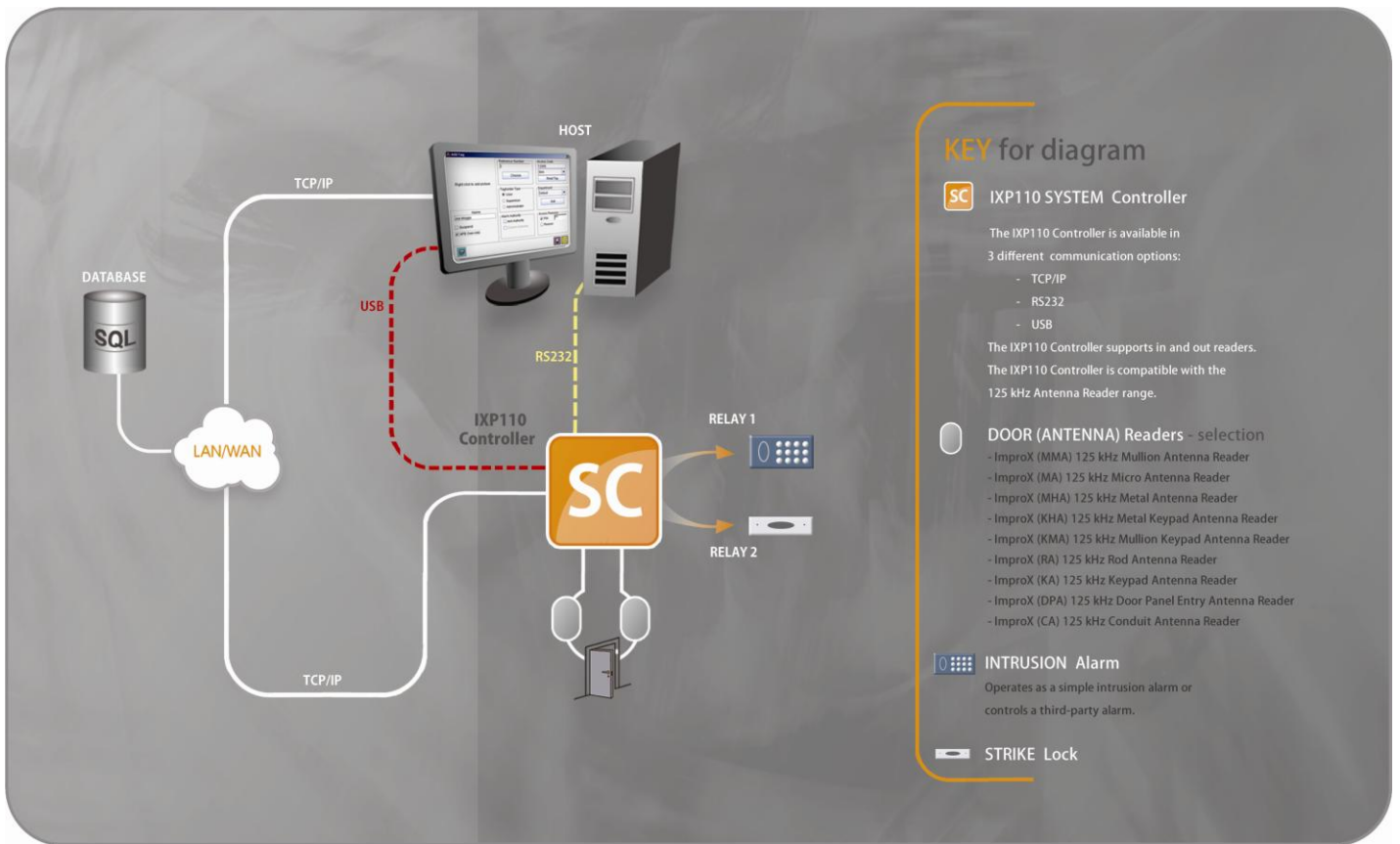


Figure 1: IXP110 System Overview

This Product Specification Catalogue applies to the ImproX IXP110 Controller, IXP904-1-0-GB-02, IXP905-1-0-GB-02 and IXP906-1-0-GB-03.  
(The last two digits of the Impro stock code point to the issue status of the document or product).

IXP354-0-0-GB-07	Issue 08	April 2009	IXP110\Controller\Product Specification Catalogue\ LATEST ISSUE\IXP110C-psc-en-08.docx
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