



ImproX iTA

Product Specification Catalogue

The **ImproX (iTA) Industrial Time Attendance Terminal** is designed for a wide variety of uses, interfacing with Controllers in the IXP220, IXP300 or IXP400 Access Control Systems via the RS485 Terminal Bus connection.

The ImproX iTA Terminals applications include:

- Time and attendance.
- Access control.
- OEM custom requirements.
- Interfacing Third-party Devices such as Barcode, Magstripe and Wiegand Readers into the IXP220, IXP300 or IXP400 Access Control Systems.

The ImproX iTA has a built in proximity read-head. The ImproX iTA can, however, interface with The ImproX range of Multi-mode Remote Readers.

The ImproX iTA also interfaces with the ImproX IR Infrared Receiver, the ImproX RF 4-Channel UHF Receiver (where extended range is required), third-party Barcode and Magstripe and Wiegand 26-Bit, 37-Bit, 40-Bit and 44-Bit types. Each ImproX iTA is designed to be used with one Remote Reader, or Receiver.

Besides the standard lock types, the ImproX iTA is capable of controlling motor locks that use reverse polarity for opening and closing. Suitable locks are manufactured by, for example, MIWA and Goal. The ImproX iTA can also control pulse-operated solenoid locks.

Key Features

- Interfaces with the IXP220, IXP300 or IXP400 Access Control Systems.
- Tag Read function for the following read-only Tags: Slim Tags and Omega Tags.
- Tag Read/Write function for the Philips HITAG™ 1 and Philips HITAG™ 2 Read/Write Tags.
- TTL interface to the ImproX IR, ImproX RF, and Third-party Readers.
- Operation from power inputs in the range 10 V to 30 V DC.
- A 16-character, single-line Liquid Crystal Display (LCD).
- A 4-button Keypad.
- A single-tone, 4-level volume (including off) adjustable Buzzer.

ImproX (iTA)

Industrial Time Attendance Terminal

XTA906-1-0-GB-XX

Key Features (Continued)

- A single bi-coloured Red or Green Status LED. The Status LED is software-configurable via the Communications Protocol.
- The ability to upgrade Firmware whilst installed on site, without removal of the Terminal.
- Two independent single-pole, double-throw (SPDT) Relay Outputs with NO, NC and COM contacts available.
- Four user configurable Digital Inputs which can perform specific tasks such as:
 - Door Open Sensing.
 - Request to Enter/Exit.
 - Scanner Inhibit.
 - Alarm Input.
 - Action Request.
 - Mains Failure Sensing when interfaced to the ImproX 1 A Uninterrupted Power Supply (XUP900 and XUP901).
 - Battery Low Voltage Sensing when interfaced to the ImproX 1 A Uninterrupted Power Supply (XUP900 and XUP901).
- End-of-line (EOL) Sensing anti-tamper protection.
- Added anti-tamper protection when you attach the enclosure's Lid and Base using the TORX® Fasteners (M4 x 20 mm).

Reading Range (Tag)

Tag Type	Typical Range (Minimum) (mm)	Typical Range (Minimum) (in)
ImproX Credit Card Tag	25 - 50	1 - 2
ISO Credit Card (Slim)	25 - 50	1 - 2
Philips HITAG™ 1	25 - 50	1 - 2
Philips HITAG™ 2	25 - 50	1 - 2

NOTE: Mounting the Terminal on a metallic surface will reduce the Tag Read/Write range slightly.

Physical Specifications

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Length	: 145 mm (5.70 in).
Width	: 220 mm (8.66 in).
Height	: 57 mm (2.24 in).
Approximate Weight	: 825 g (1.81 lb).
Housing Material	: Polycarbonate Plastic.
Colour	: Light Grey.

Environmental Specifications

Operating Temperature	: -15°C to +60°C (+5°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	: CISPR22, IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5, IEC61000-4-6 and IEC61000-4-8.
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ACCESS CONTROL

Approvals (Continued)

FCC Approval	:	Pending.
Dust & Splash Resistance	:	Designed to work in an indoor or outdoor environment similar to IP55. The Terminal is sealed against water.
Drop Endurance	:	1 m (3.28 ft) drop (in packaging).

Electrical Specifications

Power

Input Voltage : 10 V DC to 30 V DC.

Power Requirements	Current (mA)	Power (W)
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Supply Voltage = 10 V DC Relays all on, Third-party Reader Connected, Remote Reader Connected	: 250	2.5
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Supply Voltage = 30 V DC Relays all on, Third-party Reader Connected, Remote Reader Connected	: 83	2.5
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Permissible Input Supply Ripple Voltage (Max) : 1 V_{pp} at 50 Hz.

Power Input Protection : Reverse polarity, over-voltage and over-current protection.

Power Output

Remote Reader Port : 5 V DC \pm 0.1 V is supplied to power the single Remote Reader connected. A maximum of 150 mA can be supplied from this port.

Third-party Reader Port : 5 V DC \pm 0.1 V is supplied to power the single reader connected to this port. A maximum of 50 mA can be supplied from this port.

Terminal Bus

Electrical Interface : RS485, ASCII with 16-bit CRC checking.

Baud Rates : 1 200, 2 400, 4 800, 9 600, 19 200, 38 400 and 76 800 selectable via the communications protocol.

Data Format : 8 data bits, no parity, 1 stop bit.

Communications Protocol : ImproX Secure Communications Protocol.

Remote Bus Port

Electrical Interface : TTL.

Baud Rate : 9 600 (fixed).

Data Format : 8 data bits, no parity, 1 start and 1 stop bit.

Communications Protocol : ImproX Proprietary Protocol.

Third-party Port

Electrical Interface : TTL.

Function : The function of this port is selected via the terminal DIP-switch.

Digital Inputs

Input Type : 4 x Dry-contact Inputs.

Protection : +50 V to -50 V continuous, +80 V to -80 V surge.

Configuration : Software configurable in Normal Sensing Mode and in End-of-line (EOL) Sensing Mode.

Relays

Relay Output : 2 x independent single-pole, double-throw (SPDT) Relays, each with NO, COM and NC contacts.

Contact Ratings : 3 A at 24 V DC.
3 A at 125 V AC.

Data Format

Barcode : Single data stream.

ImproX IR : Single data stream.

ImproX RF : Single data stream.

Magstripe : Clock and data.

Wiegand : '0' and '1' streams.

Communication Protocol

Barcode : Code 39.

ImproX IR : Proprietary.

ImproX RF : Proprietary.

Magstripe : ABA Track 2.

Wiegand : 26-bit, 37-bit, 40-bit and 44-bit.

Frequency

Passive Frequency : 125 kHz.

Processor

Type : 16-bit Micro-controller operating at 16 MHz.

RAM (Non-volatile) : 2 Kbytes.

Flash ROM : 64 Kbytes.

Other

Anti-tamper Switch : An anti-tamper switch inside the housing indicates an alarm if the Front Cover is removed from the Base.

Factory Defaults

Baud Rate : Factory-set to 38 400.

Buzzer Volume : Level 3 (maximum).

User Interfaces

Liquid Crystal Display

Characters : 16 Characters by 1 line.

Character Sets : English, Katakana.

Contrast : Software adjustable in 8 discrete steps via the Communications Protocol.

Back-lighting : Permanently on.

Keypad

Buttons : 4 Buttons, used for entering Reason Codes.

Reason Code Range : 1-4, 11-14, 21-24, 31-34 and 41-44.

Buzzer

Volume : Software adjustable in four discrete steps (including off).

Tone : Single tone.

Terminal

Status Indicator

Status LED : Bi-colour Red or Green LED (externally visible). The functions are application specific.

Diagnostic Indicators

Incoming RS485 Data : Green LED (flashing) (internally visible).

Outgoing RS485 Data : Red LED (flashing) (internally visible).

Related Information

For extra information relating to this product refer to the:

- Hardware Installation Manual (XTA303-0-0-GB-XX).

Ordering Information

Order the ImproX (iTA) Industrial Time Attendance Terminal using the following Part Number:

- XTA906-1-0-GB-XX.

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.

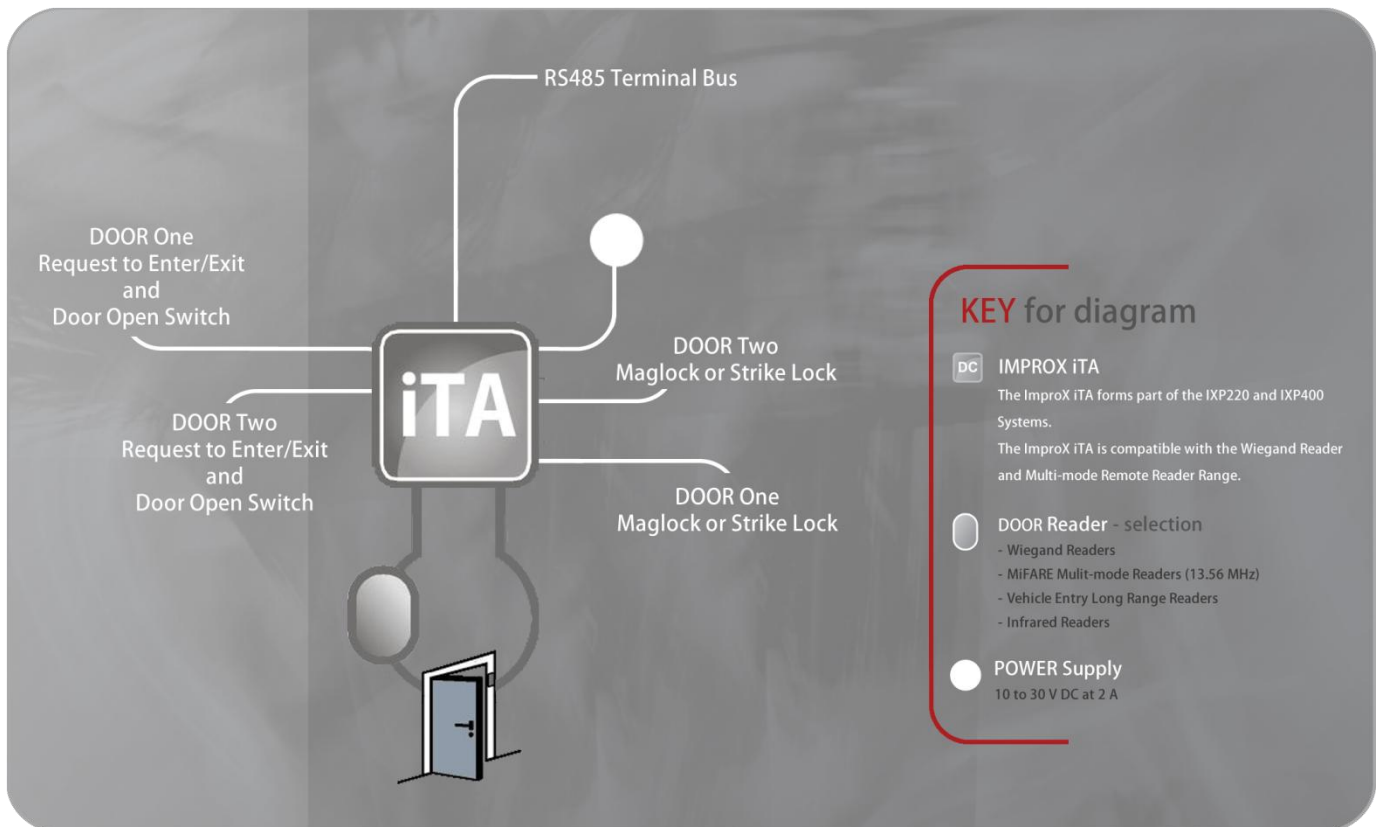


Figure 1: ImproX iTA Overview

This Product Specification Catalogue applies to the ImproX (iTA) Industrial Time Attendance Terminal, XTA906-1-0-GB-01.
(The last two digits of the Impro stock code point to the issue status of the document or product).

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