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ACCESS CONTROL

Controller Module
ANTENNA READER

Product specification
CATALOGUE

The **Impro Antenna Reader Module** (ARM) is one of the new, 3rd-generation, Access Portal Cluster Modules from Impro Technologies.

This Cluster Extension Module may be plugged into an existing Cluster (or connected to a Cluster Controller Module via S-Bus) to add full Anti Pass-back (APB) control of one door, or Single Entry Access Control of two doors.

The Module has two full-featured Antenna Reader Terminals with their associated Relays, Door Open Sense and Request To Exit digital inputs.

The Antenna Reader Module is presently available as a Cluster Module in a black ABS plastic Housing - and a PCB Card version for installation into an IPS (Integrated Power Supply) Housing.

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Key Features

- Cost effective, modular solution that allows for:
  - **Scaling** to the size requirement of the application
  - **Expansion** - Quick and convenient (plug-in) should needs increase
  - **Zero Downtime** – Replacing an ARM will not require downtime (the Tag memory and Transaction Buffer reside in the CCM).
- A Software utility to upgrade Firmware while installed on-site, without removal of the ARM.
- Flexibility in installation – The ARM may be:
  - Plugged (together with other Expansion Modules into the CCM, forming part of a "Cluster" of Impro Controller Modules
  - Installed up to 150 away from its CCM (connected via S-Bus)
  - Installed (as a PCB Card) in a 19" Rack version of the system
- The ARM supports the following tags:
  - Impro Tags (Read only)
  - Slim Tags (Read only)
  - Omega Tags (Read Only)
  - Philips HITAG™ 1 and Philips HITAG™ 2 (Read/Write)
  - HID 125 kHz Tags (Read Only).

NOTE: HID is a registered trademark of HID Global Corporation (an ASSA ABLOY Group Brand).

- 16-step Auto-tune that allows for increased cable distances of up to 25 m (82 ft.) for Non-keypad Antenna Readers and up to 16 m (53 ft.) for Keypad Antenna Readers.
- End-of-Line (EOL) Sensing on Door Open Sensor (DOS) Inputs.
- Connection to up to two Antenna Readers per ARM, allowing Relaxed or Full Anti-passback (APB) access.
- An excellent user interface consisting of 8 LED "Diagnostic Indicators".
- Two independent single-pole, double-throw (SPDT) Relay Outputs which let you interface to door strikes, magnetic locks and other third-party devices (for example alarms panels or lighting).
- IXP220 / ImproNet System Compatible
- Four Dry Contact Digital Inputs including two Door Open Sensor (DOS) and two Request to Exit (RTE) Inputs. *(When used in Access Portal Pro or IXP220 Systems, these inputs may be configured for other uses, including: Scanner Inhibit, Alarm interface and Action Request)*
- A Software utility to upgrade Firmware while installed on-site, without removal of the ARM (provided the ARM is clustered with its CCM).

Impro (ARM) Antenna Reader Module

HML900-0-0-GB-XX HML901-0-0-GB-XX

Physical Specifications

Antenna Reader Module in Plastic Housing

Length	:	186 mm (7.3 in)
Width	:	99 mm (3.9 in)
Height	:	57 mm (2.3 in)
Approximate Weight	:	266 g (9.38 oz.)
Housing Material	:	ABS Plastic
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

Dust & Splash Resistance	:	Designed to work in an indoor (dry) environment similar to IP40. The ARM is not sealed against water
Drop Endurance	:	1 m (3.28 ft.) drop (in packaging).

Electrical Specifications

Power

Input Voltage	:	12 V DC to 15 V DC, (polarity sensitive) when powered separately as necessary for a remote, S-Bus installation	
Power Requirements		Current (mA)	Power (W)
Input Voltage 12 V DC with no Antennas attached	:	50	0.6
Input Voltage 12 V DC with Antennas attached	:	200	2.4
Power Input Protection	:	Reverse polarity, and Transient voltage protection is provided	
Relay Power Requirements	:	An additional ~0.4 W per Relay in use	

Communications

Direct (Baud Rate 115 200)	:	When the ARM is plugged (side-by-side) directly into the CPU, or installed as a PCB Card in a 19" Rack Installation.
S-Bus (Device) (Baud Rate: 9600)	:	S-Bus allows for the remote installation of the ARM, up to 150m away from its CPU.
Module Status	:	Slave

Reader Options

Antenna Port	:	2 Fully functional Antenna Reader Ports.

Digital Inputs

Input Type	:	2 Dry-contact inputs with End-of-line (EOL) Sensing and 2 Dry-contact inputs without End-of-line (EOL) Sensing.
Detection Resistance Range	:	< 2 kΩ
Protection Range	:	+15 V continuous.

Relays

Relay Output	:	2 Independent, single-pole, double-throw (SPDT) Relays, each with NO, COM and NC contacts.
Contact Ratings	:	10 A at 28 V DC 5 A at 220 V AC 12 A at 120 V AC
Operations	:	100 000 Minimum

Processor

Type	:	ARM Cortex M0 operating at 45MHz
Total RAM	:	4 K Byte
Flash	:	48 K Byte

Other

Anti-tamper Switch	:	1 PCB Mounted Switch

Related Information

For extra information relating to this product refer to the:

- Impro (ARM) Antenna Reader Module Hardware Installation Manual (HML300-0-0-GB-XX).

Ordering Information
Order the Antenna Reader Module using the following Part Numbers:

HML900-0-0-GB-XX	:	Module in plastic Cluster Module Housing
HML901-0-0-GB-XX	:	PCB Card on base for IPS Housing

User Interfaces

LED Status and Diagnostic Indicators

Status LED	:	Continuous Red for Normal Operation Flashing Red During Firmware Upgrade Off when Supply Voltage outside limits
Data	:	Flashing Green as per outgoing data.
Relay [2]	:	Continuous Red on activation of the Relay.
Relay [1]	:	Continuous Red on activation of the Relay.
Reader 2, RTE [2]	:	Continuous Green on detected contact closure.
Reader 2, DOS [1]	:	Continuous Green on detected contact closure.
Reader 1, RTE [2]	:	Continuous Green on detected contact closure.
Reader 1, DOS [1]	:	Continuous Green on detected contact closure.
Data	:	Flashing Green as per outgoing data.

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.

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.

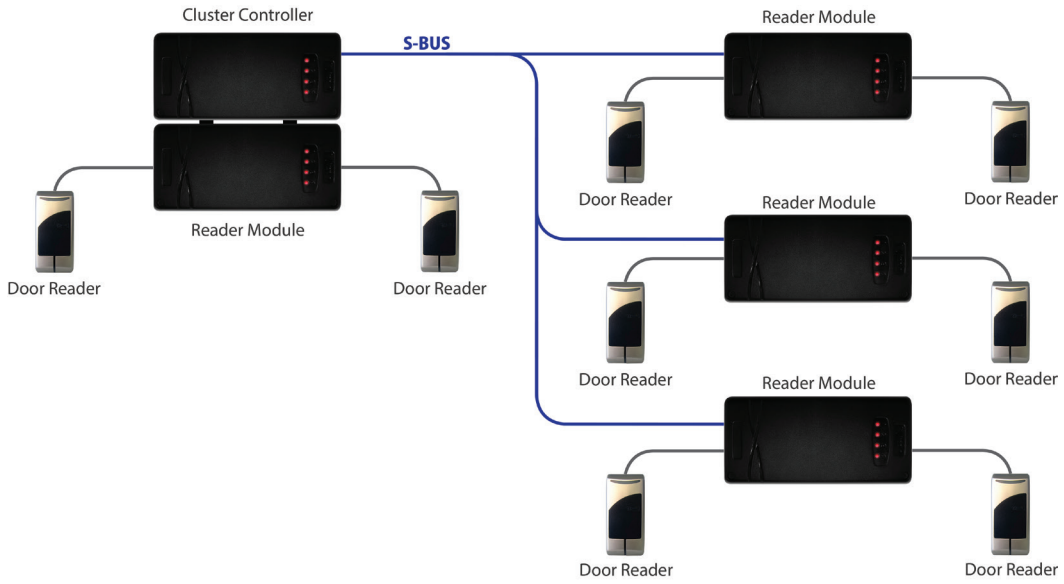

Figure 1 – System layout showing how Antenna Reader Modules may be connected to a Cluster Controller Module

This Product Specification Catalogue applies to the Impro (ARM) Antenna Reader Module, HML900-1-0-GB-01, HML901-1-0-GB-00. (The last two digits of the Impro stock code point to the issue status of the document or product).			
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