impro technologies®

PRODUCT CODE:
HCA910-0-0-GB-XX

Portal Application Controller - Plastic Housing

INSTALLATION MANUAL

SPECIFICATIONS

Working Environment	Designed to work in an indoor environment similar to IP20. The AC is not water resistant.	
Input Voltage Rating.....	10 V DC to 15 V DC, nominally 12V, polarity sensitive.	
Power Requirements	**Current**	**Power**
Supply Voltage 12 V DC	150 mA	1.8 W
Buzzer.....	4 kHz piezo-electric buzzer	
Anti-tamper	Contact type, NC, (tamper on open)	
Real Time Clock (RTC) Backup Battery		
Battery Type	1 x 3 V, CR2032, Lithium cell Battery.	
Processor	AM335x ARM® Cortex-A8 – 1 GHz (VFP and NEON® Floating-point accelerators)	
Operating System	ARM Linux – Running Debian 8	

Communication

Ethernet Port

Connection	Standard Ethernet RJ45 connector. 10/100 Mbps, half or full duplex. *NOTE: The unit is rated to 100 Mbps, however it will work on a 1 000 Mbps (1 GB) network.*
Protocol	TCP/IP, UDP.

S-Bus Host Port

Electrical Interface	Propriety S-Bus
Baud Rate	9600
Encryption	AES Encryption
S-Bus Addresses	A maximum of 8 S-Bus addresses may be connected to the S-Bus Host Terminal

RS485 Device Port

Configuration	38 400 Default.
Electrical Interface	RS485.
Baud Rates	9 600, 19 200, 28 800, 38 400, 57 600 and 115 200 (Selectable via the Communications Protocol.)
Data Format	8 data bits, no parity, 1 stop bit.
Communications Protocol	Impro secure communications protocol.
Line Termination	Provision is made for line termination.
Default Mode	Receive Mode.

USB Ports

USB Host Port 0	USB2 High Speed – 480Mb/s
USB Host Port 1	USB2 High Speed – 480Mb/s

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General

Memory

RAM	512 MB DDR3
Non Volatile Memory	8 GB micro SD card, Class 4
	4 GB On-board eMMC

Diagnostic Indicators

Incoming RS485 1 (Controller)	Flashing Green LED
Outgoing RS485 1 (Controller)	Flashing Red LED
Link Speed LED (Ethernet)	Red LED
Link Active LED (Ethernet)	Red LED
CPU Usage	Red LED On = Idle, Off = Busy.
CPU Running	Flashing Green LED = Running
Power	Red LED = Power ON

Console Pinout	Signal	Type
1	Ground	Power
2	TX	Output
3	RX	Input

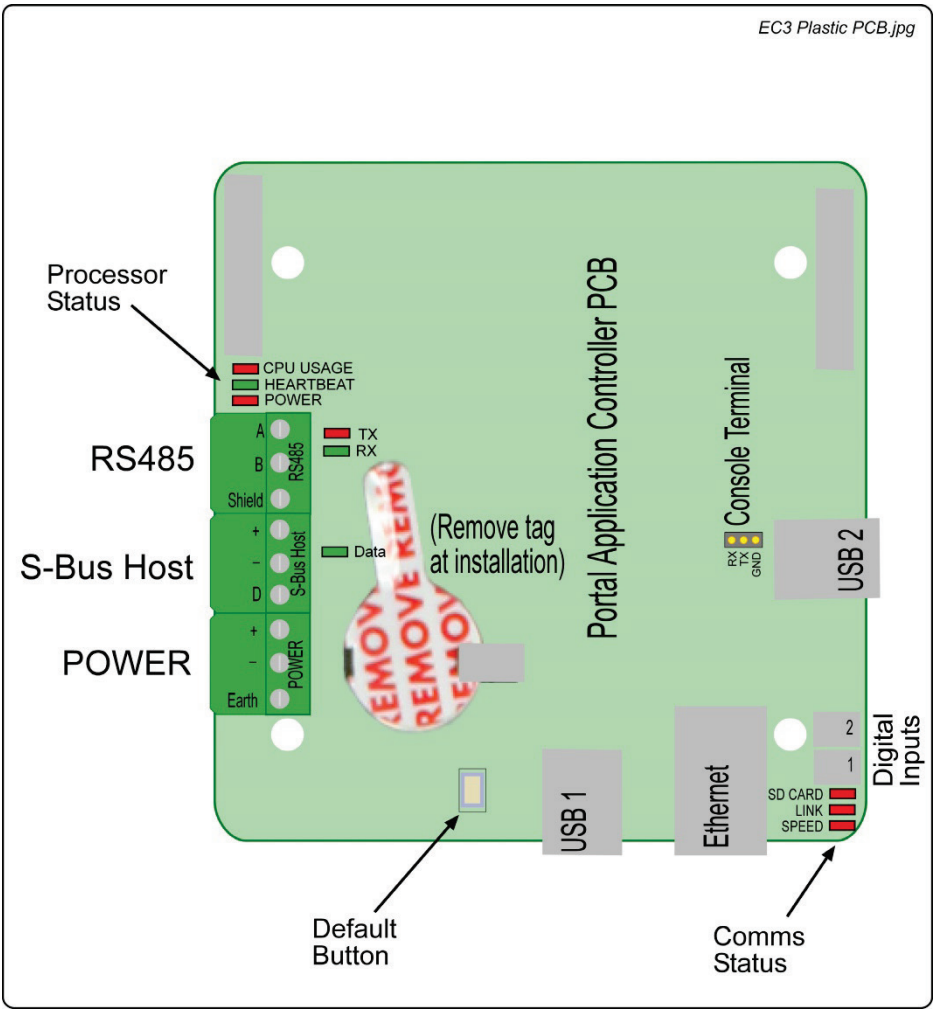
Two Digital inputs
These inputs have built-in resistive pullups. One digital input is connected to the factory-installed anti-tamper switch. The remaining input may be used to monitor the status of a supply voltage (requires a comparator driving a relay / open collector).

Console Connector
Connect the FTDI cable (TTL -232R-3V3-WE) to the console connector (pinout as per the table above).

Battery Tab
Remember to remove the battery tab to supply power to the Real Time Clock.

Default Button
Hold this down for 5 seconds and then release to default the password and return to the dynamic IP setting. (Useful in the event of setting an invalid static IP).

ELECTRICAL CONNECTIONS



Note: *The Installed Portal Application Controller firmware does not make use of the S-Bus or USB interfaces.*

One of the digital inputs is factory-wired to the anti-tamper switch, which is activated when the housing cover is removed.

For added lightning protection, use a 3-core power supply cable and connect the power earth terminal to the earth on the DC power supply.

INSTALLATION INFORMATION

Box Contents

Find the following when unpacking the Portal Application Controller:

- Portal Application Controller in a black ABS plastic housing. The housing consists of a Front Cover Assembly and a Mounting Plate. The Front Cover and Mounting Plate are held together with two Combi Screws (M4 x 10 mm) at the bottom of the housing.
- This Installation Manual
- Ziploc bag, containing the following:
  - Fixed Address Label
  - Two extra Combi Screws (M4 x 10 mm).
  - An extra Fixed Address Label.

NOTE: No mounting hardware is included in the packaging - the installer should obtain fasteners that are appropriate for the mounting surface.

Mounting the Portal Application Controller

Choose a position on a suitable firm mounting surface that is sheltered from the weather and allows for the convenient routing of cables.

CAUTION: Make certain that you mount the Portal Application Controller on a vibration-free surface.

NOTE: You can mount onto virtually any surface including metal.

1. Remove the cover from the mounting plate
2. Hold the mounting plate against the wall/mounting surface and (taking care not to damage the PCB) mark the position of the mounting holes on the mounting surface.
3. Drill the mounting holes and secure the mounting plate to the mounting surface, using suitable screws and wall plugs, nuts and bolts or rivets.

DC Supply Connection

The installer will need to supply a 12V DC power supply capable of supplying 200 mA.

Route the cable from the DC power supply to the Portal Application Controller.

(See Electrical Connections on page 4.)

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Network connections

With reference to the diagram on page 4:

1. Connect to the Access Portal server via Ethernet cable, running a cable from the nearest suitable Ethernet point, through one of the quick-click glands at the top of the housing, into the Ethernet socket on the Application Controller.
2. RS485 devices (door controllers) may be connected to the RS485 terminals on the Application Controller. Observe the wiring instructions in the installation manuals for the RS485 devices, using end-of-line links where necessary. Maximum RS485 line length is 1 000m (1 093 yd.).

System configuration

The Application Controller firmware installed in this unit does not make use of the S-Bus and USB ports. All settings and configuration are performed using Impro System Software, via the Ethernet connection.

The anti-tamper switch leads may be plugged into one of the digital inputs if tamper event detection is required when the housing lid is opened. This will also require that the correct input on this unit is configured via the Access Control System.

Fixed Address Labels

On installation of each Application Controller, do the following:

- Obtain, or prepare a sketched plan of the installation site.
- Attach the additional Fixed Address Labels, packaged with the Application Controller, in the corresponding position on the sketched site plan.
- When the system installation is complete and all the units are represented on the site plan by their Fixed Address Labels, file the site plan for future reference.

User Notes

GUARANTEE OR WARRANTY

This product conforms to our Guarantee or Warranty details placed on our Web Site, to read further please go to www.impro.net.

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ENVIRONMENTAL PROTECTION

Waste electrical products should not be disposed of with household/office waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice.

This manual is applicable to the Portal Application Controller HCA910-0-0-GB-XX			
HCA310-0-0-GB-00	Issue 01	January 2019	CUSTOMER MANUALS - IMPRO\GEN3 Access Portal Era\Portal Plastic Application Controller\English Manuals\Latest\EC3Portal-insm-en-01.pdf