Resource
Data Management

Carel® RS485 to IP DIN Rail Communications Module

Commissioning/User Guide
Revision 1.1

PR0020 DUALDIN CAR

Contents

Please ensure all power is switched off before installing or maintaining this product.

The RS485 to IP Communications Module

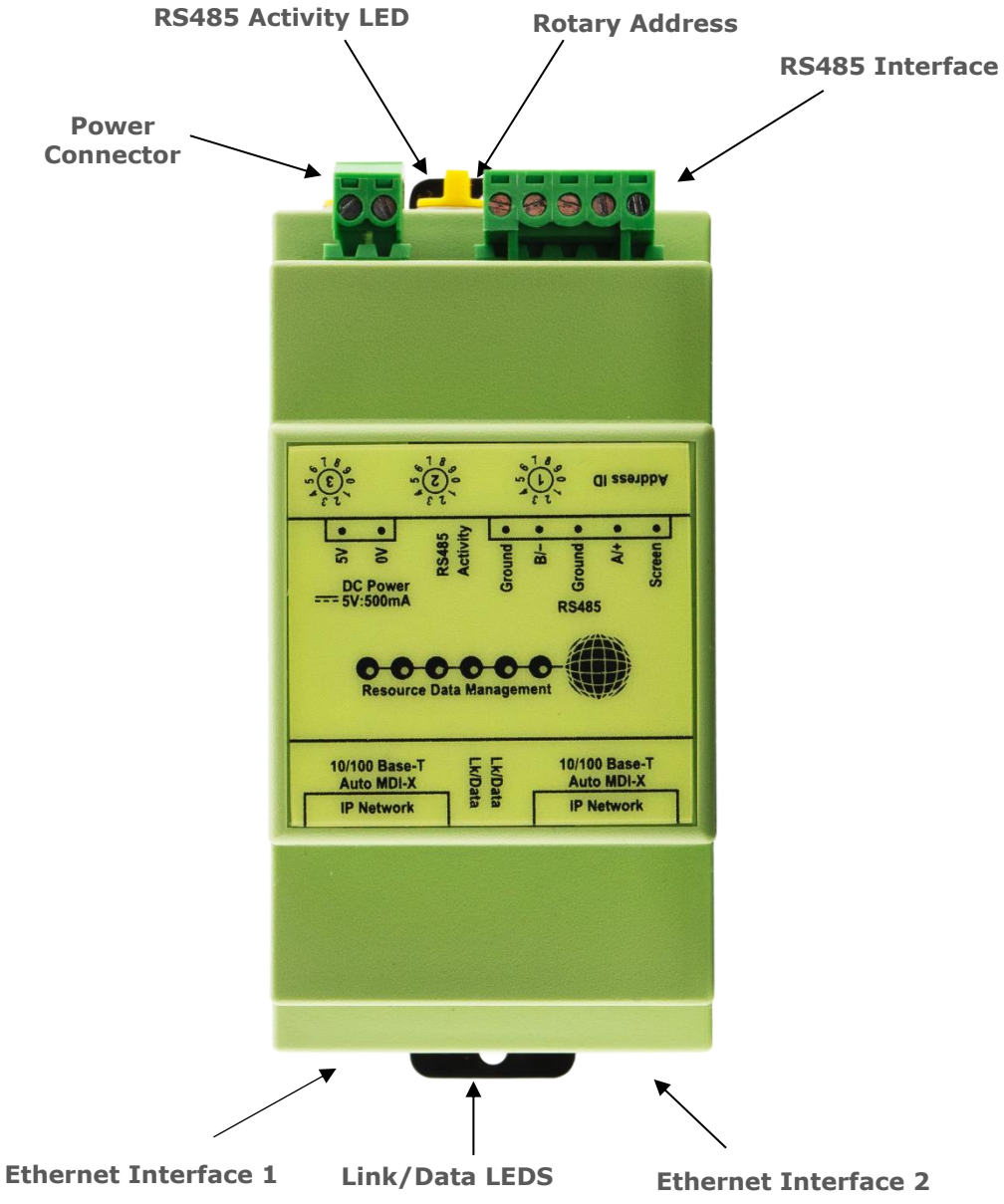
Carel® Variant

Description

The RS485 to IP module is used to convert RS485 Carel® traffic into IP traffic for use with an RDM Data Manager. This will allow RS485 Carel devices to be connected to an IP network thus reducing wiring costs and complexity onsite. The gateway also has the benefit of having two Ethernet ports allowing for further connectivity to other IP devices or for linking together multiple modules negating the need for 3rd party network equipment.

When connected to the DMTouch/miniDM the feature "Carel Interface", part number PR0470-ECAR, must be enabled. Each device connected to the PR0020 DUALDIN CAR will take up 1 position in the Carel device count with 32 allowed by the "Carel Interface" enable and then 32 more for each extra line enabled.

Connections



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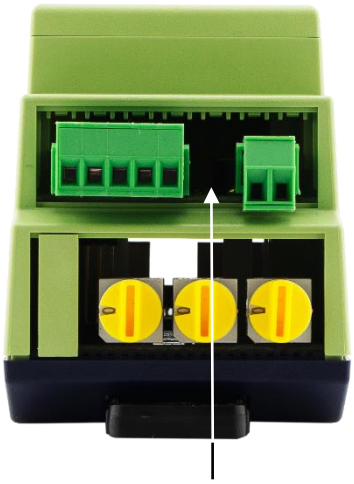
Status LEDs

There are two LEDs next to the Ethernet ports, one for each port and a single LED for the RS485 interface.

Link/Data LEDS



RS485 Activity LED

LED Description	Colour	State	Comment
Link / Data	Green LED	On	Connection Present
		Off	No Connection
		Flashing	Data
RS485 Activity	Green LED	Flashing	Network Activity
		Permanently off/on	Network Fault

Configuration

The IP address of the module is dependent on the rotary switch positions.

Rotary Address	IP Address Range
001 to 254	The module is set to operate in the 192.168.0.XXX range with the last part of the IP address being a number between 1 and 254. The last part of the IP address is the rotary switch address entered. Select a 3 digit address and power on the module. For example if the rotary switch address is set to "150" then the module will be assigned the address 192.168.0.150.
999	The module is set to DHCP mode and will request an IP address from network. Set '999' and power on the module.
Remaining Addresses	The remaining rotary switch addresses are reserved for future use and should not be used.

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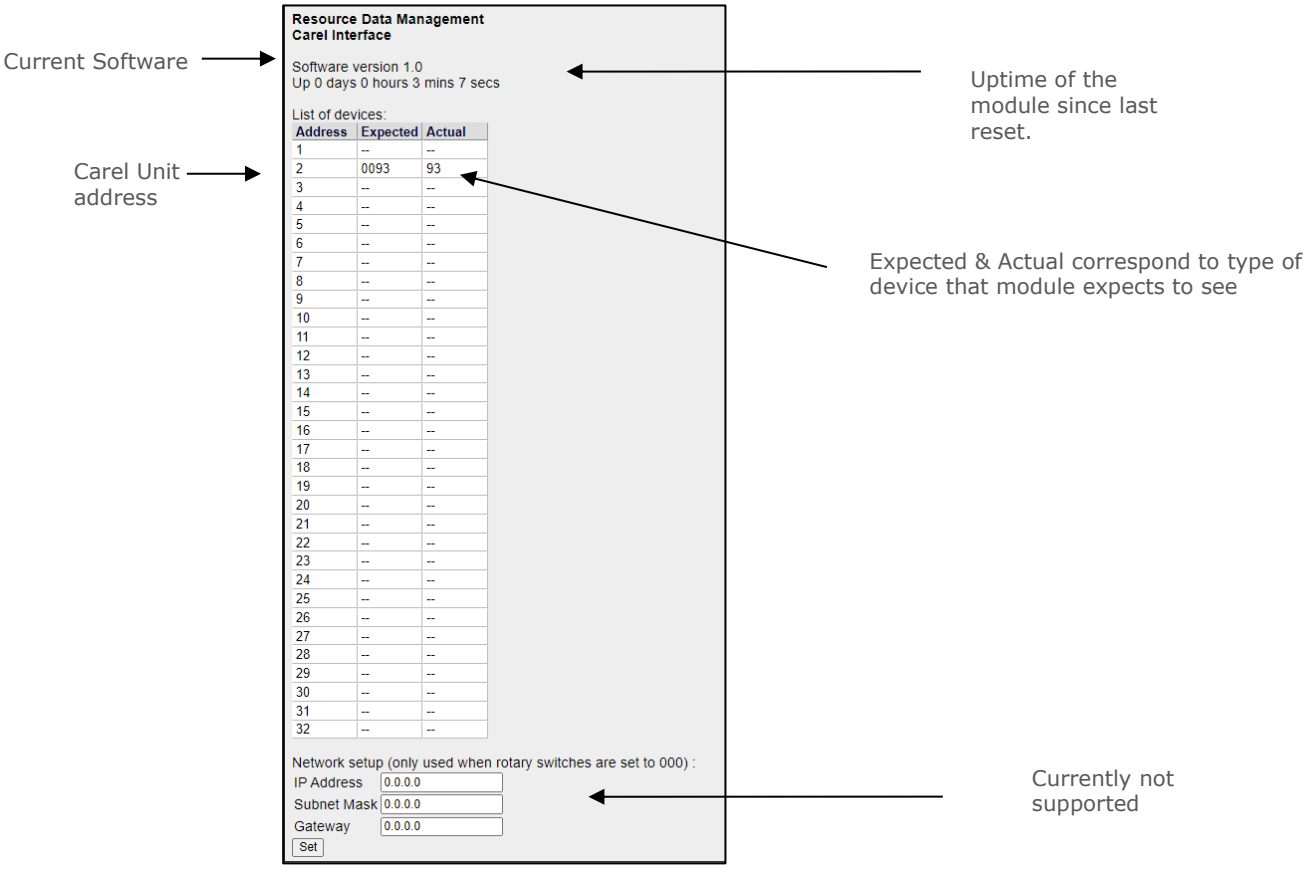
Webpage Interface

Below is a screenshot of the webpage interface and the data displayed.



Once the appropriate information has been entered click on "Set" to save the changes. A message "Setup Changed" will be shown along with a review of the details entered, when the page refreshes ensure the configuration has been updated with the desired settings.

Adding a Carel Device to a DMTouch/miniDM

On the DMTouch/miniDM the Carel Interface software needs to be activated before it will communicate to the Carel devices. A PR0470-ECAR needs activated per 32 controllers.

Note: Only compatible with DM software 4.1 or above.

To add a Carel device, log in and navigate through the following menus:

Service/Devices/Network/Add Device

Selecting the 'Add device' option, will show the following page:

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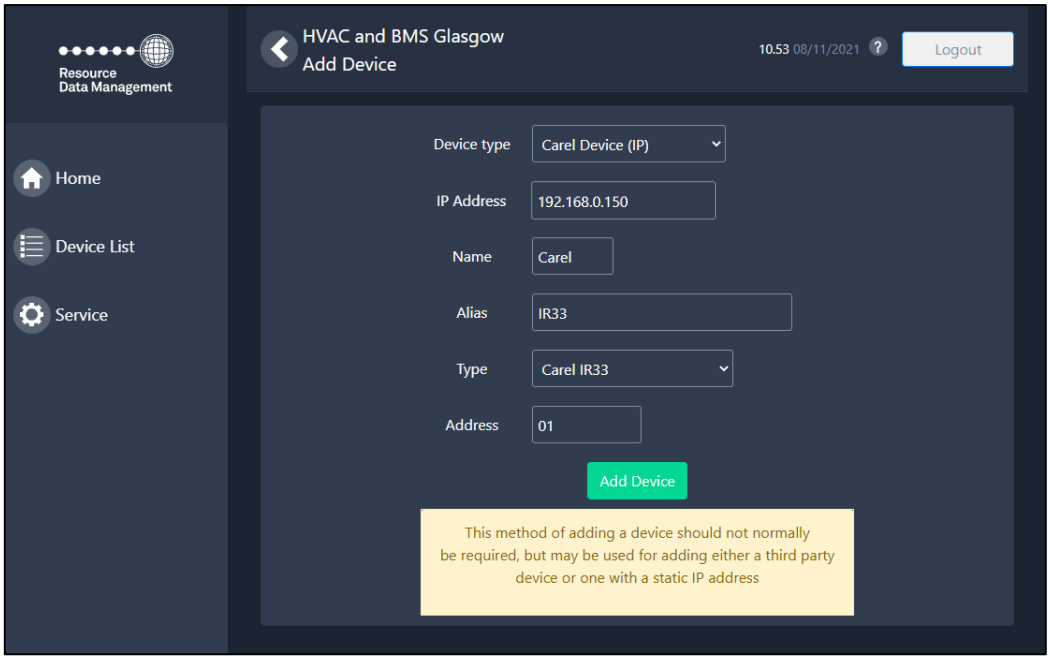

Within the page, all fields will need to be entered:

Device Type:	Select Carel Device (IP)
IP Address:	The IP address assigned to the Carel module
Name:	The name you wish to appear on the Device List
Alias:	Enter an appropriate description for the device
Type:	Select the device from the drop down menu
Address:	Enter the address of the device. Consult 3rd party user document for addressing guide. Each device would need and address on 1 through to 32.

Compatible Devices

LED Description
Carel Powersplit Controller
Carel IO
Carel MPX
Carel pCOWeb Pack Controller
Carel MPX Pro
IR33
Carel pRack Dual Controller

Once details are entered, the Carel controller will show in the Device List as below:

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Specification

Supply Voltage Range	5 Vdc ±5%
Typical supply current	<500 mA
Operating temperature range	+5^{0}C to +50^{0}C (41°F to 122°F)
Operating Humidity	80% maximum
Storage temperature range	-20^{0}C to +65^{0}C (-4°F – 149°F)
Environmental	Indoor use at altitudes up to 2000m, Pollution Degree II
Size	110mm (4.3in) (L) x 52.5mm (2in) (W) x 68mm (2.6) (D)
Weight	125 Grams
EMC	EN 61326-1: 2013
Ventilation	There is no requirement for forced cooling ventilation
Class 2 Insulation	**No** protective Earth is required and **none** should be fitted
Disposal	Please observe local legislation with regards to electrical products
Origins	Product designed in the UK manufactured in Taiwan

Ethernet Interface

10/100 Base-T with Auto MDI-X feature. The Auto MDI-X feature automatically configures the Ethernet Interface to allow either a standard patch cable or crossover cable to be used when connecting to the RS485 to IP module directly.

External Power Supply Requirements

5Vdc: 500mA

Cleaning

Do not wet the module when cleaning. Clean by wiping with a slightly damped lint free cloth.

Mounting Instructions

Standard DIN rail mountable with additional mounting holes 103mm apart.

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Power Supply

The unit is supplied complete with a mains powered 5Vdc DIN rail mount power supply.

Mains Supply Requirements: Input Voltage Range - 100 to 240vAC
Maximum 0.88 A, 50/60Hz

Note the product must be used as detailed by the manufacturer, failure to comply may result in the level of protection being affected.

Maximum Number of RS485 Devices

The maximum number of Carel devices which can be connected to a single gateway is 32

Disclaimer

The specifications of the product detailed in this document may change without notice. RDM Ltd shall not be liable for errors or omissions, for incidental or consequential damages, directly or indirectly, in connection with the furnishing, performance or misuse of this product or document.

Revision History

Revision	Date	Changes
V1.0	09/12/21	First Release
V1.1	13/12/24	Note added for Network Setup information on Web Interface page

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Resource Data Management