



ECM-RS2D

RS232/RS485/DMX512 Port Module

Quick Reference Guide (revision 2.10)

OVERVIEW

The ECM-RS2D module is designed to control any devices with RS232/RS485 and DMX512 interface.

Being a bidirectional gateway between physical interface RS232/RS485 and Ethernet network, ECM-RS2D supports multiple TCP/IP connections to each serial port.

The device has 2 independent isolated channels of serial ports.

The control, data exchange and configuration are all handled via TCP/IP protocol.

Version "D" of the module ECM-RS2D is designed to be installed on a standard 35 mm DIN rail.

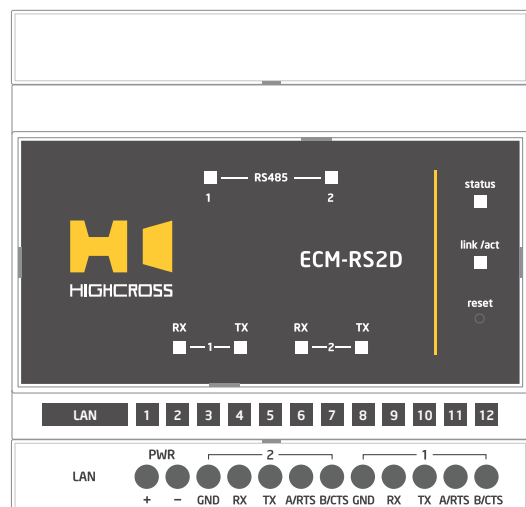
SPECIFICATIONS

Number of serial ports	2
Supported interfaces of serial ports	RS232, RS485, DMX512
Supported signals of physical interfaces	RS232: GND, TX, RX, RTS, CTS RS485, DMX512: A(-), B(+)
Galvanic isolation	Up to 1 kV
Supply voltage (power terminals and PoE)	+12 ... 48 VDC
Consumption current	200 mA at +12 VDC
Operating temperature	-20°C ... +45°C (-5°F ... +115°F)

Operating humidity	5 ... 80% RH non-condensing
Enclosure	5M DIN rail box, UL94-V0 flame retardant PC
Dimensions	90 x 88 x 58 mm (3.54" x 3.46" x 2.28")
Weight	170 g (0.375 lbs)
Supported data exchange protocols	NetString Point-to-Point

DEVICE CONTROL COMPONENTS

FACE PANEL COMPONENTS	
RX 1...2	Indicate receiving of data from ports 1...2
TX 1...2	Indicate transmission of data to ports 1...2
RS485 1...2	Indicate mode RS485 for both ports
status	Indicates power status and connection to controllers
link/act	Ethernet link and activity indicator
reset	Multifunctional button (reboot, reset, bootloader)
TERMINAL PANELS	
LAN	Ethernet network and PoE power connector
PWR	Power supply terminals (+12...48 VDC)
1...2	Terminals: GND - RS232 ground contact isolated from PWR "-" contact RX/TX - RS232 RXD and TXD signals A/RTS - RS232 RTS or RS485 A(-) signal B/CTS - RS232 CTS or RS485 B(+) signal



LED "status" indicates the power connection and connection status with controllers	
Off	No power connected
Blink (1 Hz)	No connection with external controllers
Fast blink (4 Hz)	The device is in bootloader mode
On	Connected to external controllers

LED "link" indicates Ethernet network link and activity	
Off	No connection to Ethernet network
Blink	Connected to Ethernet network Receiving Ethernet data packets
On	Connected to Ethernet network No network activity

LEDs "TX1", "TX2", "RX1", "RX2" display activity of serial ports	
Off	No port activity
On	Data is sending/receiving through the port

LEDs "RS485 - 1" and "RS485 - 2" display the mode of serial ports	
Off	The port is in mode RS232
On	RS485 or DMX512 mode is active

Multifunctional button "reset"

To reboot the device push the button for 1 second

To reset the device to factory defaults push and hold the button for 5 seconds.

IP-address will be set to 10.0.1.101, subnet mask - to 255.255.255.0. All other settings will be set to default values

For firmware update, power off the device, push and hold the button and power the device on. Release the button after the LED "status" will start to blink fast.

The network settings of the device started in bootloader mode are: IP-address - **10.0.1.101**, subnet mask - **255.255.255.0**

The **PWR "+"** and **"-"** terminals are designed to power the device +12...48 VDC if connected Ethernet switch has no PoE support.

Terminals **GND**, **RX**, **TX**, **RTS** and **CTS** of channels 1...2 are used to be connected to corresponding RS232 interface cables.

Terminals **A(-)** and **B(+)** of channels 1...2 are designed to be connected to cables of RS485 and DMX512 interface.

To avoid damage of equipment, ensure that the port is set to proper mode (RS232 or RS485) before connecting wires to port terminals. The LEDs "RS485 - 1" and "RS485 - 2" are designed for quick visual control of RS485 mode.

SETUP AND CONFIGURATION

The configuration of the module is handled via web-interface.

To start working with the device:

- Connect the device to the Ethernet switch. If the switch has no PoE support, connect the power +12...48 VDC to the **PWR** terminal
- Ensure that your computer can connect to the network address 10.0.1.101 or set the TCP/IP settings of active network adaptor to: IP address - **10.0.1.100**, subnet mask - **255.255.255.0**
- Enter **10.0.1.101** in address bar of your web-browser
- Enter: login - **root**, password - **root**
- Configure the device settings

The web-interface contains the next web-pages:

Home	Displays the hardware revision and the firmware version
Settings	Network settings, type of data exchange protocol
Ports configuration	Settings for serial ports - type of physical interface, baud rate, data bits, parity, stop bits, CTS/RTS mode Settings for DMX512 mode - Break, MAB and Idle parameters
Status	Displays current TCP/IP connections and device uptime info

For further information refer to www.highcross.com