DCC211

# SERIAL TO ETHERNET CONVERTER
## WITH DUAL MASTERS

## INTRODUCTION

DCC211 is a Serial-to-Ethernet converter. It is an Industrial Terminal Server which functions as a gateway. It has two serial ports (RS232/RS485 slave, RS485 master) and an Ethernet port (master).

It finds applications where a SCADA software, a PLC, an HMI or DCS need to communicate with a serial bus (RS232/RS485). Essentially, two masters can access data from slaves on one serial bus.

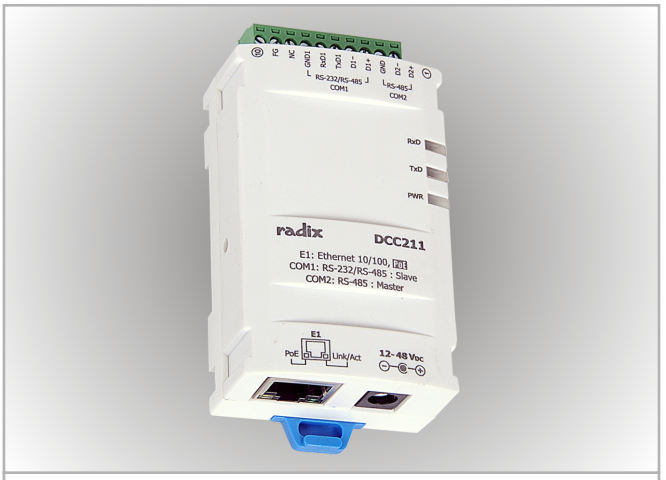
For example, a SCADA software running on a PC is connected to the Ethernet port as master and an HMI is connected to the RS485 port as the second master. Both masters are able to access data from upto 32 devices on an RS485 bus, eg temperature scanners, connected to the RS485 port (slave) of the DCC211.

DCC211 is an interface between RS232 or RS485 bus and an Ethernet port. It converts between MODBUS TCP & MODBUS RTU. The browser based configuration utility allows the host IP address and serial settings to be changed.

The DCC211 Converter offers true IEEE 802.3af-compliant (classification, Class 1) Power over Ethernet (PoE) functionality using a standard category 6 Ethernet cable to receive power from any PoE switch. If there is no PoE switch on site, the module will also accept power input from a DC adapter.

## FEATURES

- ARM Cortex-M4F processor core
  - 512 KB flash memory
  - 256 KB single-cycle system SRAM
  - 6KB of EEPROM
- 10/100 Mbps Ethernet port
- Browser based configuration utility
- Telnet, TCP Modbus protocols
- Serial Interface : RS232, RS485
- Configurable baud rate, parity, data bits, stop bits, IP address
- 12~48 VDC power supply
- Mounting : DIN Rail / Surface
- Redundant power inputs: PoE (IEEE 802.3af, Class 1) and DC jack




## SPECIFICATIONS

All specifications at ambient of 25 °C, unless specified otherwise

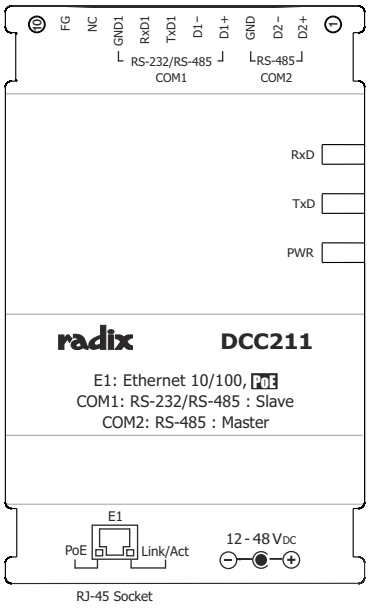
| | |
|---|---|
| **SYSTEM** | |
| CPU | 32 bit MCU |
| **COMMUNICATION INTERFACE** | |
| Ethernet | 10/100 Base-TX, 8-pin RJ-45X1, (Auto-negotiating, LED indicator) PoE (IEEE 802.3af, Class 1) |
| Utility software | Browser based configuration utility |
| Ethernet protocol | Telnet, TCP MODBUS |
| Serial protocol | MODBUS RTU |
| COM1 | 3-wire RS232 (Slave)<br>2-wire RS485 (Slave) |
| COM2 | 2-wire RS485 (Master) |
| Self-Tuner | Yes (automatic RS485 direction control) |
| UART | 16c550 or compatible |
| **COM PORT FORMAT** | |
| Baud rate (bps) | 300, 600, 1200, 2400, 4800, 9600, 14400, 19200, 38400, 57600, 115200, 230400 |
| Data bit | 5,6,7,8 |
| Parity | None, Odd, Even, Mark, Space |
| Stop bit | 1, 2 |
| **INDICATORS** | |
| Power | Red LED |
| TxD | Green LED |
| RXD | Blue LED |
| **POWER** | |
| Power input (DC Jack) | 12~48 VDC |
| Power consumption | 0.05A @24VDC |
| 2 mm male connector plug with 1.5meter cable is included for connection to a 24VDC supply (12~48VDC) | |
| **MECHANICAL** | |
| Material | ABS |
| Mounting | a) Snap on for 35 mm DINrail to DIN46277<br>b) Surface |
| Dimensions (in mm) (See Fig1) | 30.1(H) X 48.3(W) X 95(L) |
| **ENVIRONMENTAL LIMITS** | |
| Operating temperature | 0 to 65°C |
| Storage temperature | -30 to 80°C |
| Ambient relative humidity | 10 to 90% (non-condensing) |
| **CONNECTION** | |
| Single/ stranded wires | ⩽ 2.5mm², AWG 14 |
| COM1 | RS-232 : TxD1, RxD1 ,GND1<br>RS-485 : D1+, D1- |
| COM2 | RS-485 : D2+, D2- |
| **AC POWER ADAPTOR FOR DCC211** | To be ordered separately |
| Model | ACA203 |
| Mains supply voltage | 100~240VAC, 50/60hz |



radix®
www.radix.co.in

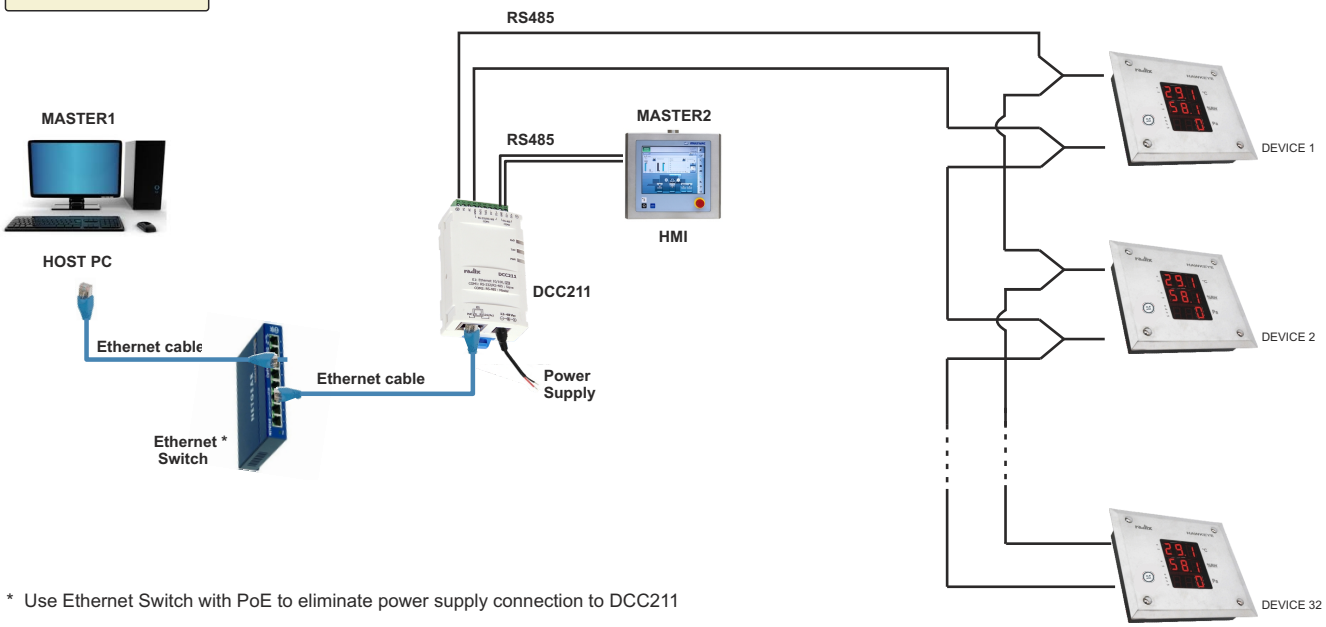
# SERIAL TO ETHERNET CONVERTER
## WITH DUAL MASTERS

## CONNECTION DETAILS




## APPLICATION

**NON-POE**

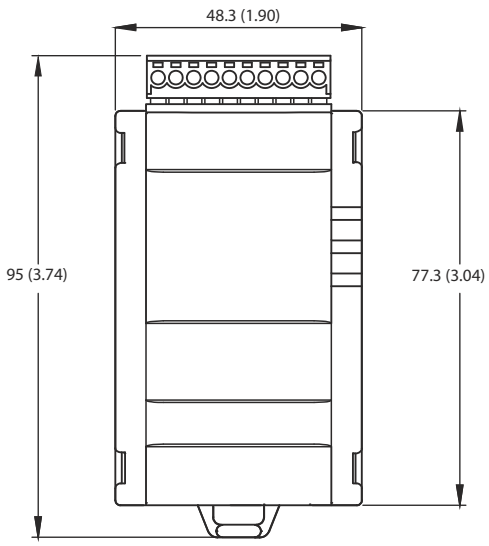



* Use Ethernet Switch with PoE to eliminate power supply connection to DCC211

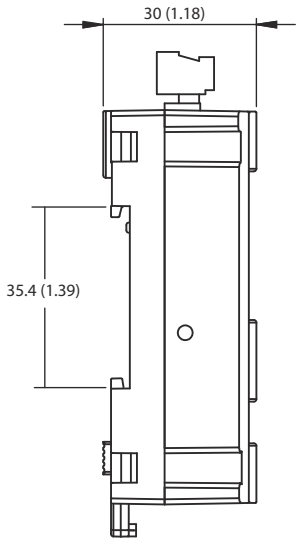
DCC211

# SERIAL TO ETHERNET CONVERTER
## WITH DUAL MASTERS

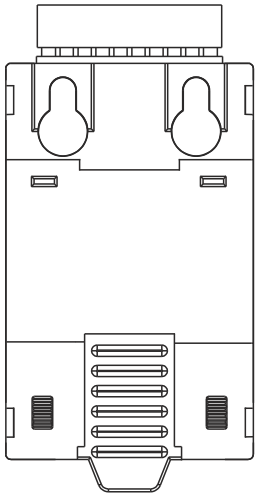
DIMENSIONS mm (inch)




FRONT VIEW




SIDE VIEW



REAR VIEW

FIG 1

## ORDERING INFORMATION

SERIAL TO ETHERNET CONVERTER WITH DUAL MASTERS
Model : DCC211
Order Code : 2559

**In the Box**

| | |
|---|---|
| DCC211 | 1 pc |
| Power Cable, 1.5 meter for 24VDC | 1 pc |

AC POWER ADAPTOR FOR DCC211
Model : ACA203
Order Code : 2571

CAT#521R1/310316/A

**ENQUIRIES**
**Instruments:** sales@radix.co.in
**Sensors:** sensors@radix.co.in
**Gauges:** gauges@radix.co.in
**Automation:** automation@radix.co.in
**Level:** level@radix.co.in

**RADIX ELECTROSYSTEMS PVT LTD**
**EL-135/136/137, Electronics Zone**
**TTC Indl. Area, MIDC, Mahape**
**Navi Mumbai - 400 710, India**
**+ 91 22 42537707 • sales@radix.co.in**

radix®
www.radix.co.in