

INTRODUCTION

The UCM-99 Ethernet modem is a device which easily allows any industrial device with a serial interface to connect to Ethernet networks.

The UCM-99 is an ideal product in applications requiring remote COM ports and serial tunnelling facilities over Ethernet networks. The UCM-99 also works directly with any software handling TCP sockets, without any additional software.

Housed in a robust aluminium enclosure the UCM-99 is designed for use in industrial environments.

Two serial communication ports and one Ethernet are provided with the Ethernet modem.

The UCM-99 Ethernet modem includes a complete Web-Server for configuration, maintenance and customised purposes. From a standard Web Browser such as MS Internet Explorer you configure the different communication parameters, uploads new facilities or even browses your own dynamic Web-pages stored in the module. The full networking functionality makes it possible to have as much as 10 clients concurrently browsing the same module.

Features

The UCM-99 Ethernet modem in the basic version offers:

- Built-in Web-Server used for configuration, maintenance and open for customisation of your own web pages.
- Multi-networking protocol support; UDP, PPP, TCP, HTTP, FTP, SMTP, Telnet, MIME.
- Interfaces: Ethernet 10BASE-T and RS232 V24 or RS485.
- 12-48VDC power supply input.
- Industrial mounting on 35 mm DIN rail.
- Full software upgradable via Ethernet.

Additional factory fit options are available for other applications:

- Built-in AVR 8-bit application controller with serial RS232 interface to handle application specific control parameters or communication driver implementation.
- Modem, email and SMS support.
- WAP support.
- I/O expansion bus for connecting I/O modules directly to the modem.

Applications

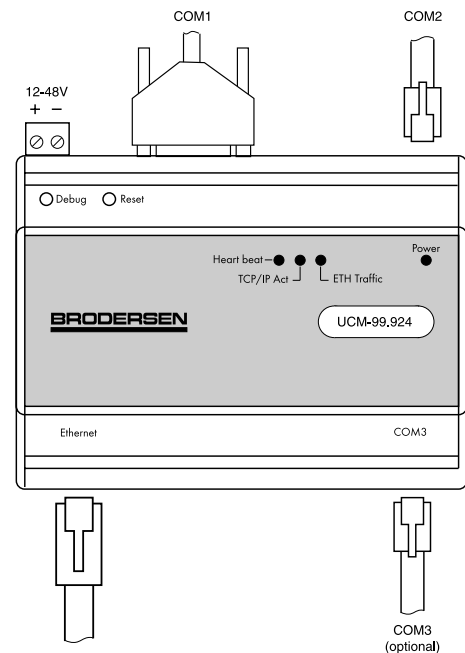
The UCM-99 Ethernet modem is highly versatile, and as such can be used in many modern communication applications for:

- Networking of industrial HW using TCP/IP technology on new or existing Ethernet networks.
- Remote COM port communication - provide you simple with a remote COM ports anywhere on your network.
- Tunneling of serial data on Ethernet network; point-to-point or multi clients with additional software.
- Various Client-Server networking solutions.

Key applications includes:

- Networking of COM port equipment (PLCs, RTUs etc.) via Ethernet.
- Remote monitoring.
- Advanced metering applications.
- Traffic light control.
- Rail crossing Monitoring.
- Dynamic signs and information displays.

UCM-99 Ethernet Modem



TECHNICAL DESCRIPTION

The UCM-99 Ethernet modem is ready to integrate with existing applications. The UCM-99 has two standard serial RS232 ports that can be configured as a tunnel, enabling transparent serial communication via PPP and TCP/IP. Alternatively the serial RS232 port can be used by an application programme to gain access to equipment, if a driver is written for the specific communication protocol.

Optionally the UCM-99 Ethernet modem can be delivered with an 8-Bit AVR application controller. The purpose of this additional controller is to give users a very flexible application platform programmed by you or by us. Using a Browser as interface you are free to programme the AVR controller. Also users will have direct Telnet access to the application controller enabling easy debugging or data manipulation using Java applets.

Ethernet Modem UCM-99

TECHNICAL DATA

INTERFACES

Network Interface:

Ethernet: RJ45 10BASE-T

Serial interface COM1:

Signal level: RS232C/v.24.
Connector: 9-pole sub-D, male.
Speed: max. 115kbps
Use: User defined or modem.

Serial interface COM2:

Signal level: RS232C/v.24 or RS485.
Connector: RJ11 6 pole.
Speed: max. 115kbps
Protocol: User defined

Serial interface COM3 (optional):

Signal level: RS232C/v.24.
Connector: RJ11 6 pole.
Speed: max. 115kbps
Protocol: User defined

CONTROLLER

Memory:

1 Mb EDO RAM
2 Mb Flash

Real time clock:

Real Time Clock with battery backup

Protocols:

Protocols supported: ARP/RARP, PPP, UDP, TCP, DHCP, HTTP, FTP, SMTP, Telnet, DNS, MIME, SMP

Software:

OnBoard script language for data acquisition and creation of dynamic web-pages.

Optional separate Controller for applications:

Atmel AVR controller (Atmega 163)

POWER SUPPLY

Supply Voltage:

Nominal 12-48VDC (10-60VDC)

Power consumption:

Max. 1,3W

Isolation

Power supply to electronics: 500V

Indicators:

Power: Red LED indicating power ON
Others: Green and yellow

GENERAL

Ambient temperature: -10 - +55°C.

EMC: EN 50081-1/EN50082-1.

Protection: IP20.

Mounting: 35 mm DIN-rail, EN50022.

Power supply terminals: Max. 1.5 mm² wire.

Housing: Anodized aluminium with plastic ends.
According to DIN 43880.

Dimensions: HxWxD: 80(+connectors)x108x62 mm.

Additional services

Plug 'n' play solution

We would be pleased to develop application specific solutions in the UCM-99 Ethernet device. We can develop the necessary software to meet specific needs, e.g. homepage design. Hardware modification or enhancement is also possible if required.

Layout on serial interface / RS232 / COM1

RS232 port (9 pole sub-D)

The RS232 port provide the following signals:

Pin 1	DCD	Data carrier detect (in)
Pin 2	RX	Receive data (in)
Pin 3	TX	Transmit data (out)
Pin 4	DTR	Data terminal ready (out)
Pin 5	SG	Signal ground
Pin 6	DSR	Data set ready (in)
Pin 7	RTS	Request to send (out)
Pin 8	CTS	Clear to send (in)
Pin 9	RI	Ringing indicator (in)

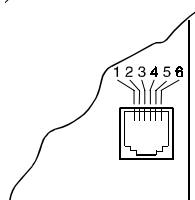
Layout on serial interface / RS485 / COM2

Hardware/serial interface

The serial port when used for RS485 is based on a 6 pole RJ11 connector. See the connections below:

The RS485 port provide the following signals:

Pin 1	SG (Signal Ground)
Pin 2	Data +
Pin 3	Data -
Pin 4	RTS +
Pin 5	RTS -
Pin 6	Shield / Module housing



Layout on serial interface / RS232 / COM2

Hardware/serial interface

The serial port when used for RS232 is based on a 6 pole RJ11 connector. See the connection below

The RS232 port provide the following signals:

Pin 1	SG	Signal Ground	Electronic GND
Pin 2	RTS	Request To Send	Output
Pin 3	RX	Receive data	Input
Pin 4	TX	Transmit data	Output
Pin 5	CTS	Clear to send	Input
Pin 6		Shield	Module housing