



SHM Communications Ltd.

Ethernet Gateway Units (EGUs)



Overview

Traditionally, intelligent industrial equipment (meters, loggers etc.) have used serial interface protocols running over RS232, RS422 or RS485 physical links.

Since the advent of the Internet, Ethernet has become a dominant interconnection medium in commercial and industrial premises. Ethernet has the following advantages :-

- It is easily expanded and reconfigured.
- It supports many simultaneous connections on the same network.
- A device on the network can be controlled from any point on the network (or from anywhere in the world if the network is connected to the Internet).
- Networking costs are relatively cheap, especially when the network can be shared with other users.

The EGUs allow devices running serial protocols to be controlled or interrogated via an Ethernet network, and is effectively an industrial "Terminal Server".

In particular, they have been designed to work with SHM's range of Data Loggers (UL8, UL24 and DL4).

The EGU connects to one logger or a "ring" of loggers using an RS485 connection (4-wire plus ground). The EGU transmits data received via the

Ethernet connection as RS485 serial data. Serial RS485 data received is transmitted back via the Ethernet connection.

All connections (except the Ethernet) are via screw terminals, and the device is inside a rugged industrial enclosure.

Communication Methods

There are several methods to communicate with devices connected to the EGU, depending on the host software that communicates with the device :-

1. If the software already supports communication via Ethernet (Stark RT and SHM's logger software utilities do this), then you only need to specify the IP address and Port number of the EGU.
2. If the software only supports serial communications, then one option is to use another EGU or Terminal Server that has been configured in "modem mode". This is connected to the PC serial port and makes the Ethernet link look like a dial-up modem connection to the software (with a "phone number" corresponding to the IP address and Port number of the EGU).
3. If the software only supports serial communications, then another option is to install a special software driver that makes the Ethernet connection look like a conventional serial port (eg. COM3:) on the PC.

For further information on this product or advice on loggers, meters, sensors or Energy Monitoring Systems, contact us at the address below.



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Specification

ENCLOSURE

Environment	IP55 (depends on cable entries)
Weight	1.4 kg
Dimensions	215 x 175 x 105 mm HWD
Fastenings	4 screws, centres 176 x 122 mm
Cable Entry	Moulded conduit knockouts, 23/29 mm dia

POWER SUPPLY

Voltage supply	230v AC \pm 15%, 50-60 Hz, 50 mA
Fuse	Internal 20mm 315mA slow-blow
Connection	LNE screw terminals

RS485

Connection	5 screw terminals (I+, I-, E, O+, O-)
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ETHERNET

Connection	RJ45 socket located inside the unit
Protocol	10/100 Base-T auto sense. TCP/IP, UDP
Ports	23 (telnet) used for EGU configuration 4001 EGU1 data (default) 1001, 1002, 1003, 1004 EGU4 data (default)

CONFIGURATION

Serial	Supplied configured for connection to SHM loggers (9600, E, 1, No handshake).
IP Address	This must be configured by the user once it is installed on the network

Selection Guide

Part Number	Description
EGU1	Single RS485 serial port
EGU4	Four independent RS485 serial ports