EnFlex MG-200 Control Server Gateway

The EnFlex MG-200 is a TCP/IP network host for interconnecting a variety of networked facility systems and devices. It has built-in pulse counters that allow it to receive inputs from electricity, water, gas, and other types of meters and transducers. The MG-200 is designed to reside at a remote site and connect to devices within that site through data and communication interfaces. The MG-200 provides the ability to locally manage multiple data acquisition and control systems and distribute information to and from connected devices over TCP/IP networks including the Internet.

The modular architecture of the MG-200 allows it to be installed in its basic form and to be upgraded later with new networking and data interface modules as customers' requirements change and new connectivity technologies and service offerings become available. In addition, multiple MG-200 gateways can be networked together via Ethernet to provide expansion capability.

The MG-200 is available as the MG-200L with a 20 MB compact flash disk and as MG-200 HD with an integral 1.2 GB hard disk drive for applications with large data storage requirements. It is also available with an optional keypad and display for configuration and monitoring of the MG-200's performance.

Key Features:

- **Standalone gateway/controller**

- **Hosts EnFlex software**

- **TCP/IP Networking with HTTP Web server**

- **Space for user programs and data**

- **10 Mbps Ethernet port**

- **3 pulse counters for utility meters**

- **5 serial ports for connecting to external devices and networks**

- **2 Expansion Ports**

- **Console Port**

- **Sensor bus port - supports up to 32 Sensor Bus (Dallas Bus) devices**

MG-200 Gateway

The MG-200 is a Linux-based workstation, and provides a complete implementation of TCP/IP networking, including SLIP, PPP, NFS, etc. It supports a range of TCP/IP services such as FTP, Telnet, etc.

The MG-200 is shipped with the complete EnFlex Application Software environment, including the embedded EnFlex Web Server, EnFlex Script® and EnFlex Connect™. It supports EnFlex Smart I/O controllers, LONWORKS-based EnFlex devices, and EnFlex Sensor Bus devices. Additional interfaces may be developed by users for any 3rd party equipment that communicates over RS-232 or RS-485.

The MG-200 is enclosed in a rugged and compact 5" X 8.25" X 2.5" solid aluminum case that can be mounted in any position. The MG-200L can be located outdoors if it is protected from direct exposure to weather.

Network Interfaces

The MG-200 provides data interfaces to the following networks:

Type	Media	Connector	Protocols
Ethernet	10 Base T	RJ-45	TCP/IP
RS-232 (COM1)	Three-wire Serial	Screw Terminals	LONWORKS, User Defined
RS-232 (COM2)	Seven-wire Serial with Modem Control	Screw Terminals	TCP/IP-PPP (External Modem), LONWORKS, User Defined
RS-485 (COM3)	Three-wire Serial (Twisted shielded pair)	Screw Terminals	EnFlex Smart I/O, Danfoss VSD, Modbus, User Defined
RS-232 (COM4)	Seven-wire Serial with Modem Control	RJ-45	TCP/IP-PPP (External Modem), LONWORKS, User Defined
RS-485 (COM5)	Three-wire Serial (Twisted shielded pair)	Screw Terminals	EnFlex Smart I/O, Danfoss VSD, Modbus, User Defined
Expansion Ports	As Required	Screw Terminals	User Defined, LONWORKS FTT
Console Port	Three-wire Serial	Screw Terminals	VT100
Device Bus	Twisted Pair	Screw Terminals	Dallas Digital Sensor Bus

Expansion Modules

The MG-200 has two expansion ports that accommodate plug-in expansion modules. Modules are installed inside the enclosure and facilitate connection of additional networks or devices. A LONWORKS FTT-10 interface module will be available. Additional expansion modules to be developed in the future may support CEBus, HDSL, ADSL, X10, Powerline Carrier, etc.

Suggested Applications

The EnFlex MG-200 can be used in numerous applications, including the following:

- Stand-alone intelligent utility meter interface
- Gateway to third-party networks and devices
- Generator monitoring and control
- Data acquisition

- Real-time metering and sub-metering
- Facility management
- Environmental monitoring
- Security and access monitoring