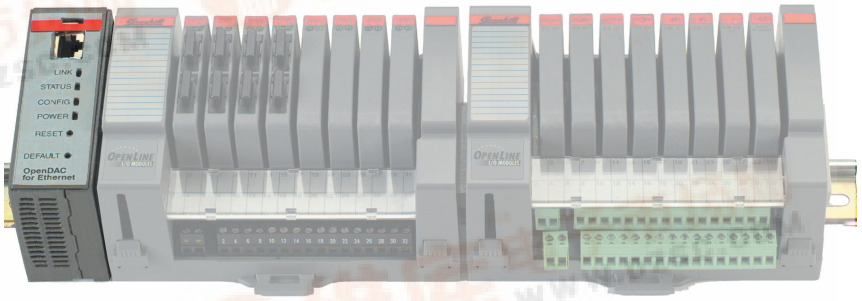
NETWORK INTERFACES
OpenDAC® for Ethernet

FEATURES
- Use Ethernet to Control/Monitor up to 32 Analog and/or Digital I/O Channels using OpenLine® I/O Modules
- Network Multiple OpenDACs®
- 10Base-T and 100Base-TX Support
- Extremely Fast Response Times over Network
- Support Modbus/TCP Protocol and HTTP
- Use Web Browser for Configuration, Monitoring and Control of I/O modules
- Diagnostic LEDs
- CE Certified
- DIN Rail Mounting
- Modbus TCP



ETHERNET UNIT ON OPENDAC® SYSTEM

APPLICATIONS
- Stand Alone Control
- Local Control & I/O
- **Remote I/O**
- Distributed I/O
- SCADA
- RTU

GENERAL DESCRIPTION
The OpenDAC® for Ethernet network interface is a remote slave that responds to Modbus/TCP commands that it receives over the network. The status and configuration of up to 32 OpenLine® analog or digital I/O channels is stored and constantly refreshed. OpenDAC® for Ethernet is self-configuring. On power up, the controller will identify the types of I/O modules present. The unit will then continuously scan and update the digital and analog modules. Digital input channels can be setup for latching operation. The OpenDAC® for Ethernet supports the OpenLine® Smart Module Protocol (SMP) that allows field calibration and parameter setup of I/O modules.

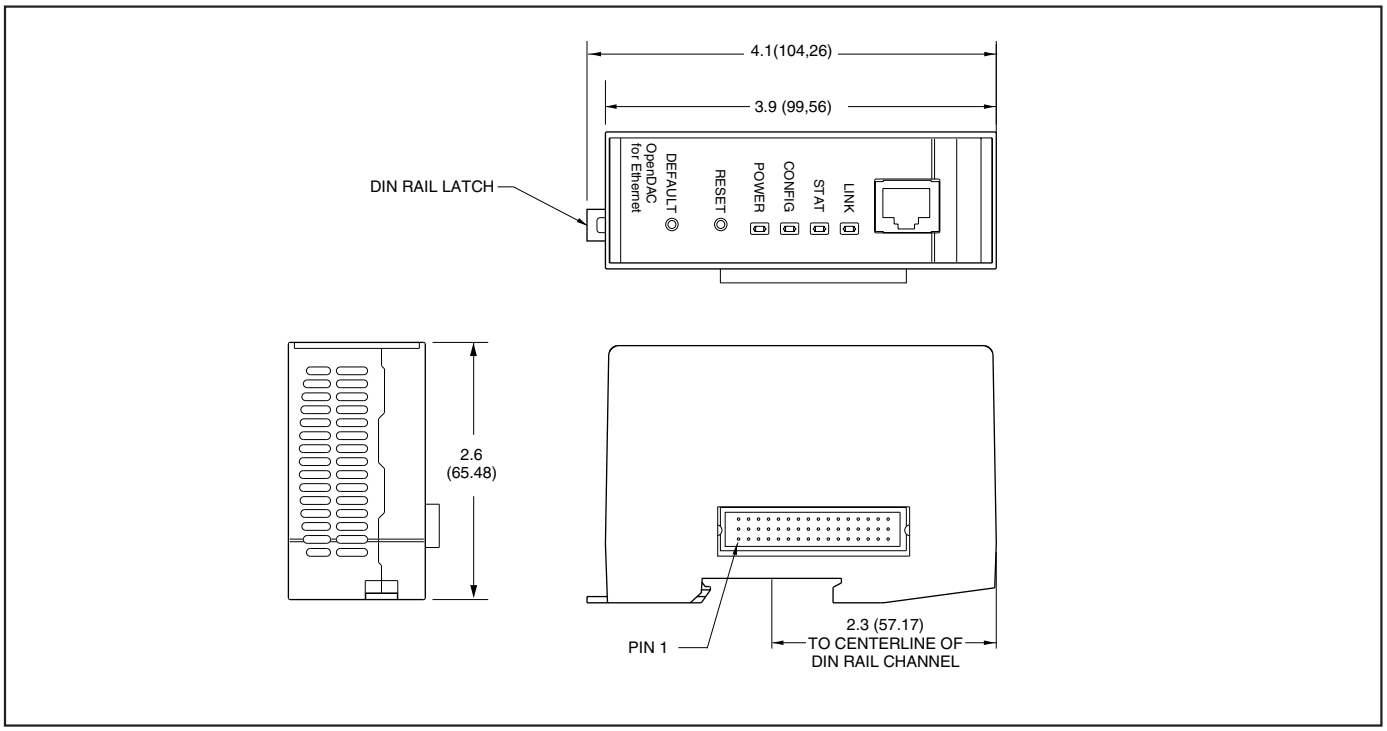
Each OpenDAC® or third party device on the network is assigned a unique IP address. There are three methods of assigning the internet protocol address -BOOTP, DHCP, and a static method. The controller is shipped with the default IP address of 128.0.0.1. The IP address can be changed using a web browser. The web browser can also be used to select BOOTP or DHCP to assign the IP address. Communication data rates are either 10 Mbps or 100 Mbps. OpenDAC® automatically detects whether it is connected to a 10Base-T or 100Base-TX network, eliminating switch settings and simplifying set up. Network and controller status can be monitored by status LEDs.

Each OpenDAC® incorporates a communication watchdog timer that monitors communication from the Modbus/TCP master. When the watchdog is enabled and the slave does not receive a valid Modbus/TCP message within a specified time, the OpenDAC® will set all output modules to the stored fault-state values. Should a valid message be received, the timer is reset and communication resumes. All configuration parameters are displayed and modified using a web browser. The configuration parameters are password protected to provide security against unauthorized access.

ANALOG & DIGITAL I/O MODULES
OpenDAC® for Ethernet connects directly to one or two 16 channel racks. Any combination of analog and digital I/O modules may be used. On power up, the OpenDAC® scans and stores the I/O configuration and makes the information available to the master.

In addition to simple On/Off instructions, the OpenDAC® allows you to:
- Read linearized thermocouple and RTD temperature values
- Detect rising or falling edges
- Latch momentary input events
- Set the level of analog outputs

DIMENSIONS In inches (and millimeters)



SPECIFICATIONS

Supply Voltage: 4.80 to 5.25 Vdc
Supply Current (less modules): 1.0 amp max.
Operating Temperature: -40 to 85°C
Humidity: 5-95% non-condensing
Housing Material: ABS/Polycarbonate blend
CPU: Net+ARM 40
Connections:
Network: RJ-45
Passive Rack: 48-Pin Euro DIN (male)
Range of Network (without repeaters): 100 meters with CAT 5 UTP

ORDERING INFORMATION

Part Number	Description
Ethernet Network Interface	
72-ETH-T000	Analog/Digital OpenDAC® for Ethernet
Ethernet User's Manual and Software	
72-UM-OETH	OpenDAC® for Ethernet user's manual
72-UM-ETH	OpenLine® for Ethernet user's manual
72-UOL	OpenLine®/OpenDAC® configuration and product data
72-UME-DLL32	Ethernet/Modbus DLL for Windows 95/98/NT
Compatible Components	
OpenDAC® I/O Racks	Analog OpenLine® I/O Modules
Digital OpenLine® I/O Modules	Power Supply

Available from your local authorized Grayhill Distributor. For prices and discounts, contact your local sales office, an authorized Distributor or Grayhill.