

Allen-Bradley 1756 Series Service Manual

1756-EN2TR

1. Description

Mfr. Part Number:

2. Specifications

Specification	Value
Manufacturer	Rockwell Automation
Brand	Allen-Bradley
Part	Number/Catalog No. 1756-EN2TR
Module	Type Ethernet Communication Module
Series	ControlLogix
Backplane	Current (5Volts) 1 amp
Ethernet-IP	Communication Rate 10/100 Mbps
Backplane	Current (24 Volts) 3 milliamps
Integrated	Ports Two (2) RJ45; One (1) USB 1.1
Power	Consumption 5.1 Watts
Current	Draw 1.2 Amp
Insulation	Voltage 30 Volts Continuous
Location	Chassis (any slot)
Enclosure	Open
Slot	Width 1
Operating	Temperature 32 to 140 degrees Fahrenheit (0 to 60 degrees Celsius)
Current	Rating 1.2 Amps
Power	Dissipation 5.1 W
Thermal	Dissipation 21.28 BTU per hour
Communication	Ethernet/IP
UPC	10612598547736 Description
The	Allen-Bradley 1756-EN2TR is a part of the ControlLogix Communication Module series. It is an Ethernet/IP (Ethernet Industrial Protocol) dual port interface communication module. It supports general messaging, Real-time messaging, and information exchange for applications like Real-Time Control, Time Synchronizat

3. Product Information

Mfr. Part Number:

1756-EN2TR

Manufacturer: Allen-Bradley / Rockwell Automation

Description: ControlLogix EtherNet/IP bridge Module Dual 10/100 Mbps

Full Description: Allen-Bradley 1756-EN2TR ControlLogix EtherNet/IP Interface Module, Dual Port 10/100 Mbps; Supports 128 TCP/IP connections, up to 8 axis, Ring and Linear topologies The 1756-EN2TR is an Allen-Bradley communication module that support Ethernet I/P communication protocol. This module has Two (2) RJ45 port for connecting or implementing Redundant Ethernet network. It also has a USB 1.1 port. This Ethernet modules supports 10/100 Mbps transmission speed. Technical specifications for 1756-EN2TR Manufacturer Rockwell Automation

Brand Allen-Bradley

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Module Type Ethernet Communication Module

Series ControlLogix

Backplane Current (5Volts) 1 amp

Ethernet-IP Communication Rate 10/100 Mbps

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Current Rating 1.2 Amps

Power Dissipation 5.1 W

Thermal Dissipation 21.28 BTU per hour

Communication Ethernet/IP

UPC 10612598547736 Description

The Allen-Bradley 1756-EN2TR is a part of the ControlLogix Communication Module series. It is an Ethernet/IP (Ethernet Industrial Protocol) dual port interface communication module. It supports general messaging, real-time I/O, messaging, and information exchange for applications like Real Time Control, Time Synchronization, and Motion. The 1756-EN2TR also meets the CIP safety standard by allowing simultaneous transfer of safety and control data and diagnostics information. It uses advanced communication chips and physical media.

The 1756-EN2TR Module has 10 - 100 Mbps Ethernet/IP communication rates and uses dual copper. It supports 256 Logix and 128 TCP/IP communication connections. It can support a maximum of 8 axes for integrated motion on the Ethernet/IP Network and draws 1 A current at 5.1V DC. It has a maximum power dissipation of 5.1 W and thermal dissipation of 17.4 BTU/hr. It can be installed in any slot in the ControlLogix Chassis. For wiring, it uses unshielded RJ45, category 5, twisted-pair cable connectors to interface with the controller. To operate an Ethernet/IP network, parameters such as IP addresses, Subnet masks, Gateway, etc. must be defined.

The 1756-EN2TR bridge has various functions like providing support for messaging, distributed I/O, and tags. It encapsulates messages within standard TCP/IP protocol. ControlNet and DeviceNet network protocols allow it to share a common application layer. The 1756-EN2TR does not require any scheduling or routing table to store information. Other features include explicit protected mode, Electronic keying, Device Level Ring Network, and Parallel Redundancy Protocol Network support.

The 1756-EN2TR is a ControlLogix Ethernet Communication module that is especially designed for use in redundant Ethernet networks. Through the embedded dual RJ45 ports that supports Ethernet protocol and 10/100 Mbps transmission speed with auto-negotiation function, this module increases the availability of an Ethernet network.

This module supports Ring and Star topology with qualified partner devices such as Flex IO, POINT IO Redundant Ethernet adapters, CompactLogix and ControlLogix as well. This module also supports implementing messages to other Allen-Bradley controllers such as SLC 500, PLC-5, and MicroLogix controllers. It is also compatible for communicating with Human Machine Interfaces (HMI), Supervisory Control and Data Acquisition (SCADA) of the same Allen-Bradley even, 3rd party products. It may also be partnered with encompass partner modules and 3rd party gateways, converters and devices.

This module also supports embedded Ethernet communication of computers and programming workstation thus, there is no need to purchase expensive communication adapters to establish connection to the controller. Additionally, the required cable for this module is a Category 5 or 6 cable which can be fabricated to form the communication cable.

Up to 128 TCP connection can be simultaneously made with this module while for Common Industrial Protocol (CIP), up to 256 connections can be made.

Initial configuration or setting of IP address can be made with the use of the Allen-Bradley BOOTP- DHCP tool. Not only for this module, the BOOTP-DHCP tool is used to a wide variety or Ethernet devices made by Allen-Bradley.