Communication Module

The following communication components are available.

Model	Description	Type
3201	Communication Module	Single or redundant Configuration, non-TMR
2201	Communication Baseplate	

The Communication Module (CM) is an optional, three-to-one interface to the MPs. Using a variety of communication methods, protocols, and physical media types, the CM enables communication with:

- External host computers
- Distributed control systems (DCS)
- Open networks
- Network printers
- Other Trident systems
- Tricon V9 systems

A single Trident controller supports up to two CMs on one CM Baseplate. Each CM operates independently and supports three RS-232/485 serial ports and two Ethernet ports. Two CMs can provide redundant communication connections or additional independent communication ports.

The CM Baseplate should be connected directly above or below an MP Baseplate. Two MP Interconnect Assemblies are required to connect the MP Baseplate to the CM Baseplate. For more detailed information, see the *Trident Communication Guide*.

Communication Capabilities

Each CM provides the following communication capabilities:

- Serial ports
- Network ports
- Protocol support

Serial Ports

Each CM provides three optically isolated RS-232/485 serial ports which are user-configurable for Modbus point-to-point or multi-point (network) connections. Transmission rates up to 115 kilobits per second per port can be selected.

Network Ports

Each CM provides two network ports:

- One 10-megabit Ethernet port, with two connectors:
  - 10BaseT
  - Attachment unit interface (AUI) for a 10-megabit media access unit (MAU)
- One 100-megabit Ethernet port, with two connectors:
  - 100BaseTX
  - Media independent interface (MII) for a 100-megabit MAU

MAUs may be used in place of the 10/100 BaseT RJ-45 twisted-pair connections to convert the CM network ports to other Ethernet media types or to extend network distances.

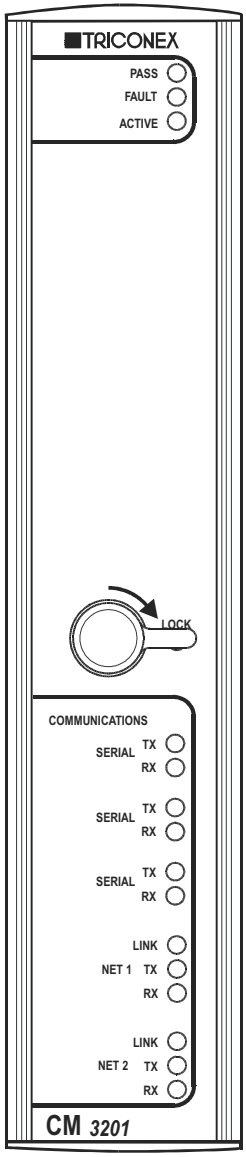
Supported Protocols

Each CM supports the following protocols:

- Modbus master or Modbus slave on the serial ports
- TCP/IP, TSAA, and TriStation network protocols on both network ports for SOE, Wonderware HMI, OPC Server, and other TSAA- or DDE-compatible applications
- JetDirect Network Printer Server DLC/LLC on both network ports
- Triconex Peer-to-Peer communication among multiple Trident systems or a combination of Trident and Tricon systems
- Time synchronization over network ports for multiple Trident systems or a combination of Trident and Tricon systems

Model 3201 Communication Module

CM Front Panel



Specifications

Logic Power

Logic power is supplied by the MP Baseplate.

Feature	Specification
Nominal input voltage	24 V DC
Specified operational voltage range	24 V DC –15% or +20% + 5% AC ripple (19.2 to 30 V DC)
Logic power (without MAUs)	8 W maximum
10 Mb AUI-type MAU	6 W maximum additional per MAU
100 Mb MII-type MAU	3.75 W maximum additional per MAU
Absolute maximum input voltage	33 V DC
Absolute maximum reverse input voltage	–0.6 V DC
Input power interruption time from nominal value	1 ms maximum
Repetition rate	1 sec minimum
Reverse current isolation input to input	500 µA maximum
Inrush current per input	2.4 A maximum, typically 1.2 A for 50 ms
Short circuit current limit per input	2.4 A maximum
Functional-to-logic ground isolation	0 V, no isolation
Protective-to-functional-earth isolation	500 V DC
+12 V AUI output power	12 V ±10%, 6 W maximum, current limited
+5 V MII output power	5 V ±5%, 3.75 W maximum, current limited