

GEM80 GEMLAN-T Module

Upgrade your GEM80 systems with the latest communication technology for improved data management and control ... the GEMLAN-T module from ALSTOM

The GEMLAN-T Module allows suitable GEM80 systems to communicate with computers over a TCP/IP network.



The GEMLAN-T Module communicates using the TCP/IP protocols which provide a masterless communications system in which any one node can take total responsibility for control of the network. Such a system allows for peer to peer communication in which each GEMLAN-T Module has equal access to the network.

Communication between each node on the network takes place over the same transmission path.

Each GEMLAN-T Module is physically connected to the network cable but logically disconnected from all others. Before communication can take place between a GEMLAN-T Module and another node, a virtual circuit must be created between them.

This logical connection is created by the user at run time, rather than "wired in", as is the case for a master/slave type network. This system provides the user with flexibility by allowing changes to be made to control algorithms in user software.

The GEMLAN-T Module uses the client/server model to communicate between nodes on a network. The client/server relationship can be compared to a telephone call; i.e. the caller initiating the call and the receiving party accepting and responding to it. When the calling party makes a call and the receiving party answers, the caller may ask questions or issue certain orders which the receiving party replies to or complies with.

Once a call is complete the receiver is replaced, freeing the telephone and network resources. Where intercommunication occurs between two nodes on a network the calling party is referred to as the client and the receiving party is referred to as the server.

The GEMLAN-T Module may function as both client and server. It is capable of initiating and accepting multiple connections to a maximum of 25 for clients and 25 for servers. Each one of these connections is a virtual circuit, which may exist between GEMLAN-T Modules or between a GEMLAN-T Module and networked computer.



GEMLAN-T Module

Networked clients can communicate with GEMLAN-T servers to:

- Read from GEM80 tables or off-line storage
- Write to GEM80 tables or off-line storage

Networked computer clients can communicate with GEMLAN-T servers to:

- Read from GEM80 tables or off-line storage
- Write to GEM80 tables or off-line storage

- Upload, download, or edit a ladder program from the GEM80
- Run a ladder program in the GEM80
- Halt a ladder program in the GEM80

GEMLAN-T provides similar features to GEMLAN-D* and supports the same application protocol, a modified version of the GEM80 ESP Programming Messages.

The module also supports Modbus over TCP/IP, both ESP and Modbus protocols maybe used on the same module.

The inclusion of an inbuilt Webserver adds remote diagnostics via a standard web browser.

Note: GEMLAN-T is NOT a direct replacement for GEMLAN-D. It is NOT possible to mix them in the same PLC.

* GEMLAN-D is the interface module providing an Ethernet connection via DECnet.

Specification Summary

Power Consumption	10W (approx.) LED Indication: Module healthy: Green LED
Connections	Ethernet 10BaseT Max Segment Connection 100 metres connector: RJ45
Dimensions	Module Width Standard double width module 223 x 41 x 250mm (H) x (W) x (D)
Weight	Approx: 550g
Environmental	Operating Temperature 0°C to 50°C (with min. cooling air flow of 200 litres/min) Storage Temperature -25°C to 70°C
Humidity	10% to 90% RH non condensing
Standards	Ethernet ISO 8802-3 GEMLAN-T Module GEM80 Standards
Flammability Rating	UL94 ClassVO
Ordering Code	8280-4001

Important: As part of the process of continuous improvement ALSTOM reserves the right to change specification without prior notice. Document revised Feb/2006

