GE Genius I-O Series Service Manual

IC660ELB906

1. Description

The IC660ELB906 is a Genius I/O IBM PC interface Module (PCIM), which acts as an entry point into the Genius I/O System for the IBM PC/AT/XT family. The PCIM is a motherboard/daughterboard designed for user-developed microprocessor system integration. This PCIM provides a low cost ‘tap’ on the Genius I/O bus, allowing a host system to control remote I/O utilizing extensive diagnostics, high reliability, and noise immunity. The PCIM software driver, a high level interface between applications use

2. Specifications

Specification	Value
Brand	**GE Fanuc**
Series	**Genius I-O**
Part	**Number IC660ELB906**
Product	**Description PC Interface Module**
Board	**Type XT slot, AT type**
Power	**Requirement 5 Volts DC, 400 milliamps**
Bus	**Loading 1 LS TTL load per input line**
Bus	**Drive Capability 10 LS TTL load per output line**
Status	**LEDs 2 (for each daughterboard)**
Ambient	**Operating Temperature 0 to 60 degrees Celsius**
Hand-held	**Monitor Connection External Connector**
Host	**Backplane Interface ISA Compatible**
Weight	**3 Pounds Description**
The	**IC660ELB906 PC Interface Module or PCIM which is made by GE Fanuc is made to be installed in an XT-type slot in a personal computer. It is designed to interface a Genius bus to a compatible host computer. It is also designed to integrate with user-developed microprocessor systems. This interface module has a cost-effective design, extensive diagnostic facilities, and high level of reliability and noise immunity, making it ideal for the Genius I/O system. The IC660ELB906 PC Interface Module offers control and monitoring**

3. Product Information

The IC660ELB906 is a Genius I/O IBM PC interface Module (PCIM), which acts as an entry point into the Genius I/O System for the IBM PC/AT/XT family. The PCIM is a motherboard/daughterboard designed for user-developed microprocessor system integration. This PCIM provides a low cost ‘tap’ on the Genius I/O bus, allowing a host system to control remote I/O utilizing extensive diagnostics, high reliability, and noise immunity. The PCIM software driver, a high level interface between applications user-developed software and the PCIM, provides bus access.

The IC660ELB906 PCIM’s daughterboard is a general purpose I/O controller that provides a convenient method to control devices on the Genius serial bus. The daughterboard performs initialization and fault management tasks for up to 30 bus devices, stores up-to-date images of the I/O controlled by each device, and is able to communicate with other controllers on the bus by passing background messages not associated with I/O commands. The interface is optimized for the IBM personal computer bus. Network data rate is configurable by an on-board dip switch, which allows the PCIM daughterboard to handle protocol and provide a general purpose, non-time critical method of tapping into the Genius twisted pair network.

The IC660ELB906 PCIM’s motherboard provides a convenient way to interface an Open Architecture daughterboard to an IBM compatible host. All signals necessary to communicate with a daughterboard are buffered through the motherboard to the host bus. In addition to expected interface lines, the motherboard also provides daughterboard control and monitoring functions, including a standard ‘unit load’ to the IBM bus, low supply voltage detection, power-up RESET signal sequencing, and host system address decoding. A built-in timer can monitor system operation and shut down the daughterboard if the host system faults, which prevents potential conflicts on the bus. This timer can be user-disabled by way of a jumper. The IC660ELB906 PC Interface Module is Genius I/O IBM PCIM manufactured by GE Fanuc. It runs on 5 Volts DC voltage and 400 milliamps of current. It has an XT slot and an AT type board, and it weighs 3 pounds. Technical specifications for IC660ELB906

Brand GE Fanuc

Series Genius I-O

Part Number IC660ELB906

Product Description PC Interface Module

Board Type XT slot, AT type

Power Requirement 5 Volts DC, 400 milliamps

Bus Loading 1 LS TTL load per input line

Bus Drive Capability 10 LS TTL load per output line

Status LEDs 2 (for each daughterboard)

Ambient Operating Temperature 0 to 60 degrees Celsius

Hand-held Monitor Connection External Connector

Host Backplane Interface ISA Compatible

Weight 3 Pounds Description

The IC660ELB906 PC Interface Module or PCIM which is made by GE Fanuc is made to be installed in an XT-type slot in a personal computer. It is designed to interface a Genius bus to a compatible host computer. It is also designed to integrate with user-developed microprocessor systems. This interface module has a cost-effective design, extensive diagnostic facilities, and high level of reliability and noise immunity, making it ideal for the Genius I/O system. The IC660ELB906 PC Interface Module offers control and monitoring functions such as low supply voltage detection, host system address decoding, host interrupt control, signal conditioning, and a built-in watchdog timer. It also provides an onboard DIP switch for configuring the network data rate.

The IC660ELB906 PC Interface Module consists of a motherboard and a daughterboard that are made to provide effective interfacing facilities. The motherboard is a 2-layer rectangular board and the daughterboard is a 4-layer rectangular board. Its functionalities consist of 3 main sections which are the serial interface, dual-port RAM, and PCIM manage processor. The required data from the host computer is received into the input table segment for the corresponding serial bus address of the bus interface unit. In order to employ the I/O data of the bus interface unit accurately, the module arrangement of the station and information of the I/O data must be properly entered into the host computer. The I/O data includes the input and output details of the relevant serial bus addresses for the bus interface modules. A personal computer that is equipped with the IC660ELB906 PC Interface Module can effectively control the field control station and Genius I/O blocks that are in the same application system.