# GE Series 90-70 Series Service Manual

IC697CPU782

## 1. Description

The IC697CPU782 is a CPU module from the Series 90-70 Programmable Logic Controller (PLC) platform that is formerly manufactured by GE Fanuc, now under Emerson Automation.

This CPU mainly features an embedded 80386DX microprocessor with a clock speed of 16 MHz with a Boolean execution time of 0.4 microseconds per boolean function.

## 2. Specifications

| Specification | Value |
|---|---|
| Brand | **GE Fanuc** |
| Series | **Series 90-70** |
| Manufacturer | **GE Fanuc (Former); Emerson Automation (Current)** |
| Product | **Description Single slot CPU** |
| Part | **Number IC697CPU782** |
| Series | **Series 90-70** |
| Processor | **type 80386DX microprocessor** |
| Product | **type CPU module** |
| Part | **Number IC697CPU782** |
| Discrete | **I/O memory 12 KB** |
| Compatibility | **GE Fanuc 90-70 PLCs** |
| Product | **Description Central Processing Unit (CPU)** |
| Analog | **I/O memory 8 KB** |
| Clock | **speed 16 megahertz** |
| Processor | **80386DX microprocessor** |
| Boolean | **Execution speed 0.4 microseconds per boolean function** |
| Maximum | **RAM 512 kilobytes** |
| Discrete | **I/O 12 K, max (any combination)** |
| Floating | **Point math Supported** |
| Current | **input 1.6 Amps** |
| Analog | **I/O 8 K max** |
| Communication | **port RS485 interface** |
| Voltage | **input 5 Volts DC** |
| Boolean | **execution 0.4 microseconds per boolean function** |
| LED | **indicators Module OK, RUN, Outputs enabled** |
| Serial | **port 1** |
| Voltage | **input 5 Volts DC** |
| Lithium | **Battery IC697ACC701** |
| Operating | **temperature 0 to 60 degrees Celsius** |
| Communication | **port One (1) RS485 interface** |
| Module | **location slot 1 of r** |

## 3. Product Information

The IC697CPU782 is a CPU module from the Series 90-70 Programmable Logic Controller (PLC) platform that is formerly manufactured by GE Fanuc, now under Emerson Automation. This CPU mainly features an embedded 80386DX microprocessor with a clock speed of 16 MHz with a Boolean execution time of 0.4 microseconds per boolean function.

Technical specifications for IC697CPU782

Brand GE Fanuc

Series Series 90-70

Manufacturer GE Fanuc (Former); Emerson Automation (Current)

Product Description Single slot CPU

Part Number IC697CPU782

Series Series 90-70

Processor type 80386DX microprocessor

Product type CPU module

Part Number IC697CPU782

Discrete I/O memory 12 KB

Compatibility GE Fanuc 90-70 PLCs

Product Description Central Processing Unit (CPU)

Analog I/O memory 8 KB

Clock speed 16 megahertz

Processor 80386DX microprocessor

Boolean Execution speed 0.4 microseconds per boolean function

Maximum RAM 512 kilobytes

Discrete I/O 12 K, max (any combination)

Floating Point math Supported

Current input 1.6 Amps

Analog I/O 8 K max

Communication port RS485 interface

Voltage input 5 Volts DC

Boolean execution 0.4 microseconds per boolean function

LED indicators Module OK, RUN, Outputs enabled

Serial port 1

Voltage input 5 Volts DC

Lithium Battery IC697ACC701

Operating temperature 0 to 60 degrees Celsius

Communication port One (1) RS485 interface

Module location slot 1 of rack 0

VME System designed to support the VME standard C.1

Supported products IC660/IC661 and IC697 I/O products

The IC697CPU782 is a Series 90-70 Programmable Logic Controller (PLC). This processor module supports Simplex CPU configuration with primary features such as 80386DX microprocessor type with a processing speed of 16 MHz and Boolean execution speed of 0.4 microseconds per function. The IC697CPU782 I/O capacity includes support for up to 12 Kbytes of discrete input and output and 8Kbytes for analog input and output data. It also supports the installation of 512 KB of expansion memory a well as configurable data and program memory. This module is also provided with a key switch memory protection that prevents unwanted access and modification to the module. The IC697CPU782 is programmed using the MS-DOS of Windows-based programming software package specifically, Logicmaster 90-70, VersaPro Professional Edition, and Proficy Machine Edition Logic Developer PLC Professional Edition. This CPU supports floating calculations, compare, interrupts, and software internal controller such as Proportional + Integral + Derivative (PID) controller. It can be used with I/O and smart option modules over the rack-mounted backplane (IC697CHS750, 782, 783, 790, 791) via the VME C.1 Standard format compatibility of the module. Also, optional modules that can be installed and utilized by the controller are IC697 LAN interface modules, several Coprocessor modules, Bus Controller for IC660/IC661 I/O, Communications modules, and all of the IC697 family of discrete and analog I/O modules. The IC697CPU782 utilizes a lithium battery to retain the contents of the RAM memory. This battery has a catalog number of IC697ACC701 that has a shelf life of 10 years and is capable of memory retention up to 6 months without primary power applied to the controller.

The GE Fanuc IC697CPU782 module is a 16 megahertz CPU module for GE Series 90-70 PLCs. The vibration rating for the module is 1 G at 57 to 150 Hertz. The shock rating is 15 G for 11 milliseconds duration. The operating temperature range for the Series 90-70 systems is 0 to 60 degrees Celsius. The storage temperature range is -40 to 85 degrees Celsius. The recommended range for the relative humidity level is from 5 to 95%, non-condensing. The recommended enclosure is a steel cabinet with an environmental protection rating of IP 54 to provide protection against splashing water and dust. GE Fanuc products are approved for global use and they are manufactured with ISO9001 quality assurance for applications in industrial environments. Agency approvals for GE Fanuc products include the CE, UL508, CSA22.2, and UL2279 standards. Standard 9-slot and 5-slot racks are used for installing the IC697 programmable controllers. The IC697CPU782 module must be installed in slot 1 of the PLC rack. The IC697CPU782 module supports 32-bit instructions and its memory is expandable to 512 KB. The CPU module also supports floating point operations. The microprocessor used for the IC697CPU782 module is 80386DX at 16 megahertz. Up to 8000 analog I/O and 12,000 inputs/outputs are supported by the CPU module. The IC697CPU782 module can be programmed through software which runs on the MS-DOS or MS-Windows operating system. The computer running the programming software can connect to the IC697CPU782 module through a serial connection, a parallel connection, or through Ethernet connections. For serial connections, an integrated RS-422/RS-485 serial port is provided on the CPU module. Ethernet connections require the installation of an optional communication module. The IC697CPU782 module requires 1.6 Amps of current from the PLC backplane at 5 Volts DC.