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CIMPLICITY®
HMI for CNC Version 5.5

Important New Features

Summary

CIMPLICITY HMI for CNC Version 5.5 can be installed as a new release or an upgrade release. You must install CIMPLICITY HMI before installing this release of CIMPLICITY HMI for CNC software.

CIMPLICITY HMI for CNC Version 5.5 introduces new options and new features to the HMI product family. The newest advance is support of the GE Fanuc Series 150*i* controller and access of up to 24 axis in both the Series 150 and Series 150*i* controllers. The growth rate of CIMPLICITY HMI for CNC continues to accelerate as GE Fanuc introduces new products and features faster than our competitors.

HMI for CNC Enhancements

Overview

CIMPLICITY HMI for CNC represents an advance in state-of-the-art integration with GE Fanuc OpenFactory products. CIMPLICITY HMI for CNC gives you a complete user interface for GE Fanuc Series 150B, 150*i*A, 160B/C, 180B/C, 210B, 160*i*A, 180*i*A, 210*i*A, and Power Mate H, *i*-H, *i*-D controllers. CIMPLICITY HMI for CNC includes the integration of runtime OpenFactory Drivers and Libraries, and Basic Operation Package 1 offered by GE Fanuc.

GE Fanuc OpenFactory products include the ability to access the internal data structures of the CNC via an Ethernet connection, which significantly increases the number of CNCs that can be communicated with over your network. You also have the option of using a fiber optic high-speed serial bus (HSSB) to communicate with factory CNCs. Both the Ethernet and HSSB links allows a personal computer running the CIMPLICITY HMI for CNC software to communicate with the GE Fanuc CNCs to exchange data, part programs, and alarms.

Full client / server support is available with CIMPLICITY HMI for CNC product. You can combine CIMPLICITY HMI for CNC with other CIMPLICITY HMI Servers and Viewers to offer a complete system approach.

Support Multiple New CNCs

CIMPLICITY HMI for CNC now supports multiple new CNC controllers. The supported controller is dependent upon your selected protocol, FOCAS1/Ethernet or FOCAS1/HSSB.

Controllers supported for FOCAS1/Ethernet are:

- Series 150*i*MA
- Series 160*i*MA, 160*i*TA, 180*i*MA, 180*i*TA, 210*i*MA, 210*i*TA.
- Series 160*i*LA, 160*i*WA, 180*i*WA.
- Power Mate *i*-H or *i*-D.

Controllers supported for FOCAS1/HSSB are:

- Series 150MB, 150TB, 150MBMA.
- Series 150*i*MA
- Series 160MB, 160TB, 180MB, 180TB, 210MB, 210TB.
- Series 160MC, 160TC, 180MC, 180TC.
- Series 160*i*MA, 160*i*TA, 180*i*MA, 180*i*TA, 210*i*MA, 210*i*TA.
- Series 160*i*LA, 160*i*WA, 180*i*WA.
- Power Mate H, *i*-H, *i*-D.

CIMPLICITY HMI for CNC Version 5.5 Product Structure

CIMPLICITY HMI Application Options - Platform Availability

	Hardware Platform	Intel	Intel	Order With
	Operating System	Win 2000	Win NT	Runtime Systems
Option	Part Number			
HMI for CNC Server Option. Separate Option CD.	IC646NCN010	Yes	Yes	Yes
HMI for CNC Additional Connection	IC646NCN020	Yes	Yes	Yes

CIMPLICITY HMI for CNC Upgrades

There are two types of upgrades for CIMPLICITY HMI systems - Version Upgrades and Functional Upgrades.

Version Upgrades take older CIMPLICITY systems and upgrade them to the current version, in this case Version 5.5.

Functional Upgrades are required for changing from Runtime to Development systems or for increasing the device I/O count of a system. Please note that CIMPLICITY HMI for CNC systems do not count device I/O.

CIMPLICITY HMI for CNC Version Upgrades

	Intel Platforms
CIMPLICITY HMI for CNC Version Upgrade Media upgrade for customers with HMI for CNC Option	IC646NCN001

Version Upgrade Policy

Software Version Upgrades to CIMPLICITY HMI for CNC product option will be provided free of charge during the 90 day warranty period*. After this period, upgrades will be made available to customers through Version Upgrade part numbers.

**Functional Upgrades are not included in the 90-day warranty period.*

CIMPLICITY for Windows - Documentation

CIMPLICITY HMI Manuals	
IC646LBR100	CIMPLICITY HMI Library – Includes all CIMPLICITY HMI documentation
IC646LRW000	Report Manager Suite
GFK-1500	HMI Getting Started Guide
GFK-1180	Base System User's Manual
GFK-1181	Device Communications Manual
GFK-1396	CimEdit Operation Manual
GFK-1548	Action Calendar Operation Manual
GFK-1305	Basic Control Engine Program Editor Manual
GFK-1282	Basic Control Engine Event Editor Manual
GFK-1283	Basic Control Engine Reference Guide Manual
GFZ-62994EN/02	Basic Operation Package 1 Operator's Manual
GFK-1341	CIMPLICITY for CNC Operation Manual
GFK-1379	Historical Data Analyzer Operation Manual
GFK-1461	Integrator's Toolkit Application Developer Guide
GFK-1405	Marquee Driver Operation Manual
GFK-1675	OPC Server Operation Manual
GFK-1494	Pager Operation Manual
GFK-1303	Recipes Operation Manual
GFK-1874	SCADA Driver Operation Manual
GFK-1353	Server Redundancy Operation Manual
GFK-1752	SQL Getting Started Guide
GFK-1413	Statistical Process Control Operation Manual
GFK-1632	System Sentry Operation Manual
GFK-1692	ThinView Operation Manual
GFK-1694	Tracker Getting Started Guide
GFK-1216	Tracker Production Tracking Operation Manual
GFK-1408	Tracker Routing Control Objects Operation Manual
GFK-1260	Trending Manual
GFK-1668	WebView Operation Manual

Note: Hardcopy documentation is no longer shipped with product.

System Recommendations

Systems Based on Intel Windows NT

System Type	Operating System	Minimum Recommended RAM *	Recommended Free Hard Disk Space
Server	Windows NT - Version 4.0	128 MB	500 MB

Hardware: Pentium® PC, VGA Monitor, and access to a CD-ROM drive.

Systems Based on Intel Windows 2000

System Type	Operating System	Minimum Recommended RAM *	Recommended Free Hard Disk Space
Server	Windows 2000 - Version 5.5	128 MB	500 MB

Hardware: Pentium® PC, VGA Monitor, and access to a CD-ROM drive.

*Note: Performance will improve with additional memory.

CNC Hardware Information

CNC Interface Hardware

You will need at least one of the following cards described below installed in your computer:

GE Fanuc Part Number	Description
A20B-8100-0581	FANUC Type 2 PC HSSB Single Port Card
A20B-8100-0583	FANUC Type 2 PC HSSB Single Port Card for i Series CNC
A20B-8100-0580	FANUC Type 2 PC HSSB Dual Port Card
A20B-8100-0582	FANUC Type 2 PC HSSB Dual Port Card for i Series CNC
A02B-0236-J291	CNC-Based Ethernet Printed Circuit Board (A20B-8100-0270)
A02B-0236-J292	CNC-Based Ethernet Printed Circuit Board with IDE (A20B-8100-0271)

Additionally, you will need one of the fiber optic cables described below to connect your computer to each CNC:

GE Fanuc Part Number	Description
Old Style (before 8/1/97)	
A66L-60010021#L5R003	5 meter fiber optic cable
A66L-60010021#L20R003	20 meter fiber optic cable
A66L-60010022#L50R003	50 meter fiber optic cable
New Style (after 8/1/97)	
A66L-60010026#L1R003	1 meter fiber optic cable
A66L-60010026#L5R003	5 meter fiber optic cable
A66L-60010026#L10R003	10 meter fiber optic cable
A66L-60010026#L20R003	20 meter fiber optic cable

CNC Hardware

You will need one of the interface cards described below installed in each of your CNCs:

GE Fanuc Part Number	Description
A02B-0207-J200	FANUC CNC HSSB Card 200 VAC (A20B-8001-0290)
A02B-0207-J201	FANUC CNC HSSB Card 24 VDC (A20B-2002-0210)
A02B-0236-J200 (50 m)	FANUC CNC HSSB Card Old Style i Series (A20B-8001-0640)
A02B-0236-J202 (100 m)	FANUC CNC HSSB Card New Style i Series (A20B-8001-0641)
A02B-0259-J200	FANUC CNC HSSB Card Power Mate i-D/H (A20B-8001-0730)
A02B-0211-J090	FANUC CNC HSSB Module Power Mate H (A20B-2902-0540)
A02B-0211-C220	FANUC CNC HSSB Adapter Power Mate H

CNC Option Bits

In order for the CIMPLICITY HMI for CNC product to run, you must purchase at least the following option bits for your controller:

GE Fanuc Part Number	Description
Series 150 CNC Model B	
A02B-0207-J801	FANUC Library Option Bit
A02B-0207-J811	FANUC BOP Option Bit
A02B-0162-J917	FANUC Software Operator Panel Option Bit
Series 160/180 Model B/C	
A02B-0207-J800	FANUC Library Option Bit
A02B-0207-J810	FANUC BOP Option Bit
A02B-0201-J960	FANUC Software Operator Panel Option Bit (Model B)
A02B-0223-J960	FANUC Software Operator Panel Option Bit (Model C)
A02B-0201-J961	FANUC Software Operator Panel General Purpose (Model B)
A02B-0223-J961	FANUC Software Operator Panel General Purpose (Model C)
Series 210 Model B	
A02B-0207-J800	FANUC Library Option Bit
A02B-0207-J810	FANUC BOP Option Bit
A02B-0218-J960	FANUC Software Operator Panel Option Bit
A02B-0218-J961	FANUC Software Operator Panel General Purpose

Series 160i/180i/210i Model A	
A02B-0207-J800	FANUC Library Option Bit
A02B-0236-S707	FANUC Library Option Bit
A02B-0237-S707	FANUC Library Option Bit
A02B-0238-S707	FANUC Library Option Bit
A02B-0239-S707	FANUC Library Option Bit
A02B-0247-S707	FANUC Library Option Bit
A02B-0248-S707	FANUC Library Option Bit
A02B-0207-J810	FANUC BOP Option Bit
A02B-0201-J960	FANUC Software Operator Panel Option Bit
A02B-0201-J961	FANUC Software Operator Panel General Purpose
Power Mate Model H	
A02B-0211-J834	FANUC Library Option Bit
A02B-0211-J845	FANUC BOP Option Bit
Power Mate I Model D/H	
A02B-0207-J800	FANUC Library Option Bit
A02B-0207-J810	FANUC BOP Option Bit

In order to access certain FANUC CNC user interface screens, you must also purchase option bits related to those screens.

Specific CNC Requirements

For detailed information on specific CNC requirements, see the *Introducing HIM for CNC* chapter of the *CIMPLICITY HMI for CNC Operation Manual* (GFK-1341).

Installation Notes

You must install at least Version 5.5 of CIMPLICITY software before installing Version 5.5 of the CIMPLICITY HMI for CNC software.

The procedure for installing CIMPLICITY software is described in the *CIMPLICITY Getting Started Guide* (GFK-1500).

After you finish installing the CIMPLICITY software, reboot your computer before installing the CIMPLICITY HMI for CNC software.

The procedure for installing the HMI for CNC software is described in the *CIMPLICITY HMI for CNC Operation Manual* (GFK-1341).

To upgrade your projects after you have installed this release, open each project from the CIMPLICITY Workbench. You will be asked if you want the upgrade to be performed. Once the upgrade is performed, you cannot run the project under previous releases of CIMPLICITY HMI software.

Upgrading from Previous Releases

Before you upgrade from a previous release of CIMPLICITY HMI for CNC:

1. Run the CIMPLICITY HMI Registration program and write down all the serial numbers.
2. Save your projects if you want them in a directory outside of the CIMPLICITY path. Remember, after you upgrade your projects, they will not work with previous versions of CIMPLICITY HMI software.
3. Shut down CIMPLICITY HMI software.
4. Start the CIMPLICITY HMI installation process.
5. After the installation finishes, reboot your computer.
6. Start the CIMPLICITY HMI for CNC installation process.
7. Reboot your computer.
8. Finish the CIMPLICITY HMI for CNC installation process.

Removing the Previous Basic Operation Package

If you have an old version of Basic Operation Package 1 installed on your PC, a dialog box will open during the installation of CIMPLICITY HMI for CNC software asking if you want to uninstall the old version of the BOP. You must remove the old version before proceeding with the rest of the installation.

Converting CimEdit Screens with FANUC Controls

If you created CimEdit screens under a previous version of CIMPLICITY HMI for CNC that have embedded FANUC Controls, you need to perform the following steps:

1. Make sure all CIMPLICITY HMI for CNC projects are shutdown.
2. For each project with a screen or multiple screens that have embedded FANUC Controls, enter the following:

```
c:\> convert_screen  "project screen path"  "screen name"
```

or

```
c:\> convert_screen  "project screen path"  * or *.*
```

Retry Method for Down Devices

When communicating with multiple FOCAS1/Ethernet controllers, it is recommended that the global parameter DC_RETRY_ONE_DEVICE be set to TRUE. For information on setting global parameters, see the Global Parameters chapter in the *CIMPLICITY HMI User's Manual* (GFK-1180) or the CIMPLICITY Help file.