GE
Intelligent Platforms

# Motion Solutions

## Flexible Solutions for Improved Machine Productivity

imagination at work

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01.10 GFA-483T

## FANUC Digital Servos

RX3i

Proficy ME
Logic Developer-PLC

Series 90-30

IC695PMM335 | IC694DSM324 | IC694DSM314 | IC693DSM324 | IC693DSM302 IC693DSM314

IC695FTB001
Fiber Terminal I/O Block

IC693ACC336
5V I/O Terminal Board

IC693CBL324 (1m)
IC693CBL325 (3m)

44A726268-001
24V I/O Terminal Board

IC693CBL319 (1m)
IC693CBL311 (3m)

A66L-6001-0023#Lxxxxx (unsheathed)
A66L-6001-0026#Lxxxxx (sheathed)
FSSB Servo Command Cable

### βi SERIES

**Motors** (cont-peak torque)
β0.4/5000*is* (0.4-1 Nm)
β0.5/6000*is* (0.65-2.5 Nm)
β1/6000*is* (1.2-5 Nm)
β2/4000*is* (2-7 Nm)
β4/4000*is* (3.5-10 Nm)
β8/3000*is* (7-15 Nm)
β12/3000*is* (11-27 Nm)
β22/2000*is* (20-45 Nm)

**Amplifier Kits**
IC800BIK020
IC800BIK020
IC800BIK020
IC800BIK040
IC800BIK040

**Encoder Cables**
(Straight x=0; Right Angle x=7)
CFDA-xWPB-0070-AZ (7m)
CFDA-xWPB-0070-AZ (7m)
CFDA-xWPB-0070-AZ (7m)
CFDA-xWPB-0070-AZ (7m)
CFDA-xWPB-0070-AZ (7m)
CFDA-xWPB-0140-AZ (14m)
CFDA-xWPB-0140-AZ (14m)
CFDA-xWPB-0140-AZ (14m)
CFDA-xWPB-0140-AZ (14m)
CFDA-xWPB-0140-AZ (14m)

**Power Cables**
(Standard x=P; Shielded x=E)
CP8B-1WxB-0070-AZ (7m)
CP3B-0WxB-0070-AZ (7m)
CP5B-0WxB-0070-AZ (7m)
CP6B-0WxB-0070-AZ (7m)
CP8B-1WxB-0140-AZ (14m)
CP3B-0WxB-0140-AZ (14m)
CP5B-0WxB-0140-AZ (14m)
CP6B-0WxB-0140-AZ (14m)

**Power & Brake Cable**
(Standard x=P; Shielded x=E)
CP9B-0WxB-0070-AZ (7m)
CP9B-0WxB-0140-AZ (14m)

**Brake Cables** (Optional)
CB6N-5WPM-0070-AZ (7m)
CB4N-0WPM-0070-AZ (7m)
CB4N-0WPM-0070-AZ (7m)
CB4N-0WPM-0070-AZ (7m)
CB6N-5WPM-0140-AZ (14m)
CB4N-0WPM-0140-AZ (14m)
CB4N-0WPM-0140-AZ (14m)
CB4N-0WPM-0140-AZ (14m)

**Encoder Battery** (Optional)

| Built-In (1-axis) | Panel Mounted* |
|---|---|
| IC800BBK021 | IC800ABK001 |
| IC800BBK021 | IC800ABK001 |
| IC800BBK021 | IC800ABK001 |
| IC800BBK021 | IC800ABK001 |
| IC800BBK021 | IC800ABK001 |

### βHVi SERIES

**Motors** (cont-peak torque)
β2/4000*is* (2-7 Nm)
β4/4000*is* (3.5-10 Nm)
β8/3000*is* (7-15 Nm)
β12/3000*is* (11-27 Nm)
β22/2000*is* (20-45 Nm)

**Amplifier Kits**
IC800BIHV010
IC800BIHV010
IC800BIHV020
IC800BIHV020

**Encoder Cables**
(Straight x=0; Right Angle x=7)
CFDA-xWPB-0070-AZ (7m)
CFDA-xWPB-0070-AZ (7m)
CFDA-xWPB-0070-AZ (7m)
CFDA-xWPB-0070-AZ (7m)
CFDA-xWPB-0140-AZ (14m)
CFDA-xWPB-0140-AZ (14m)
CFDA-xWPB-0140-AZ (14m)
CFDA-xWPB-0140-AZ (14m)

**Power Cables**
(Standard x=P; Shielded x=E)
CP3I-0WxB-0070-AZ (7m)
CP3I-0WxB-0070-AZ (7m)
CP4I-0WxB-0070-AZ (7m)
CP3I-0WxB-0140-AZ (14m)
CP3I-0WxB-0140-AZ (14m)
CP4I-0WxB-0140-AZ (14m)

**Power & Brake Cable**
(Standard x=P; Shielded x=E)
CP2I-0WxB-0070-AZ (7m)
CP2I-0WxB-0140-AZ (14m)

**Brake Cables** (Optional)
CB4N-0WPM-0070-AZ (7m)
CB4N-0WPM-0070-AZ (7m)
CB4N-0WPM-0070-AZ (7m)
CB4N-0WPM-0140-AZ (14m)
CB4N-0WPM-0140-AZ (14m)
CB4N-0WPM-0140-AZ (14m)

**Encoder Battery** (Optional)
IC800BBK021
IC800BBK021
IC800BBK021
IC800BBK021

### αHVi SERIES

**Motors** (cont-peak torque)
α2/6000HV*is* (2-6 Nm)
α2/6000HV*is* (2-6 Nm)
α4/5000HV*is* (4-8.8 Nm)
α4/5000HV*is* (4-8.8 Nm)
α8/6000HV*is* (8-22 Nm)
α8/6000HV*is* (8-22 Nm)
α12/4000HV*is* (12-46 Nm)
α12/4000HV*is* (12-46 Nm)
α22/3000HV*i* (22-64 Nm)
α22/3000HV*i* (22-64 Nm)
α22/4000HV*is* (22-70 Nm)
α30/4000HV*is* (30-100 Nm)
α40/4000HV*is* (40-115 Nm)
α50/3000HV*is* (75-215 Nm)

**Amplifier Kits**
IC800BIHV010
IC800BIHV040
IC800AIHV010
IC800AIHV040
IC800AIHV080
IC800AIHV180

**Dynamic Braking Module**
ZA06B-6079-H401

**Encoder Cables**
(Straight x=0; Right Angle x=3)
CFDA-xWPB-0070-AZ (7m)
CFDA-xWPB-0070-AZ (7m)
CFDA-xWPB-0070-AZ (7m)
CFDA-xWPB-0070-AZ (7m)
CFDA-xWPB-0070-AZ (7m)
CFDA-xWPB-0070-AZ (7m)
CFDA-xWPB-0140-AZ (14m)
CFDA-xWPB-0140-AZ (14m)
CFDA-xWPB-0140-AZ (14m)
CFDA-xWPB-0140-AZ (14m)
CFDA-xWPB-0140-AZ (14m)

**Power Cables**
(Standard x=P; Shielded x=E)
CP2I-0WxB-0070-AZ (7m)
CP2I-0WxB-0070-AZ (7m)
CP3I-0WxB-0070-AZ (7m)
CP3I-0WxB-0070-AZ (7m)
CP4I-0WxB-0070-AZ (7m)
CP4I-0WxB-0070-AZ (7m)
CP4I-0WxB-0070-AZ (7m)
CP9I-0MxB-0070-AZ (7m)
CP2I-0WxB-0140-AZ (14m)
CP2I-0WxB-0140-AZ (14m)
CP3I-0WxB-0140-AZ (14m)
CP3I-0WxB-0140-AZ (14m)
CP4I-0WxB-0140-AZ (14m)
CP4I-0WxB-0140-AZ (14m)
CP4I-0WxB-0140-AZ (14m)
CP9I-0MxB-0140-AZ (14m)

### αHVi SERIES (con't)

**Brake Cables** (Optional)
CB4N-0WPM-0070-AZ (7m)
CB4N-0WPM-0070-AZ (7m)
CB4N-0WPM-0070-AZ (7m)
CB4N-0WPM-0070-AZ (7m)
CB4N-0WPM-0140-AZ (14m)
CB4N-0WPM-0140-AZ (14m)
CB4N-0WPM-0140-AZ (14m)
CB4N-0WPM-0140-AZ (14m)

**Encoder Battery** (Optional)

| Built-In (1-axis) | Panel Mounted* |
|---|---|
| IC800BBK021 | IC800ABK001 |
| IC800BBK021 | IC800ABK001 |
| IC800BBK021 | IC800ABK001 |
| IC800ABK002 | IC800ABK001 |
| IC800ABK002 | IC800ABK001 |
| IC800ABK003 | IC800ABK001 |

**Power Supply Kits†**
IC800PSHV011 (11kW)
IC800PSHV018 (18kW)
IC800PSHV030 (30kW)
IC800PSHV045 (45kW)

**Note:**
Color coding indicates compatible product matches and applies to products within a specific series.

*Each panel mounted battery pack can support up to 6 encoders
†One PSM power supply can support up to six αHV*i* amplifiers depending on the motor ratings. The power supply must be sized to match to system power requirements. See the section "Selecting a Power Supply" on page 73.

## Analog Servos and Steppers

Proficy ME Logic Developer-PLC

RX3i

Series 90-30

HE693STP113
Horner Stepper Controller

IC693DNM200
DeviceNet Master
(To DeviceNet S2K Models)

VersaMax Micro

IC693DSM314

IC693DSM302
IC693DSM314

I/O Cables
IC800PCUBC02S030 (200 S/R; 3m)
IC800PCUBC02S050 (200 S/R; 5m)
IC800PCUBC04S030 (400 S/R; 3m)
IC800PCUBC04S050 (400 S/R; 5m)
IC800PCUBC10S030 (1000 S/R; 3m)
IC800PCUBC10S050 (1000 S/R; 5m)

IC693CBL324 (1m)
IC693CBL325 (3m)

IC693ACC336
Terminal Board

IC800SKCFLY010 (1m)
IC800SKCFLY030 (3m)

### S2K SERVO AMPLIFIER (RESOLVER) 115/230 VAC

**Motors** (cont-peak torque)
- MTR-3T11-G (0.3-1.1 Nm)
- MTR-3T12-G (0.6-2.4 Nm)
- MTR-3T13-G (0.9-2.8 Nm)
- MTR-3T21-G (0.6-2.2 Nm)
- MTR-3T22-G (1.3-4 Nm)
- MTR-3T23-G (2-6 Nm)
- MTR-3T24-H (2.6-6.6 Nm)
- MTR-3T43-H (5.6-11.3 Nm)
- MTR-3T42-H (4.1-12 Nm)
- MTR-3T43-J (6.1-12.1 Nm)
- MTR-3T44-J (8.1-16.2 Nm)
- MTR-3T45-H (10.2-20.5 Nm)
- MTR-3T54-H (13.6-34.5 Nm)
- MTR-3T55-H (17.1-43.4 Nm)
- MTR-3T57-H (20.9-55.3 Nm)
- MTR-3T66-H (35.9-87.3 Nm)
- MTR-3T67-G (42-101.9 Nm)
- MTR-3T69-G (53.9-131.6 Nm)

**Amplifiers**
- IC800SSD104RS1
- IC800SSD107RS1
- IC800SSD216RS1
- IC800SSD228RS1

**Resolver Cables**
- CBL-3T-RD
- CBL-3T-RD
- CBL-3T-RD
- CBL-3T-RD

**Power Cables**
- CBL-T7-MP
- CBL-T7-MP
- CBL-3T-MP
- CBL-3T-MP

**Power and Brake Cables†**
- CBL-T7-MB
- CBL-T7-MB
- CBL-3T-MB
- CBL-3T-MB

### S2K SERVO AMPLIFIER (RESOLVER) 480 VAC

**Motors** (cont-peak torque)
- MTR-3T42-H (4.1-12 Nm)
- MTR-3T43-J (6.1-12.1 Nm)
- MTR-3T44-J (8.1-16.2 Nm)
- MTR-3T45-H (10.2-20.5 Nm)
- MTR-3T54-H (13.4-38.3 Nm)
- MTR-3T55-H (16.9-48.1 Nm)
- MTR-3T66-H (34.7-52.2 Nm)
- MTR-3T67-G (40.2-61 Nm)
- MTR-3T69-G (52.3-79 Nm)

**Amplifiers**
- IC800SSD407RS1
- IC800SSD420RS1

**Resolver Cables**
- CBL-3T-RD
- CBL-3T-RD

**Power Cables**
- CBL-T7-MP
- CBL-3T-MP

**Power and Brake Cables†**
- CBL-T7-MB
- CBL-3T-MB

### S2K SERVO CONTROLLER (RESOLVER) 115/230 VAC

**Motors** (cont-peak torque)
- MTR-3T11-G (0.3-1.1 Nm)
- MTR-3T12-G (0.6-2.6 Nm)
- MTR-3T13-G (0.9-2.8 Nm)
- MTR-3T21-G (0.6-2.2 Nm)
- MTR-3T22-G (1.3-4.0 Nm)
- MTR-3T23-G (2-6 Nm)
- MTR-3T24-H (2.6-6.6 Nm)
- MTR-3T43-H (5.6-11.3 Nm)
- MTR-3T42-H (4.1-12 Nm)
- MTR-3T43-J (6.1-12.1 Nm)
- MTR-3T44-J (8.1-16.2 Nm)
- MTR-3T45-H (10.2-20.5 Nm)
- MTR-3T54-H (13.6-34.5 Nm)
- MTR-3T55-H (17.1-43.4 Nm)
- MTR-3T57-H (20.9-55.3 Nm)
- MTR-3T66-H (36-87.3 Nm)
- MTR-3T67-G (42-101.9 Nm)
- MTR-3T69-G (53.9-131.6 Nm)

**Controller**
- IC800SSI104RD2 DeviceNet
- IC800SSI104RP2 PROFIBUS
- IC800SSI104RS1 SERIAL
- IC800SSI107RD2 DeviceNet
- IC800SSI107RP2 PROFIBUS
- IC800SSI107RS1 SERIAL
- IC800SSI216RD2 DeviceNet
- IC800SSI216RP2 PROFIBUS
- IC800SSI228RD2 DeviceNet
- IC800SSI228RP2 PROFIBUS

**Resolver Cables**
- CBL-3T-RD
- CBL-3T-RD
- CBL-3T-RD
- CBL-3T-RD

**Power Cables**
- CBL-T7-MP
- CBL-T7-MP
- CBL-3T-MP
- CBL-3T-MP

**Power and Brake Cables†**
- CBL-T7-MB
- CBL-T7-MB
- CBL-3T-MB
- CBL-3T-MB

### S2K SERVO CONTROLLER (RESOLVER) 480 VAC

**Motors** (cont-peak torque)
- MTR-3T42-H (4.1-12 Nm)
- MTR-3T43-J (6.1-12.1 Nm)
- MTR-3T44-J (8.1-16.2 Nm)
- MTR-3T45-H (10.2-20.5 Nm)
- MTR-3T54-H (13.4-38.3 Nm)
- MTR-3T55-H (16.9-48.1 Nm)
- MTR-3T66-H (34.7-52.2 Nm)
- MTR-3T67-G (40.2-61 Nm)
- MTR-3T69-G (52.3-79 Nm)

**Controller**
- IC800SSI407RD2 DeviceNet
- IC800SSI407RP2 PROFIBUS
- IC800SSI407RS1 SERIAL
- IC800SSI420RD2 DeviceNet
- IC800SSI420RP2 PROFIBUS

**Resolver Cables**
- CBL-3T-RD
- CBL-3T-RD

**Power Cables**
- CBL-T7-MP
- CBL-3T-MP

**Power and Brake Cables†**
- CBL-T7-MB
- CBL-3T-MB

### S2K STEPPER CONTROLLER 115 VAC

**Motors** (holding torque)
- MTR-1221-D (144 oz-in)
- MTR-1231-D (238 oz-in)
- MTR-1324-D (335 oz-in)
- MTR-1337-D (675 oz-in)
- MTR-1350-A (630 oz-in)
- MTR-1350-D (995 oz-in)
- MTR-1N31-I (650 oz-in)
- MTR-1N32-I (1200 oz-in)
- MTR-1N41-G (1905 oz-in)

**Splash-proof Motors** (holding torque)
- MTR-1324-D (335 oz-in)
- MTR-1337-D (675 oz-in)
- MTR-1350-A (630 oz-in)
- MTR-1350-D (995 oz-in)

**Controller**
- IC800STI105D2 DeviceNet
- IC800STI105P2 PROFIBUS
- IC800STI105S1 SERIAL

**Encoder Cables**
- CBL-1C-ET
- CBL-13-ET
- CBL-14-ET

**Power Cables**
- CBL-12-MPS
- CBL-13-MP
- CBL-14-MP

### MOTOR CUBE

**Stepping Motors** (holding torque)
- IC800MCUB12160XN (50 oz-in)
- IC800MCUB12210XN (100 oz-in)
- IC800MCUB12310XN (175 oz-in)

**Stepping Motor/Encoder** (holding torque)
- IC800MCUB12160XE (50 oz-in)
- IC800MCUB12210XE (100 oz-in)
- IC800MCUB12310XE (175 oz-in)

**Encoder Cable**
- CBL-12-ED-03M-RA (3m)

**Power Cables**
- IC800MCC23P050 (5m)
- IC800MCC23P100 (10m)

### POWER CUBE

**Stepping Amplifier**
- IC800PCUB00300

**Stepping Motors** (holding torque)
- MTR-1216 (61 oz-in)
- MTR-1220 (116 oz-in)
- MTR-1221 (124 oz-in)
- MTR-1231 (236 oz-in)
- MTR-1235 (185 oz-in)
- MTR-1331-J (327 oz-in)
- MTR-1N31-I (605 oz-in)

**Splash-proof Motors** (holding torque)
- MTR-1331-J (327 oz-in)

**Encoder Cables**
- CBL-1C-ET
- CBL-13-ET
- CBL-14-ET

**Power Cables**
- CBL-12-MP
- CBL-13-MP
- CBL-14-MP

**Note:**
Color coding indicates compatible product matches and applies to products within a specific column.

†Use this cable in place of power cable for motors with optional brake

# Motion Controllers

GE offers motion controllers for a broad range of applications and system configurations providing the flexibility to choose a system that optimizes performance and investment cost. Regardless of your requirements, GE has a motion controller to meet your requirements, from simple point-to-point indexing to complex multi-axis machine control.

## PACMotion Series

The PACMotion multi-axis motion controller, matched with world class FANUC digital servos, is designed to deliver unsurpassed machine productivity required for today's high-speed machines and lean manufacturing environments. Hosted by the powerful PACSystems RX3i controller, PACMotion is part of a complete automation control solution. Page 5

## DSM300 Series

The DSM300 series are multi-axis servo motion controller modules for the PACSystems* RX3i and Series 90*-30 PLCs. The DSM300 series can control FANUC digital servos or analog servos such as the VersaMotion series. Page 17

## S2K Series

The S2K series are stand-alone motion controllers available for brushless servo and stepping motor control and include an integral AC power supply and servo amplifier. Page 20

| Feature | PACMotion | DSM300 | S2K |
|---|---|---|---|
| Architecture | PAC-based | PLC-based | Stand-alone |
| Number of Axes | Up to 4 FANUC Digital Servos | DSM302: 2 Digital, 2 Analog<br>DSM314: 2 Digital, 4 Analog<br>DSM324: 4 Digital (Fiber Optic) | 1 |
| Dedicated Master Axis | Virtual or Incremental Encoder | No | No |
| Servo Command Interface | Fiberoptic | Fiberoptic/GEF Digital/Analog Velocity/Analog Torque | n/a |
| Position Feedback Type | Serial Encoder | Serial Encoder/Quadrature Encoder | Resolver |
| Motor Feedback Resolution (counts/rev) | 64K, 128K, 1M | 8K | 4K |
| Motion Logic Program | Interrupt Driven Task in PAC | Separate Program in Module | Separate Program in Module |
| PAC/PLC High Speed Interrupts | 3 (time or event) | No | n/a |
| Motion Program | Integrated Function Blocks or Structured Text | Separate Text Program | Separate Text Program |
| Motion Types | | | |
| Incremental Moves | Yes | Yes | Yes |
| Absolute Moves | Yes | Yes | Yes |
| Synchronized Start | Up to 8 axes | 2 axes | No |
| Delayed Start | Up to 8 axes | No | No |
| Superimposed Motion | Yes | Yes | Yes |
| Jogging | Yes | Yes | Yes |
| Homing | Yes | Yes | Yes |
| Acc/Dec | Linear/ Programmable Jerk | Linear/Fixed Jerk | Linear/Fixed Jerk |
| Cam Function | Advanced | Basic | Basic |
| Cam Queuing | Yes | No | No |
| Cam Scaling | Master and Slave | No | No |
| Cam Phase Correction | Yes | Yes | No |
| Normalized Cam Profiles | Yes | No | No |
| Dynamic Cam Profile Changes | Yes | No | No |
| Cam Curve Fitting | 1/2/3/5th order | 1/2/3rd Order | 1st Order |
| Ramping onto Cam Profile | Yes | No | No |
| Number of Cam Profiles | 2048 | 99 | 1 |
| Electronic Gearing (Follower) | Advanced | Basic | Basic |
| Digital Cam Switch | 4 High Speed Outputs | No | No |
| Shortest Path Absolute Moves | Yes | No | No |
| Move Queuing and Blending | Advanced | Basic | Basic |
| Master/Slave Configuration | Up to 40 Axes over PLC Backplane | 4-axes on module | Hardwired Encoder |

**Motion Controllers**

## PACMotion

**PACMotion**
The PACMotion controller is a versatile servo motion controller that combines the benefits of a highly integrated motion and machine logic solution with the performance, flexibility and scalability required for advanced machine automation. PACMotion is designed to deliver unsurpassed machine productivity required for today's high-speed machines and lean manufacturing environments. The 4-axis servo motion controller is built on a high performance hardware platform, with a new enhanced motion engine, operating system, and open standard integrated programming paradigm. Add to that world class reliability of FANUC servos and you have a motion system designed to give you the best productivity and accuracy possible.

**Performance to Improve Machine Productivity**

- Real-time synchronization of up to 40 axes
- Three high speed time-based or event-driven interrupts enable fast deterministic event response and synchronization
- Demand-driven data exchange model between the PACSystems RX3i CPU and PACMotion modules may significantly reduce scan time impact
- Digital cam switch (PLS) function with multi-track high-speed outputs with microsecond level response
- Reduced downtime with industry leading FANUC servos featuring MTBF ratings in excess of 400,000 hours
- Low MTTR FANUC servos require no tuning or parameter setting; over 5 million axes sold

**Open and Integrated to Improve Engineering Productivity**

- Single software development environment with shared tag database for logic, motion, I/O and operator interface
- Motion and machine logic in a common program greatly simplifies programming
- Motion function blocks and state model designed to comply with the PLCopen programming standard to reduce learning curve and training costs
- Buffer mode allows program logic to queue motion command sequences and specify or change the velocity transition between buffered moves on-the-fly
- Advanced diagnostic tools included in Proficy software speed diagnostics and machine time to market

**Flexibility and Scalability**

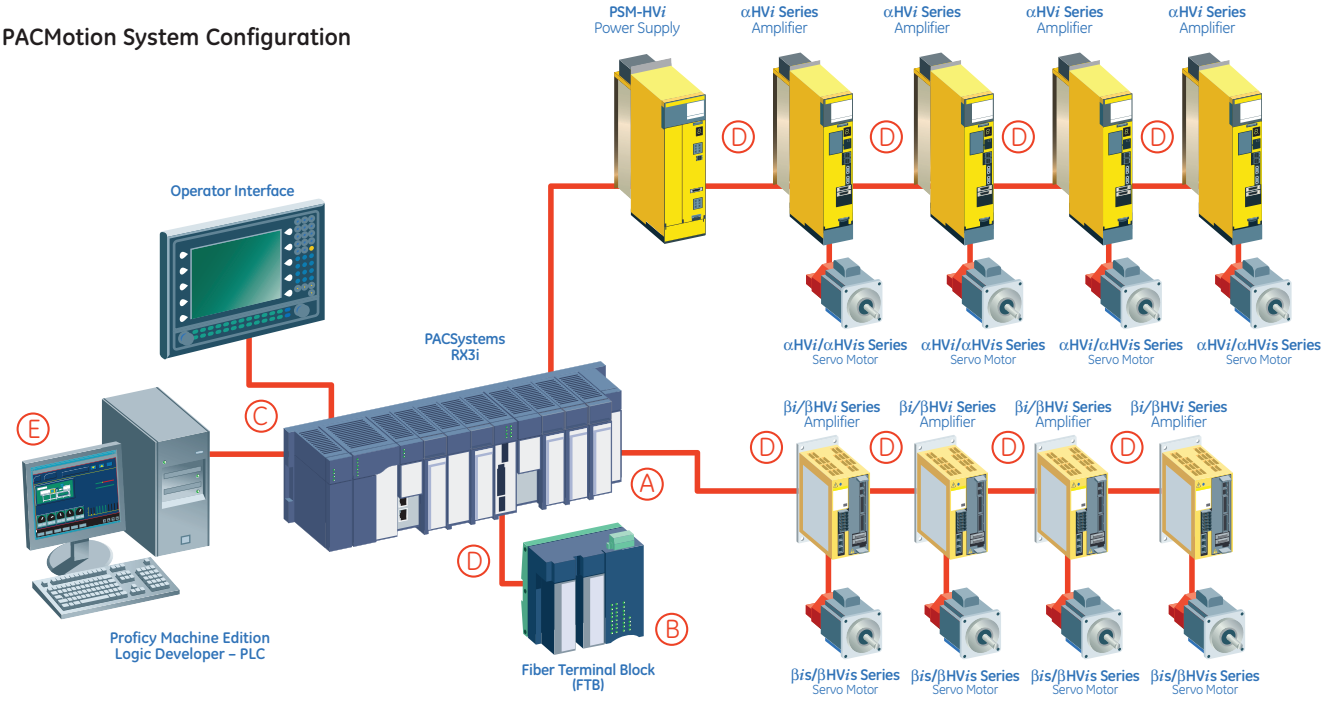
- Four servo axes per module; Up to 40 axes in a single PACSystems RX3i rack
- Built-in faceplate I/O and optional fiber I/O terminal block supports extensive user configurable digital and analog I/O
- Amplifiers and motion I/O can be physically distributed using noise immune fiber optic interfaces
- Virtual (time-based) or real (encoder) master axes over the backplane support advanced cam and electronic gearing applications for flexible electronic line shaft applications

## Motion Controllers

# PACMotion

Each PACMotion module can control up to 4 axes of GE βi, βHVi or αHVi servos via a fiber optic command interface for superior noise immunity, especially in distributed systems. By combining the versatility of the GE PACSystems RX3i and QuickPanel operator interface products, GE provides customers with a complete integrated machine control solution. This single-source system results in such benefits as ease of integration and programming, shorter development cycles, and higher reliability.

### PACMotion System Configuration




| | Part Number | Description |
|---|---|---|
| A Motion Controller | IC695PMM335 | PACMotion Motion Controller for RX3i |
| B Motion I/O Expansion | IC695FTB001 | Optional Fiber Terminal Block (without terminal headers) |
| | IC695FTB1B032 | Optional Fiber I/O Terminal Block (with screw terminal headers) |
| | IC695FTB1S032 | Optional Fiber I/O Terminal Block (with spring clip terminal headers) |
| | IC695FTB1B132 | Optional Fiber I/O Terminal Block (with extended shroud screw terminal headers) |
| | IC695FTB1S132 | Optional Fiber I/O Terminal Block (with extended shroud spring clip terminal headers) |
| C Communication Cable | IC693CBL316 | Serial Cable for Programming - 3m (1 per system) |
| D Fiber Optic Cables | ZA66L-6001-0023#L150R0 | FSSB and FTB I/O Cable 0.15 Meter |
| | ZA66L-6001-0023#L300R0 | FSSB and FTB I/O Cable 0.3 Meter |
| | ZA66L-6001-0023#L1R003 | FSSB and FTB I/O Cable 1 Meter |
| | ZA66L-6001-0023#L2R003 | FSSB and FTB I/O Cable 2 Meter |
| | ZA66L-6001-0023#L3R003 | FSSB and FTB I/O Cable 3 Meter |
| | ZA66L-6001-0026#L1R003 | FSSB and FTB I/O Cable Sheathed, 1 Meter |
| | ZA66L-6001-0026#L3R003 | FSSB and FTB I/O Cable Sheathed, 3 Meter |
| | ZA66L-6001-0026#L5R003 | FSSB and FTB I/O Cable Sheathed, 5 Meter |
| | ZA66L-6001-0026#L10R03 | FSSB and FTB I/O Cable Sheathed, 10 Meter |
| | ZA66L-6001-0026#L20R03 | FSSB and FTB I/O Cable Sheathed, 20 Meter |
| | ZA66L-6001-0026#L30R03 | FSSB and FTB I/O Cable Sheathed, 30 Meter |
| | ZA66L-6001-0026#L50R03 | FSSB and FTB I/O Cable Sheathed, 50 Meter |
| | ZA66L-6001-0026#L100R3 | FSSB and FTB I/O Cable Sheathed, 100 Meter |
| E Proficy Programming Software | IC646MPP001 | Logic Developer PLC Professional without GlobalCare. Complete with Software key |
| | IC647MPP001 | Logic Developer PLC Professional without GlobalCare. Complete with USB Hardware key |
| | IC646MBP001 | Machine Edition Professional Development Suite without GlobalCare. Complete with Software key |
| | IC647MBP001 | Machine Edition Professional Development Suite without GlobalCare. Complete with USB Hardware key |

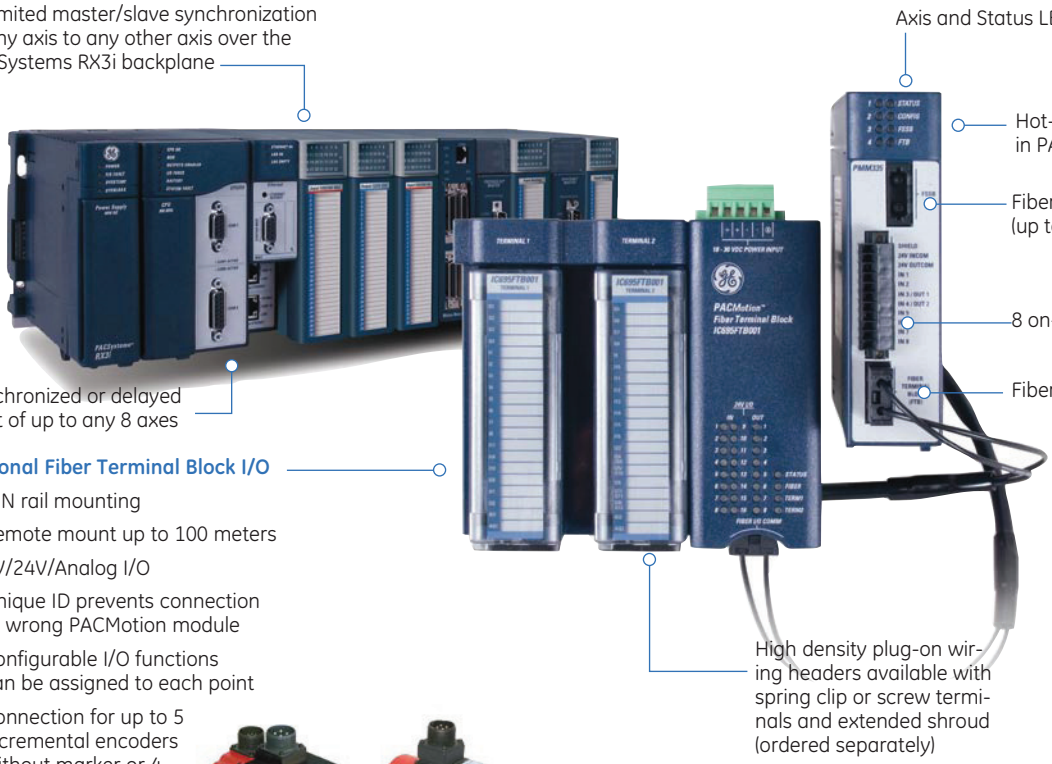
### APPLICATIONS

- High-speed printing
- Packaging systems
- High-speed assembly
- Woodworking machinery
- Automotive assembly
- Material handling
- Web handling applications
- Infeed conveyors
- Labeling
- Filling

## PACMotion

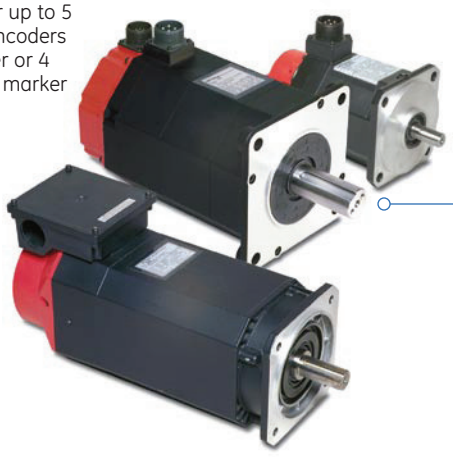
### PACMotion Controller Features

- Fast motion path (1ms) planning and position update rates (500µs) deliver improved accuracy and faster response to changing control requirements
- Unlike most PLC-based motion, PACMotion delivers consistent motion update rate regardless of the number of axes
- High reliability FANUC servos improve machine uptime
- High speed synchronization of up to 40 axis over the PACSystems RX3i backplane
- Advanced cam and gearing features for electronic line shaft applications
- Single software development environment for complete automation control solution simplifies programming
- Distributed architecture for greater machine flexibility–up to 100 meters between axes using noise immune fiber cables
- Optional Fiber Terminal Block allows distributed motion centric I/O to reduce wiring complexity and cost
- Two high-speed position capture inputs per axis for registration and sequence control




**Optional Fiber Terminal Block I/O**

- DIN rail mounting
- Remote mount up to 100 meters
- 5V/24V/Analog I/O
- Unique ID prevents connection to wrong PACMotion module
- Configurable I/O functions can be assigned to each point
- Connection for up to 5 incremental encoders without marker or 4 encoders with marker pulse



**βi and βHVi Servos**

- 0.4 to 22 Nm cont. torque range
- 230 and 460 VAC models
- Noise immune fiber optic interface
- Absolute feedback with optional battery
- 64K or 128K count/rev serial encoder
- Optional holding brake

**αHVi and αHVis Series Servos**

- 2 to 75 Nm cont. torque range
- 460 VAC line regenerative power supplies
- Noise immune fiber optic interface
- Absolute feedback with optional battery
- 1M count/rev serial encoder
- Optional holding brake