

# FANUC



CNC PRODUCTS & SERVICES



# CORPORATE PROFILE



FANUC America offers the most complete range of industry leading products and services for CNC systems, robotics, and factory automation solutions. We are dedicated to increasing the competitiveness of North and South American manufactures by helping them maximize their efficiency, reliability, quality, and profitability.

## **Products**

With more than 3.3 million CNCs installed worldwide and 50 years of experience, FANUC is the world's leading supplier of intelligent factory automation systems and CNC technology. FANUC's industry leading 52 year Mean-Time-Between-Failure (MTBF) means that machine tools with FANUC controls experience less downtime,

produce more parts, support downstream production more effectively and deliver on customer promises. FANUC CNCs provide the lowest total cost of ownership (TCO) with a competitive acquisition cost, lower operating costs, higher performance, better quality parts, lower downtime costs and a higher resale value. FANUC uses only the best components from the world's leading electronic suppliers and automated manufacturing systems ensure process repeatability so that continuous improvement programs have the maximum impact.

## **People**

In addition to the most advanced, reliable controls, FANUC is also building the brightest and the most experienced



team in the industry. FANUC is committed to being there whenever and wherever our customers need us, with more than 5,200 people supporting 240 offices around the world. Over 30% of our employees are focused on Research and Development to ensure we are providing the most reliable, efficient and innovative products on the market today.

## Service

FANUC provides our customers with a single source for after sales support and services. Through our commitment to our Service First philosophy, we give customers confidence that their machines will be available for production when they need them. We offer lifetime parts and maintenance support for all of our products as long they are in use.

Our Service First commitment also includes access to local parts inventories, factory-trained service and support, economical repair and returns services, and professional training to help customers get the most out of their systems.

## The Undeniable Global Leader in CNC

More than 3,300,000 CNCs installed worldwide  
More than 15,700,000 motors installed worldwide

# CNC SYSTEMS

FANUC develops cutting-edge CNC and motion control systems for machine tools as well as other custom applications for machine operators and end users around the world.

FANUC CNC systems have a world-class reputation for performance, precision, reliability and user-friendly operation. From straightforward, standard applications to complex, high-precision programs, FANUC offers the perfect combination of CNCs, drives, motors, I/O and connectivity solutions for consistent, dependable performance.

In addition to our own products, FANUC collaborates with other key technology suppliers to design and develop fully integrated factory solutions to help our customers reach the highest levels of productivity, efficiency and profitability.

## Markets Served

Aerospace	Job Shop
Agriculture	Medical
Automotive	Metal Fabrication
Construction	Metalfforming
Education	Mold & Die
Energy	Woodworking
General Motion Control	

## Series 30i/31i/32iCNC

The Series 30i/31i/32i-MODEL B CNCs were developed for the next generation of high-performance machine tools. The product line spans from simple, straight-forward CNC applications up to highly complex machine tools and non-traditional applications.

- 5-axis machining for precision parts, with faster cycle times, improved surfaces finishes and simplified part programming, setup and operation
- Mill-turn and 5/6-sided machining, combining turning and milling in a single part program to reduce setup and cycle time and improve quality
- Linear and rotary transfer machining for short cycle times with the convenience and simplicity of a single CNC interface for multiple spindles and stations
- Precision grinding, with high performance and accuracy for cylindrical, surface and profile grinding
- Gear cutting and synchronizing multiple axes and spindles for high quality cylindrical and bevel gear machines
- Woodworking machining of large nested part programs at ultra-high speed while maintaining accuracy on flatbed and 5-axis routers.
- High performance motion control in applications such as composite tape laying, riveting, water jet, laser, friction stir welding and EDM



## Series 0i CNC

The FANUC Series 0i is designed for standard commodity machines that demand the ultimate in reliability, performance, connectivity and safety with a mean time between failure rate of 52 years. The Series 0i supports up to 4 axes with simultaneous interpolation and 8 axes in total, and integrates with both *ai* and *Bi* drive technologies.

- Compatibility with all previous versions of the 0i Series and 30i Series
- Existing part programs run without modification
- Simple part programming and operation
- Operator-friendly graphic display
- Comprehensive help functions
- Nano-precision interpolation for the highest quality surface finish
- High-speed machining for faster, better quality parts
- Cutter compensation for direct input from part drawings
- Canned cycles and Custom Macros for simplified part programming
- Skip cycle interface for probe measurements
- Tool management for maximum machine utilization
- Ethernet connectivity



# MOTION CONTROL SYSTEMS

## Power Motion *i*-MODEL A

Power Motion *i*-MODEL A was developed for high-performance, multi-axes general motion applications. The Power Motion *i* offers powerful custom screen development tools, a high-speed, multi-path PMC ladder interface and up to 32 axes/4 paths of high-performance motion control. Specialized functions such as pressure and position control, multi-axes synchronization, electric CAM, and high-speed response, make the Power Motion *i* the ideal choice for a wide range of general motion applications.

## Series 35*i* CNC

The Series 35*i* MODEL B was developed for high-performance, specialized machine tool and general motion applications. The Series 35*i* is an integrated solution that offers up to 16 axes/4 paths of high performance motion control and 4 spindles.

## *i*Pendant

The FANUC *i*Pendant is a factory hardened, portable display and operational control panel that supports all the standard CNC screens for operation, programming and maintenance. A touch-panel interface is available and all of the keys can be customized with the transparent key sheet.



CNC System Sales Contact

888-FANUC-US (888-326-8287)

Select 2⇒1⇒4

email: [cnc.sales@fanucamerica.com](mailto:cnc.sales@fanucamerica.com)

## FANUC CNC Features & Capabilities

Feature	0i-MF	0i-TF	0i-PF	32i-B	31i-B	31i-B5	30i-B	35i-B	Power Motion <i>i</i> -A
Max. Feed & Spindle Axes (total /per path)	11/9	11/9	7	16/12	26/16	26/16	40/28	20/20	32/24
Max. Feed Axes (total /per path)	9/7	9/7	7	10/8	20/12	20/12	32/24	16/16	32/24
Max. Spindle Axes (total /per path)	4/3	4/3	-	6/4	6/4	6/4	8/4	4/4	-
Max. Simultaneously Controlled Axes Per Path	4	4	4	4	4	5	24	4	4
Max. Controlled Paths	2	2	1	2	4	4	10	4	4
Milling	✓	-	-	✓	✓	✓	✓	-	-
Turning	-	✓	-	✓	✓	✓	✓	-	-
Punching	-	-	✓	✓	-	✓	-	-	✓
Grinding	✓	✓	-	✓	✓	✓	✓	-	-
Laser	-	-	-	-	✓	-	✓	-	-
Max. Number of PMC	3	3	3	5	5	5	5	5	5
Max. PMC Program Size Steps	100,000	100,000	100,000	300,000	300,000	300,000	300,000	300,000	300,000
Dual Check Safety	✓	✓	✓	✓	✓	✓	✓	✓	✓
Built-In 3D Interference Check	-	-	-	✓	✓	✓	✓	-	-
Manual Guide <i>i</i>	✓	✓	-	✓	✓	✓	✓	-	-
Simultaneous 5-Axis	-	-	-	-	-	✓	✓	-	-
Max. Program Memory	2MB	2MB	2MB	8MB	8MB	8MB	8MB	1MB	1MB
Max. Number Programs	1000	1000	1000	1000	4000	4000	4000	1000	1000
Data Server Storage	4GB	4GB	4GB	4GB	4GB	4GB	4GB	-	-

# DRIVE SYSTEMS

FANUC offers a wide range of drives and motors designed to optimize machine tool performance with exceptional power and efficiency.

FANUC's powerful high-speed machining technology and energy efficiency strategies significantly reduce cycle times while maintaining accuracy and precision. When the axes decelerate, FANUC's intelligent drive systems send energy back into the power line to reduce total energy consumption by as much as 50 percent.

FANUC motors contain an internal permanent magnet design using rare earth magnets that reduce size and minimize the motor footprint.

## Servo Motors

The FANUC ALPHA *i* Series (*αi*S, *αi*F) servo motor provides ultra-smooth rotation and superior acceleration for compact, high-speed, precision machines. The BETA *i* Series (*βi*S, *βi*F) servo motor offers a high performance-to-cost ratio that is ideal for entry level machines.

## Built-In Servo Motors

The DiS Series synchronous built-in servo motors are ideal for rotary tables and rotary axes for 5-axis machines.

ALPHA *i* Series  
Amplifier

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Select 2⇒1⇒4  
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## Amplifiers

The ALPHA *i* Series (*aiSV*, *aiSP*) is the energy efficient amplifier and features power-source regeneration with low power-loss devices. The BETA *i* Series (*BiSV*, *BiS-VSP*) can handle up to two axes or serve as a compact spindle-plus-servo amplifier unit for one spindle and up to three servo axes.

## Linear Motors

The FANUC LiS Series linear motor meets the most advanced requirements and can generate peak forces of 300 N to 17,000 N with various motor shapes available.

## Spindle Motors

FANUC ALPHA *i* Series (*aiiT*, *aiiL*, *aiiP*), BETA *i* Series (*BiI*, *BiIP*) and Built-in Spindle Series (*BiI*, *BiS*) spindle motors can be configured to provide high output power, high speed, low vibration, high performance-to-cost ratio or any combination of these.



# LASER SYSTEMS

FANUC's high-performance, high-reliability CO<sub>2</sub> and fiber lasers deliver the maximum cutting for metallic and non-metallic materials, welding and additive manufacturing. FANUC laser systems combine power, speed and precision to deliver the maximum cutting performance for a wide range of applications, sheet metal and non-metallic material to plate processing up to 32mm thick mild steel.

Both the FANUC Fiber and CO<sub>2</sub> Lasers are available with power ratings from 1,000W to 6,000W, so it is easy to find a system that matches practically any set of process requirements. FANUC Lasers are integrated with the FANUC Series 30i-L/31i-L Model B CNC Controls and FANUC servo motors to deliver intelligent, responsive laser cutting and compelling energy savings.

## FANUC CO<sub>2</sub> Laser Solutions

FANUC CO<sub>2</sub> Laser Systems provides powerful laser cutting and combined laser/punching performance and is ideal for alternating from thin to very thick sheets. With its low energy and gas consumption, it offers a reliable, precise and cost-effective way to cut a variety of sheet metal.

### Laser System Sales Contact

888-FANUC-US (888-326-8287)

Select 2⇒2

email: [cnc.service@fanucamerica.com](mailto:cnc.service@fanucamerica.com)

## FANUC Fiber Laser System

FANUC Fiber Laser System offers a fast, precise and energy efficient option for cutting metals and non-metallic materials. Laser light is delivered to the cutting surface through a flexible, encapsulated fiber optic cable, allowing it to cut extremely fine contours at very high speeds.



C3000i-C CO<sub>2</sub>  
Laser System

FF3000i-A Fiber  
laser system

Series 31i-L Model B

$\alpha$ iS Servo Motor

$\alpha$ iSV Amplifier





# CNC SYSTEM SALES

## Two Convenient Purchase Options: Direct or CNC Express™

### Direct Sales

All of FANUC's latest CNCs and motion controllers are available factory direct as complete, built-to-order CNC systems through our direct sales team. Complete CNC systems include controls, I/O, servos, spindles, software tools and accessories.

Additionally, our vertical program managers and after-market support account managers help end users and dealers select the FANUC CNC systems and options that will maximize their productivity. Vertical market specialities include: automotive, aerospace, heavy industry, medical and job shop.

### CNC Express™

CNC Express offers a selection of CNC system packages, with the advantage of quick delivery. A variety of popular options can be added to the packages to meet specific machine requirements.

**CNC EXPRESS™** 

Using CNC Express, FANUC can deliver some of our most popular CNC systems, motion control systems and drive packages from our office near Chicago in 4 weeks or less. The electronic CNC Express catalog simplifies the process of selecting, configuring, quoting and ordering genuine FANUC CNC systems.

### Sales Team

The reliability that FANUC CNCs are known for also translates to our experienced sales team. Our sales engineers are armed with FANUC CNC intelligent solutions and market knowledge to assist machine tool builders, retrofitters and systems integrators with selecting the ideal FANUC CNC solutions. Our application engineers are skilled at optimizing the FANUC CNC system for each machine and application.

#### CNC System Service Contact

888-FANUC-US (888-326-8287)

Select 2⇒1⇒4

email: [cnc.service@fanucamerica.com](mailto:cnc.service@fanucamerica.com)

## CNC Productivity Solutions

### **FAS**

#### **(FOCAS Automation Solutions)**

The easy choice for CNC communications and data collection. FAS solutions are based on the FANUC FOCAS API and are designed to simplify the connectivity of third-party hardware or software to a FANUC CNC. Free 30-day trial versions of the software are available.

### **FASConnect**

#### **(FOCAS Automation Solution Connect)**

A Windows service allows access and management of text data from all FOCAS enabled CNCs across a network

### **FASBacCNC**

#### **(FOCAS Automation Solution Backup)**

A user interface for browsing FASConnect servers and backing up data either manually or on a scheduled basis

### **FASOPC**

#### **(FOCAS Automation Solution OPC)**

An OPC 3.0 compliant server for easy retrieval of machining data from all FOCAS enabled CNCs

### **i Adapt@S**

Real-time adaptive control optimizes tool loading for heavy rough cutting applications, and load monitoring that triggers events at user defined warning and alarm levels

### **i Limits**

Real-time process monitoring protects the machine, fixture and part from process variations ensuring quality and providing traceability of critical machined parts

### **Parallel Axis Tracking**

Maintains the correct part zero position during movement of the W and Z axis for horizontal boring mill machines

## Custom-Engineered Solutions

Customized solutions for mechanical, operator interface, C-language and ladder development needs



# TECHNICAL TRAINING

## NCGuide

NCGuide is FANUC's CNC application software running on a PC, providing an authentic and safe operation and part programming environment at a fraction of the cost of using a production machine tool. Operators, programmers, maintenance engineers and students can practice common procedures and develop optimized processes without risks to people, tooling or machines. NCGuide Academic packages are ideal for instructor demonstrations, classroom exercises, homework, distance learning and CAD/CAM/CNC integration.

- Operational training
- Part programming training
- Offline conversational programming

## Hardware Simulators

Improve the productivity of maintenance personnel by providing hands-on-troubleshooting experience with genuine FANUC CNC hardware mounted conveniently in a frame at a fraction of the cost of using production equipment. Hardware simulators are available for sale in academic configuration or custom designed.

NCGuide Contact:

888-FANUC-US (888-326-8287)  
Select 2⇒1⇒1  
email: [cnc.parts@fanucamerica.com](mailto:cnc.parts@fanucamerica.com)

## Specialized Training Courses

- Quality instruction from expert instructors with CNC and field service experience
- Standard and custom CNC and laser maintenance, programming and advanced application courses for beginner through expert levels
- Courses offered in our Chicago CNC corporate training center as well as in cities across North America
- On-site training courses can be custom designed to address the needs of specific operating environments





## Corporate CNC training center offers the perfect learning environment

- Simulators with genuine FANUC controllers and components
- Small class sizes for individualized attention and hands-on learning
- Showroom with the latest FANUC controls
- Modern facilities
- Conveniently located NW of Chicago, at the FANUC CNC nerve center

## Online Training

We provide the best technical training in cities across the U.S. and now online. Online courses feature the latest in FANUC CNC turning and machining center programming, setup and operation. Each lesson includes a series of online presentations based on key concepts, extensive online documentation and quizzes. Exercises are performed on real FANUC CNC software and students have access to live support from a certified instructor. Each class includes a copy of NCGuide Academic software and can be bundled for maximum affordability.

## FANUC Certified Education (CERT) Program

- Advanced automation skills for CNC and robot programming, setup and operation for educational institutions
- Educational institutions and student competencies are endorsed by FANUC
- Program includes:
  - FANUC Certified instructors
  - Approved curriculum
  - Simulation software
  - Tools required to maximize exposure to operating 'real' industrial machines and robots including educational simulators and software

### Current Online Training Courses

Turning Center Programming
Machining Center Programming
Parametric Programming with FANUC Custom Macro

CNC Simulator Contact:

888-FANUC-US (888-326-8287)

Select 2⇒1⇒1

email: [cnc.parts@fanucamerica.com](mailto:cnc.parts@fanucamerica.com)

Training Contact:

888-FANUC-US (888-326-8287)

Select 2⇒4

email: [cnc.training@fanucamerica.com](mailto:cnc.training@fanucamerica.com)

# AFTER MARKET

## Customer Portal

FANUC customer portal provides secure online access, based on your account, to information not available on our public website. This real-time service is available 24 hours a day, seven days a week.

## Also Included

- Search knowledge base
- View service contracts
- Check on account access
- Review online service requests
- Installation schedule and status
- Technical documents
- Order history
- E-store

## Part Support

FANUC customers are making a secure investment with a dependable partner who stands behind their products. With our Service First commitment, we strive to offer replacement parts and service for the life of our products — something unique to FANUC.

## We offer

- New FANUC parts in stock
- Genuine FANUC new and reconditioned parts
- One-year warranty from date of sale
- Component part sales (standard lead times apply)
- Prompt service — average answer time 15 seconds
- Order and track shipments by phone or online
- Agents available Monday – Friday  
6:00 AM – 7:00 PM CST

## Exchange Credit Program

Get FANUC-quality parts at a lower cost with FANUC's exchange credit program. FANUC's price reduction formula provides 25% to 35% lower cost while still receiving new part quality and warranty.

$$\begin{array}{r} \text{LIST PRICE} \\ - \text{EXCHANGE CREDIT}^{\text{A}} \\ - \text{RETURN SHIPPING COST}^{\text{B}} \\ \hline = \text{LOWEST PRICE} \end{array}$$

A: Return old parts to receive credit towards order

B: Free return shipping for parts weighing under 75lbs  
-returned via regular ground service.

## Option Sales

- Control upgrades to enhance your investment
- High speed machining options including 5-axis applications
- Features to increase programming efficiency
- Networking and program storage
- Operator program functions
- Macros
- Tool center point programming
- Part offsets
- Pitch error compensation
- Volumetric compensation

Parts Contact:

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888-FANUC-US (888-326-8287)  
Select 2⇒1⇒1  
email: [cnc.parts@fanucamerica.com](mailto:cnc.parts@fanucamerica.com)

Option Sales:

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888-FANUC-US (888-326-8287)  
Select 2⇒1⇒2  
email: [cnc.options@fanucamerica.com](mailto:cnc.options@fanucamerica.com)

### NOTE:

The aftermarket options and the features listed above will need to be CNC and machine compatible. Please contact our MTB for additional support





# CUSTOMER SUPPORT

## Field Service

### Expert On-Site Service

Our factory trained FANUC CNC service engineers provide convenient on-site support minimizing production down time and saving money. We have over 45 service centers and satellite locations provide strategically located across the Americas to provide fast response time (average is less than 24 hours) and low travel fees.

### Expert Phone Support

FANUC CNC service engineers provide free unlimited telephone support during regular business hours. For a nominal fee, after-hours telephone support (CS24) is available to help sustain weekend and 2nd/3rd shift productivity.

## Service Contracts

### Full-Service Contracts

Protect your productivity and bottom line with FANUC Service Contracts. We offer a wide range of service contracts to fit your needs.

- Predictable, easy-to-budget maintenance costs
- Expert on-site service from factory trained FANUC CNC service engineers (labor and travel costs included)
- Unlimited access to FANUC technical support and troubleshooting by phone - including access to CS24 after-hours phone support replacement of FANUC control system components
- Premium service contracts includes servo and spindle motors
- Volume discounts are available
- Free priority shipping to and from your location

### AVAILABLE CONTRACT COVERAGE

Series: 0, 6, 10, 11, 15, 16, 18, 20,  
21, 30, 31, 32 and 35 control models

Service Contact:

888-FANUC-US (888-326-8287)  
Select 2⇒2  
email: [cnc.service@fanucamerica.com](mailto:cnc.service@fanucamerica.com)

Contract Sales Contact:

888-FANUC-US (888-326-8287)  
Select 2⇒1⇒3  
email: [cnc.contracts@fanucamerica.com](mailto:cnc.contracts@fanucamerica.com)

# FANUC

***Service First*** 



# REPAIR SERVICES

## PCB Repair

FANUC offers PCB repair services performed by factory-trained FANUC engineers and technicians using genuine FANUC parts. All equipment is reconditioned to factory specs and tested using FANUC CNCs and specialized FANUC testing equipment. For urgent requests, we offer express service (3-5 business days) if there is no stock available for purchase. All repaired parts come with a one-year warranty on replaced parts and labor.

## Motor Repair

The motor repair process includes preliminary static testing of phase resistances and insulation of windings; disassembly; cleaning; component testing replacement of bearings, seals and wave washers; powder coating; reassembly and final testing. Motor repair services come with a limited one-year warranty on replaced parts and labor. Preventive maintenance services such as AC servo motor overhaul and IP67 waterproofing protection are also available.

FANUC offers speed and convenience with three levels of motor repair service: Standard, Not-to-Exceed (NTE) and Express repair.

## Standard Repair

Factory trained FANUC repair experts will evaluate the motor and provide a quote for customer approval before work is started.

## Not-to-Exceed (NTE)

To expedite the process, customers can eliminate the approval process by setting a NTE cost. If the actual repair costs are equal to or less than the NTE price, repairs work will start without having to wait for a quote or quote approval.

## Express Repair

Utilizes the NTE program but with faster repair time of one to two business days. Express repair is only offered if no stock is available for purchase.

Repair Contact:

888-FANUC-US (888-326-8287)

Select 2⇒3

email: [cnc.repair@fanucamerica.com](mailto:cnc.repair@fanucamerica.com)



# FANUC

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# CONTACT US



Contact Us: 888-FANUC-US (888-326-8287) **Select 2 for CNC Products, Service & Support**

	Phone	Email	Fax
<b>Sales</b>			
Part Sales	select 2→1→1	cnc.parts@fanucamerica.com	(847) 898-5021
Option Sales	select 2→1→2	cnc.options@fanucamerica.com	(847) 898-5006
Option Quote	select 2→1→2→1		
Option Order	select 2→1→2→2		
Option Order Status	select 2→1→2→3		
Warranty Contract Sales	select 2→1→3	cnc.contracts@fanucamerica.com	(847) 898-5031
CNC System Sales	select 2→1→4	cnc.sales@fanucamerica.com	(847) 898-5691
<b>Service</b>			
Service, Technical Support & CS24 After Hours Service	select 2→2	cnc.service@fanucamerica.com (For faster service, put your local service center location in the subject line for local routing)	Call us for local service center fax #
<b>Repair</b>			
Part Repair	select 2→3→1	cnc.repair@fanucamerica.com	(847) 898-5026
Repair Status	select 2→3→2		
<b>Training</b>			
Technical Training	select 2→4		(847) 898-5319
<b>Accounting</b>			
Accounts Receivable & Billing	select 2→5	cnc.accounting@fanucamerica.com	(847) 898-5016



One FANUC is your single-source for factory automation solutions. Our industry leading CNC systems are complemented by a wide selection of robot models ranging from compact robots to large heavy lifters to our fully integrated high-speed, precision small machining centers.

## Top 10 Reasons Why FANUC CNCs Are The Best

1. Maximize machine uptime and minimize TCO with FANUC's world class reliability, delivering MTBF rates in excess of 52 years.
2. Secure investment with availability of replacement parts guaranteed for 25 years.
3. Increase competitive edge with state-of-the-art technologies to increase quality, efficiency, reliability and to reduce cycle times.
4. Minimize training and support costs with continuity of operation and upward compatibility to run existing programs on new CNC controls.
5. Reduce delivery times with quick and easy at-the-machine programming.
6. Increase daily production time with a CNC system that is 'ready-to-go' in less than 30 seconds.
7. Boost efficiency with Ethernet enabled data and remote diagnostics.
8. Minimize downtime by separating CNC control and PC technologies.
9. Rely on a world class partner for simple through complex machine tools.
10. Simplify integration with FANUC robots by using the standard interface.







# ***Service First***

## **HELP IS NEVER FAR AWAY - PHONE SUPPORT IS FREE**

Our Service First commitment means we are here for you  
with technical support and parts availability for the life of our products.



FANUC America Corporation

[www.fanucamerica.com](http://www.fanucamerica.com)

888-FANUC-US [888-326-8287]

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