SUPER SONIC

SUPER SONIC HOUSE

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RichAuto

RUIZHITIANHONG

SUPER SONIC

ABOUT US

Beijing RichAuto S&T Co. Ltd was founded in 2003. We are a national enterprise and commit to "Develop nation CNC research, serve world CNC industry and building Chinese CNC brand ".

Since established we are focusing on R&D of DSP numerical motion control systems and have formed a complete operation system that covers R&D, production, sales and services. Our company is also the first domestic manufacturer to launch the research and development of the DSP motion control system. The technology innovation of the full off-line mode, button operation and mobile storage of the DSP handle control system has led the domestic CNC industry into a real CNC era.

RichAuto independently researches and develops several series of products, such as A1X, B1X, B5X, F1X and F7X series which have made brilliant achievements in the fields of carving, cutting, welding, turning & grinding, spraying and other sports, covering machinery, laser, plasma, flame and other processing methods. They are widely used in various industries such as advertising, woodworking, stone carving, glass, jewelry, metal processing, inspection and testing and so on.

The company owns R&D and hardware design team with rich experience. It has independent hardware design and software updating abilities. At the same time, RichAuto equip with strong sales and technical team which can provide perfect pre-sale solutions and after-sales service guarantee to grasp the market demands, customer demands and automation transformation of some industries.

The company production and testing department has unique product testing equipment and means. Every product and accessory is produced and tested in strictly accordance with the process which ensure meticulous quality control.

Beijing RichAuto registered capital is 20 million yuan. It has successfully listed on the Beijing Equity Exchange and landed on the NEEQ. Stock code: 834369.

RichAuto
RUIZHITIANHONG

CULTURE

■ **CONCEPT**

Forging ahead,creat future together !

■ **COMMENT**

RichAuto products are widely accepted and received praise by the customers both in China and abroad.

■ **HONOR**

China high-quality supplier in engraving CNC machine industry . Mr. Huang the President of RichAuto is also the Vice President of Engraving Machines Association of China.

■ **SERVICE**

Offer full range numerical control solutions.

■ **DESIGN PRINCIPLE**

Specialized & Practical

RICHAUTO THE LEADER OF HANDHELD CONTROLLERS !

MoveNow F7X

MoveNow

NEW

The F7X is a new CNC system that uses a new software development program with a variety of hardware architectures to meet the needs of different industry levels. The standard network cable connection with the PC not only integrates the traditional industry PC and offline operation habits, but also supports a more powerful and flexible secondary development mode, which can create a customized system for multi-industry.

☑ NETWORK CABLE CONNECTION
☑ SECONDARY DEVELOPMENT
☑ FIVE-AXIS LINKAGE

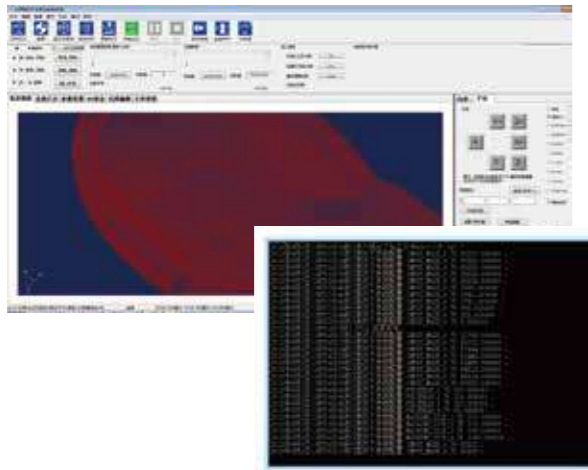☑ 3D SIMULATION
☑ MULTIPLE CONTROL
☑ SYSTEM LOG

MoveNow F7X
System performance introduction

Multi-axis Motion
Support 3-5 axis motion control, the motion of each axis can be configured discretionarily.

Two Operating Modes (PC+DSP)
PC operation and off-line DSP handle operation are inheriting traditional operating habits, no need for designated training, easy to use.

More Definable IO Ports
Freely select 24~48-ports IO boards, each IO port support customer-defined functions.

System Log
The system log function can help users view detailed operation and alarm information remotely.

Standard Network Cable Connection
Avoid the issues such as traditional PCI slot does not match, or user has to disassemble and reinstall the software when replacing the computer host.

Precise Positioning
Support feed axis to return to mechanical origin accurately (Encoder C signal returns to zero).

Multiple Control
The F7X system supports to control multi control systems on one PC. To realize remote operation and production lines through the network connections.

Remote Control And Maintenance
The system supports fully automatic dynamic upgrade, which is convenient for remote operation and remote maintenance.

High-grade 3D Simulation
Support 3D simulation display. Control the machining effect in advance through multi-angle observation.

Secondary Development
Customers can customize the operation interface and develop special process requirements to meet the individualized and differentiated needs of the industry.

MoveNow **F7X**

System performance introduction

Multi-coordinate Memory
Providing 9 working coordinate system. User can switch among the 9 coordinates, each coordinate system can save a work origin information.

Support Simulation Processing
Support rapid simulation of machining progress, checking whether the progress correct or not and calculating machining time in very short time.

Displaying File Processing Information
Through simulation or actual machining, it helps to calculate such as machining time, processing range and number of completed work pieces.

Memory Function
Support power failure protection, breakpoint storage, G code lines selection processing, array work and other advanced processing functions.

System Detection
System has I/O ports signal detection function, which is combined with the operation log function to facilitate self-test and remote maintenance.

Better System Compatibility
Support notebook, desktop, tablet, and is perfectly compatible with common operating systems such as winXP, win7, win8, win10 etc.
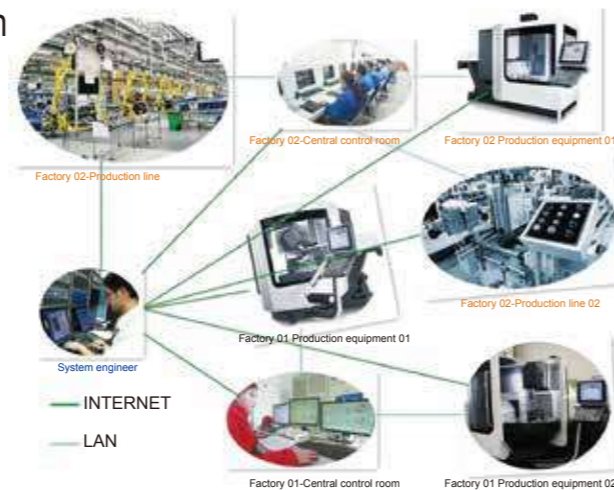
Read Multiple File Formats
Supports reading G code, PLT code, DXF, ENG code etc. which are generated by various kinds of CAD/CAM software.

Built-in Memory Chip For Mobile Transmission
Built-in large-capacity storage space, with USB communication port, can read the files in U disk and card reader directly, plug and play.
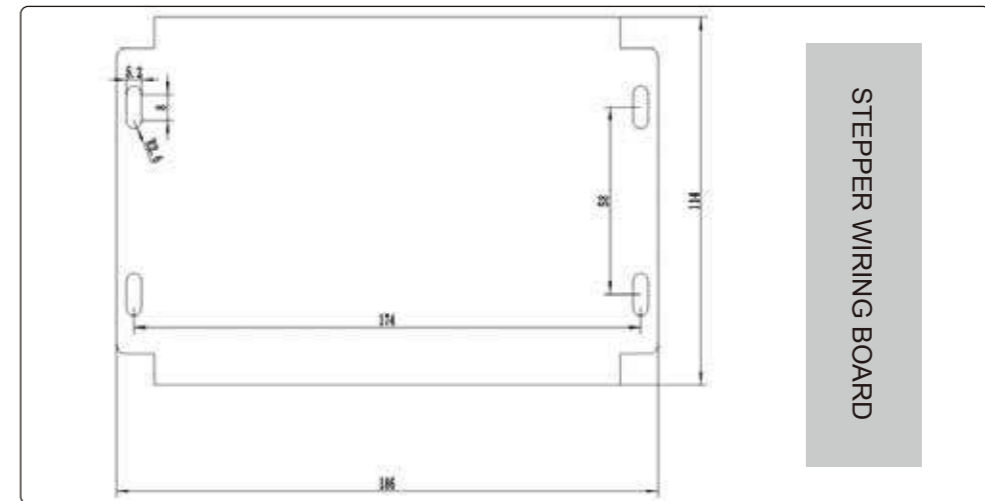
Offline Work
If computer breakdown, the system can continue processing without being affected, and the computer can be reconnected after reboot.

Support Multiple Language Display
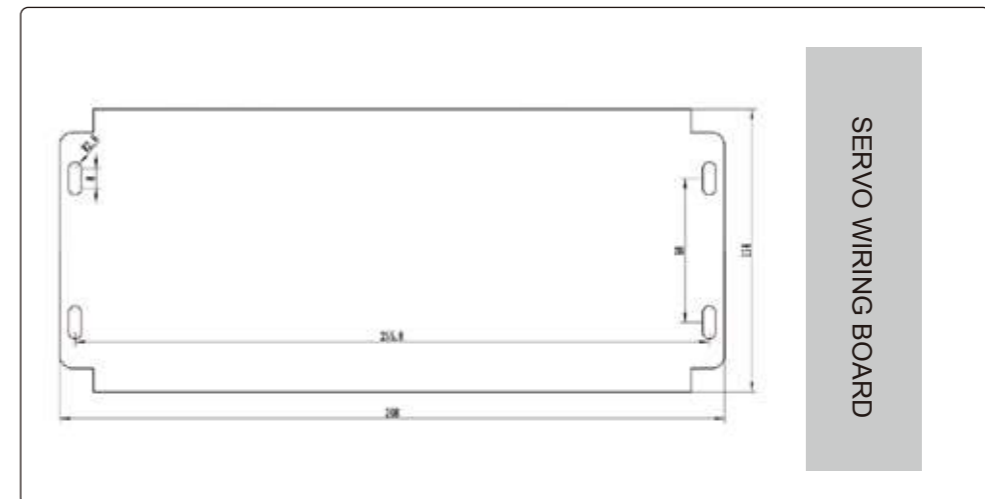The standard version supports Chinese and English, other languages can be added according to customer needs.

Multiple Manual Modes
Continuous: for fast movement; Step: for manual fine adjust; Distance: for fixed distance movement.
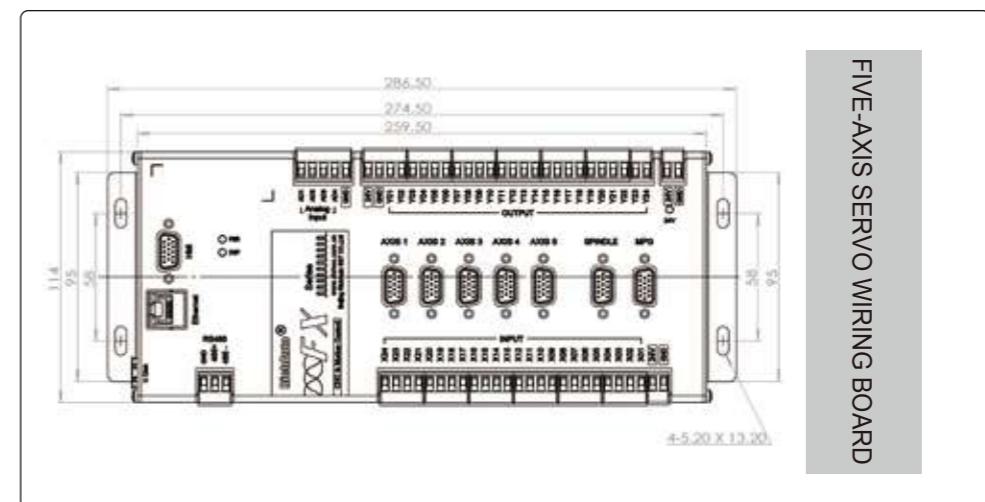

Factory 02-Central control room   Factory 02 Production equipment 01
Factory 02-Production line
Factory 02-Production line 02
Factory 01 Production equipment 01
System engineer
—— INTERNET
—— LAN
Factory 01-Central control room   Factory 01 Production equipment 02

Multi-control and remote maintenance simulation

STEPPER WIRING BOARD

SERVO WIRING BOARD

FIVE-AXIS SERVO WIRING BOARD

RichAuto **F1X** Series
Handheld Motion Control System

F1X is an economical series handheld control system. New hardware/software architecture makes it more stable and reliable. It inherits the handheld operation method of previous DSP controllers. Layout 24 buttons makes it much easier to use. The software not only fully functional, but also meets various needs of major CNC industries.

Flexible secondary development allows customizing personalized industry system according to your needs. F1X series numeric control system also supports remote operation and technical service, providing convenient after-sales maintenance and systems updates.
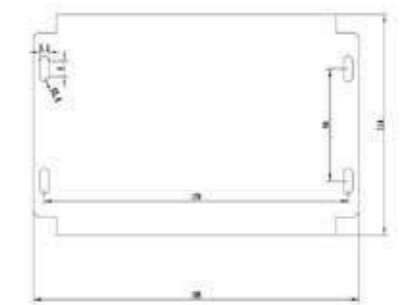
- System standard configuration is X, Y, Z 3 axis motion control method, the 4th axis can be configured to parallel with the Y axis.

- Multiple I/O ports control. Standard equipped with I/O signal node which has 16 inputs and 8 output signals.

- Support the standard G code, PLT format instructions; support domestic and international mainstream CAM software, such as: Artcam, Type3, UG, Pro/E, MasterCAM, Cimatron, Ucancam etc.

- Provide with power failure protection. System automatically save the current processing information in the moment of sudden power down (file name, current line number, work speed, spindle state)；After reboot and returned HOME position, the system automatically prompts the user to restore the processing before power down which makes processing operations become more humanity.

- Support breakpoint memory, select file line No. processing. Can save 8 different breakpoint processing information.

- Multi-coordinate memory function. Provide 9 working coordinate system. The User can switch among the 9 coordinates, each coordinate system can save a work origin information.

- Offer the options of multi speed and analog, convenient for customers to choose.

- Support adjusting spindle operating frequency (or spindle rotate speed). The spindle frequency is divided into 8 shifts. During processing, user can adjust shifts directly by keys without suspend processing.

- Support adjust speed ratio during operation. To adjust the speed ratio so as to change the processing speed and travel speed, speed ratio values from 0.1-1. Increasing or decreasing 0.1 per time.

- Simple manual operate mode. In manual mode, the system provides 3 kinds of move modes, including continuous, step, distance, become more simple and convenient.

- Identifies M code, F code and other extended instructions, it can also open a special code based on user's needs.

- Built-in 512 M memory. Adapt USB communication port with high efficiency for file transfer. Can read files in U disk and card reader directly.

- Unique handheld structure which can be hold with one hand. With LCD display and 24 keys operation keyboard, intuitive and flexible operation, no longer rely on the computer, completely offline operation.

- Self-detection function. The system comes with I/O ports signal detection function, easy remote maintenance.

- Multiple languages display. Support English, Russian, France, Traditional Chinese and Simplified Chinese. Other language can be customized.

- System can automatically upgrading, easy remote operation and maintenance.

- Supports FTP connect with handle internal storage, which is convenient for customers to copy files from the computer to the inside of the system.

PRODUCT PARAMETERS

C P U	DSP	INPUT ACCURACY	0.001MM
BREAK POINT	8	LANGUAGE	S/E/OTHER
POWER FAILURES	AUTO	DRIVE TYPE	STEPPER/SERVO
MOTION AXIS	1~4	DEFINABLE PORT	16I, 8O
SUPPLY VOLTAGE	DC 24V	PULSE RATE	10M/S
INNER MEMORY	512MB	INTERPOLATION TYPE	LINE, ARC, SPLINE
DISPLAY	3" MONOCHROME	COMMUNICATION	U DISK
STANDARD LAYOUT	Handheld controller 1pc; Stepper interface board 1 pc; Cable 1pc; USB extension cable 1pc.		
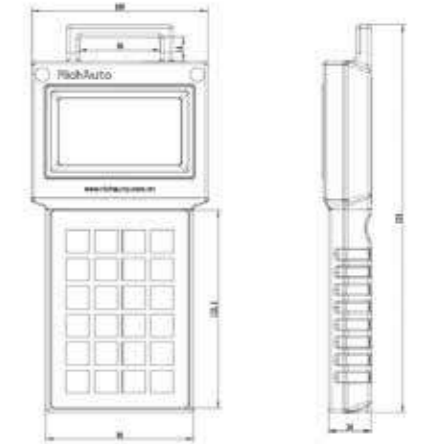
F1X Handle Dimension Drawing

MODEL LIST

| Model Name	Model No.
3 axis motion control system	F131
Cylinder multi-spindle motion control system	F135
4 axis motion control system	F141
Special for stone motion control system	F1410

F1X Installation Size

F131 3 AXIS MOTION CONTROL SYSTEM

SYSTEM FEATURES

- 3 axis linkages motion control.
- Standard configure 16I/8O wiring board.
- Easy to hold in hand, adopts LCD display and 24 buttons keypad, intuitive and flexible.
- 9 workpiece coordinates, 8 breakpoints storage positions.
- Support float and fixed tool setting, the position and speed of tool setting are easy to set.
- Support Fast/Slow manual speed switching, fine adjusting and distance setting function.
- Support to adjust spindle speed and feed speed during processing.
- Support XYZ axis driver, frequency converter, emergency stop, hard limit alarm.
- Support tool broken continue, breakpoint resume, intelligent power failure recovery.
- Support special processing requirements such as array work, milling plane, zoom, part work.
- Widely applied in advertising, woodworking, Stone, mold engraving etc. mechanical engraving.

APPLICATION FIELDS
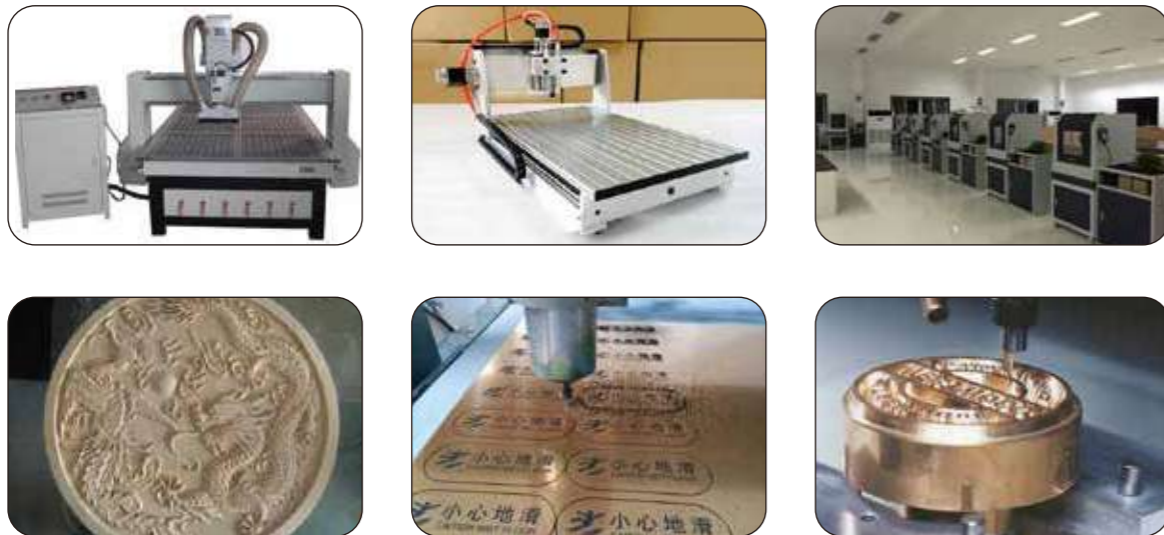
F135 CYLINDER MULTI-SPINDLE MOTION CONTROL SYSTEM

SYSTEM FEATURES

- 3 axis linkages motion control, support to control 1-4 cylinders.
- Standard configure 16I/8O interface board.
- Support float and fixed tool setting, the position and speed of tool setting are easy to set.
- Read T command to control cylinder, support tool switching.
- The tool space can be set freely, system calculates the compensation space automatically.
- Just replace the current tool, convenient and fast.
- Support 9 workpiece coordinates, 8 breakpoints storage position.
- Support HIGH/LOW manual speed switching, fine adjusting and distance setting.
- Support parking status and location settings, k1.k2 button can customize the function button.
- Special functions can be redeveloped, such as feeding and unloading, special technology, etc.

APPLICATION FIELDS
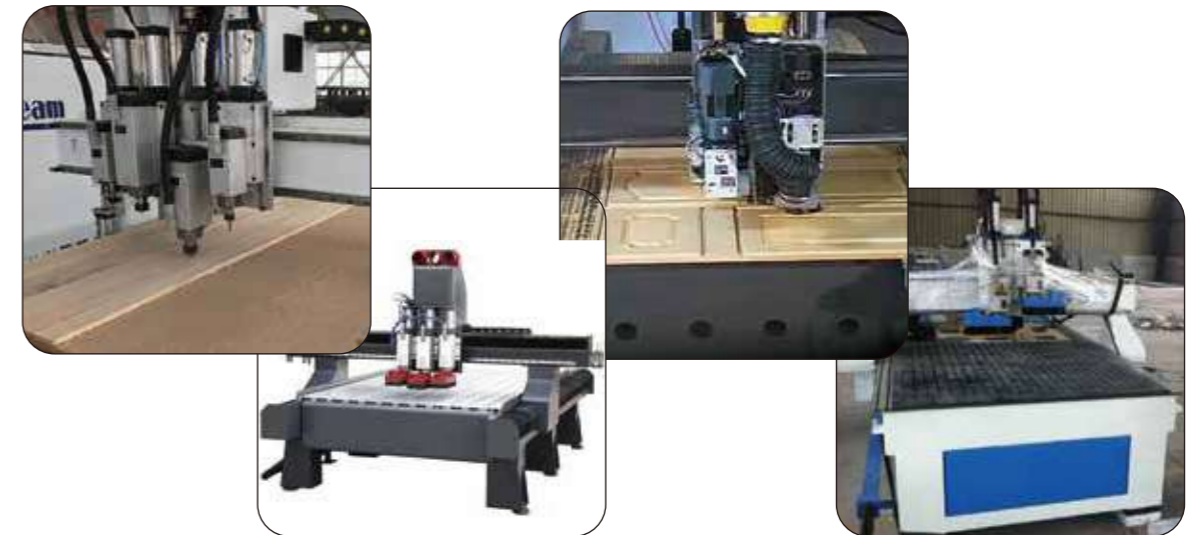
F141 4 AXIS MOTION CONTROL SYSTEM

SYSTEM FEATURES

- Implementation 4 axis interlocking control.
- Standard configure 16I/8O interface board.
- Support 9 workpiece coordinates, 8 breakpoints storage position.
- Support mobile and fixed caliberation, the position and speed of tool can be set.
- Support free mark of rotation axis (choose A,B,C).
- The fourth axis can be customized as normal axis and rotary axis.
- Support HIGH/LOW manual speed switching, fine adjusting and distance setting.
- Support XYZ axis driver, frequency converter, emergency stop, hard limit and other alarm functions.
- Support tool broken continue, breakpoint resume, intelligent power failure recovery.
- Support special processing requirements such as arrays, milling planes, zooming, row selection, and so on.
- Support parking status and location settings.
- Special functions can be redeveloped, such as feeding and unloading, special technology, etc.

APPLICATION FIELDS

F1410 STONE SPECIAL DOTTING CONTROL SYSTEM

SYSTEM FEATURES

- 3 axis or 4 axis motion control mode.
- Standard configure 24I/24O interface board.
- Support 9 workpiece coordinates, 8 breakpoints storage position.
- Support float and fixed tool, the position and speed of tool can be set.
- Support tool broken continue, breakpoint resume, intelligent power failure recovery.
- Support special processing requirements such as Array work, Scale work, Part work, Milling plane and so on.
- With intelligent stone surface dotting function, no need to install any other additional device.
- Dot data is automatically memorized in the system without changing the processing file code.
- Just dot one time, the system can read any format of processing files.
- Automatically remind the user in boot screen wether load the dot data, safe and reliable.
- Using dot number setting rather than space setting, more intuitive and fast.

APPLICATION FIELDS
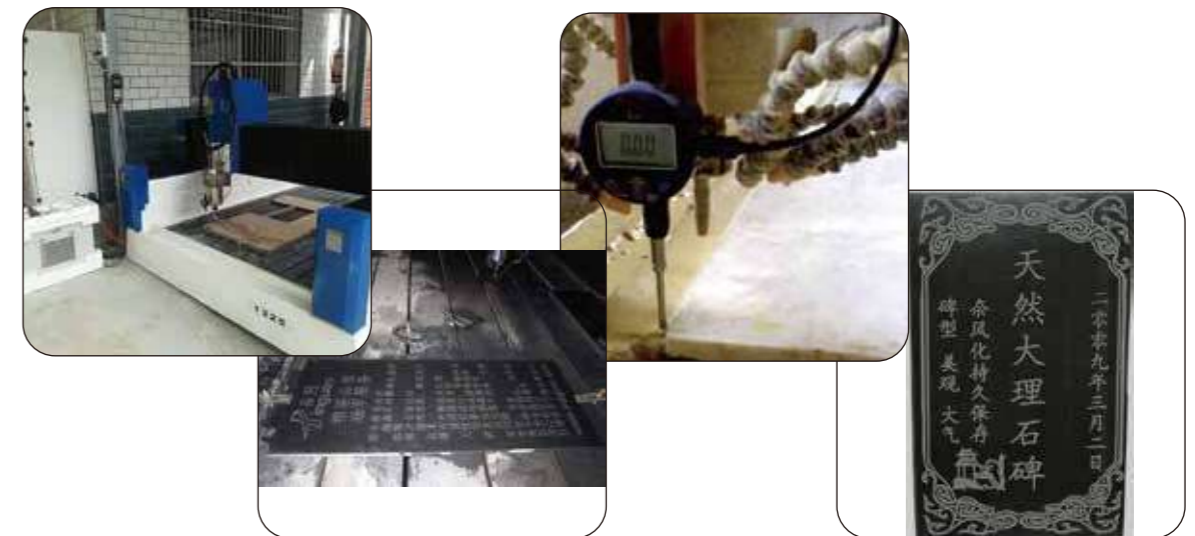
RichAuto **A1X** Series

Motion Control System

■ **High-performance core processor**
DSP core, fast computing speed, strong data processing ability.

■ **Hand-held and button operation**
16 buttons operation, easy to use, simple and quick.

■ **Multiple transmission, large storage**
Fully offline operation, with large capacity storage, support U disk and SD card reading.

■ **Flash disk mode**
Controller acts as an U flash disk when it is connecting to PC to copy processing files.

■ **Intelligent file pre-reading function**
A1X series controllers support more intelligent file pre-reading. The system only pre-read the same file for the first time, after that it start processing directly instead of pre-reading it again. In that way, it saves the valuable time a lot.

■ **Intelligent memory function**
Offer power failure recovery and break point resume functions, save processing location and file name. It is convenient for users to continue processing accurately and quickly.

■ **Data backup and data restore function**
Support to backup parameters to inner space or U-disk.

■ **Two processing modes**
High precision mode which ensures quality and accuracy of work piece while high speed mode guarantees the working efficiency which saves more processing time.

■ **Safety pre-detection and alarm**
Offer security warning and system failure alarm, such as axis mark for abnormal HOME motion, security prompts during distance motion mode, over-travel indicator light alarm etc. It guarantees the safety and consistency of processing in multi-aspects.

■ **Encryption and decryption function**
During trial period, RichAuto offers system encryption and decryption service remotely. Clients no need to remember the password.

■ **Anti-interference performance is greatly improved**
Passed CE tests, strong anti-interference performance ensures the accurate of data transmission.

■ **Remote maintenance and system upgrading**
The system has self-detection and remote system updating function.

PRODUCT PARAMETERS

CPU	DSP	POWER SUPPLY	DC 24V 3A
BUILD-IN MEMORY	512MB	PULSE FREQUENCY	1M/S
NUMBER OF LINKAGE AXES	1 to 4 axis	MIN. INPUT ACCURACY	0.001mm
DISPLAY	3" monochrome Screen	CONTROLLABLE I/O	8 inputs, 8 outputs
TRANSMISSION PORT	U disk/PC	SPINDLE CONTROL	8 shifts
SIGNAL CONTROL	Common anode	DRIVER TYPE	Stepper/Servo
LANGUAGES	English /Simplified Chinese / Traditional Chinese		
STANDARD CONFIGURATION	Handle controller 1 pc, 2.5m 50 pin cable 1pc, IO board 1pc, USB cable 1 pc.		

PRODUCTS CATEGORY TABLE

| PRODUCT CATEGORY	MODEL NAME	PRODUCT CATEGORY	MODEL NAME
3 axis carving motion control system	A11	4 axis 3D carving control system	A18
Plasma cutting motion control system	A12	Double cutters CNC lathe control system	A19
Multi spindles motion control system	A15	Carving milling grinding integrated lathe motion control system	A132
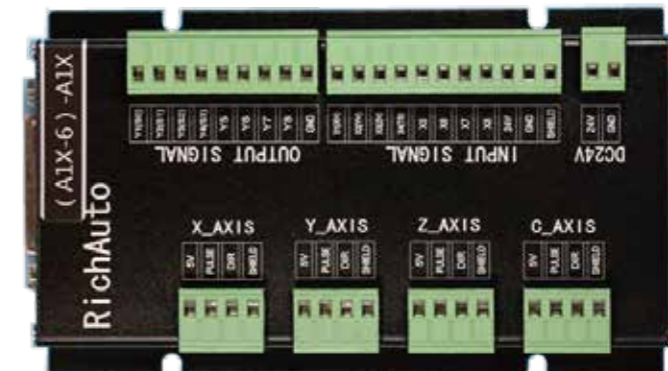
A11 THREE AXIS MOTION CONTROL SYSTEM

SYSTEM FEATURES

- 3 axis interpolations motion control.
- Standard configure 8I/O interface board.
- 9 workpiece coordinates, 8 breakpoints storage positions.
- Support mobile calibration & fixed calibration.
- Configurable position and speed of tool setting.
- HIGH/LOW manual speed switching, fine adjusting and distance setting.
- Spindle speed and feed rate are adjustable during machining.
- Offer system alarms for drivers, inverter, E-stop switch and hard limits.
- Support tool broken continue, breakpoint resume, intelligent power failure recovery.
- Array work, mill plane, scale work, part work etc. special processing demands are supported.
- Stop position and status can be set as user's requested.
- Extensive application of mechanical engraving field such as advertising, woodworking, stone carving and mould machines etc.

APPLICATION FIELDS
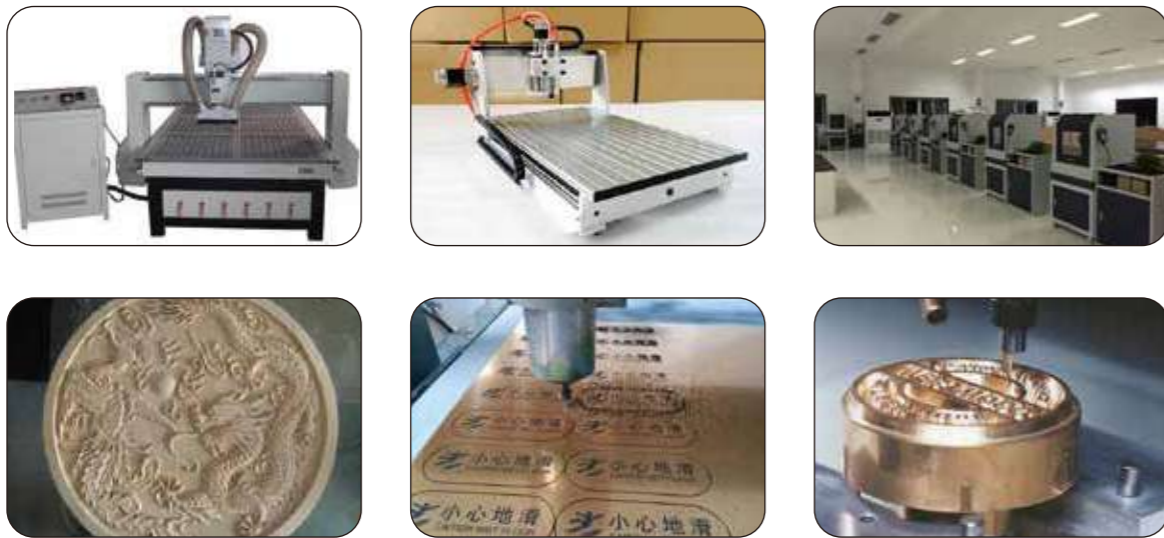
A12 PLASMA CUTTING MOTION CONTROL SYSTEM

SYSTEM FEATURES

- 3 axis interpolation control mode, support single axis ENABLES.
- 9 workpiece coordinates, 8 breakpoints storage positions.
- Standard configure dedicated 8I/O interface board for plasma only.
- Special coating internal of the controller enhances its anti-interference ability.
- Cylinder drop delay and plasma arc delays are adjustable.
- Stop position and status can be set as user's requested.
- HIGH/LOW manual speed switching, fine adjusting and distance setting.
- Offer system alarms for XYZ axes drivers, inverter, E-stop and hard limits.
- Can be used on 3 axis ball screw type and 2 axis with cylinders plasma machines.
- Specialized motion control for plasma cutting, avoiding cutting corner burning problem.
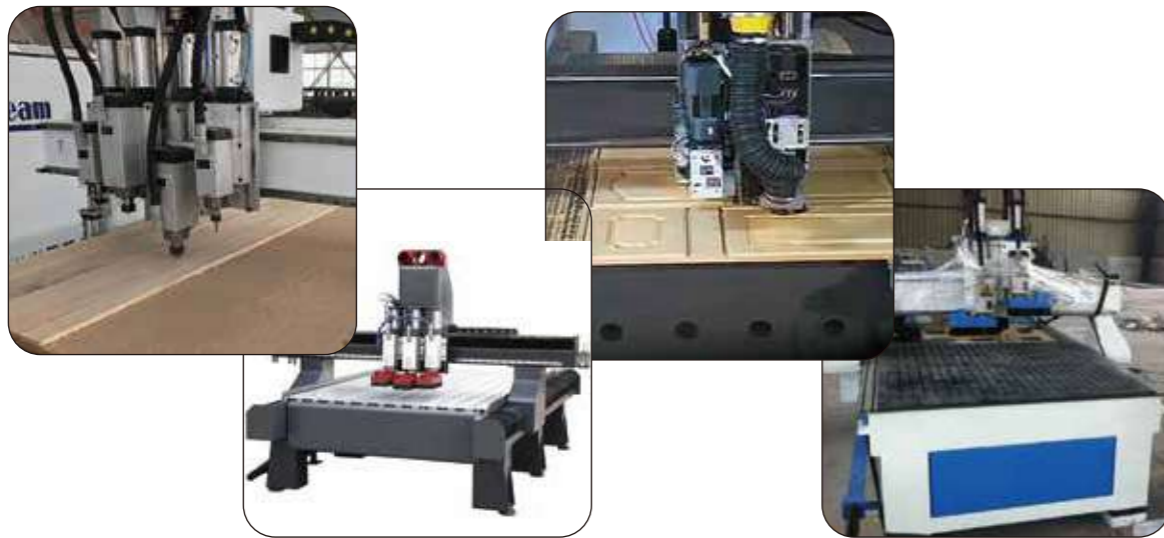
APPLICATION FIELDS

A15 MULTI-HEAD WITH CYLINDERS MOTION CONTROL SYSTEM

SYSTEM FEATURES

- Support 1 to 3 cylinders working.
- 3 axis interpolations motion control.
- Standard configure 8I/O interface board.
- Support mobile calibration & fixed calibration,Tool setting position and speed are configurable.
- Read T command to control cylinders, spindles can switch flexibly.
- Tool space can be set freely, system calculates compensation automatically.
- User only need to calibrate the cutter which is changed.
- 9 workpiece coordinates, 8 breakpoints storage positions.
- Support tool broken continue, breakpoint resume, intelligent power failure recovery.
- HIGH/LOW manual speed switching, fine adjusting and distance setting.
- Offer system alarms for drivers, inverter, E-stop switch and hard limits.
- Stop position and status can be set as user's requested.

APPLICATION FIELDS

A18 FOUR AXIS 3D CARVING MOTION CONTROL SYSTEM

SYSTEM FEATURES

- 4 axis interpolations motion control.
- Standard configure 8I/O interface board.
- 9 workpiece coordinates, 8 breakpoints storage positions.
- Support mobile calibration & fixed calibration.
- Configurable position and speed of tool setting.
- Support free mark for rotary axis (can be marked as A, B or C).
- The 4th axis can be set as standard axis or rotary axis.
- Support HIGH/LOW manual speed switching, fine adjusting and distance setting.
- Offer system alarms for drivers, inverter, E-stop switch and hard limits.
- Support tool broken continue, breakpoint resume, intelligent power failure recovery.
- Stop position and status can be set as user's requested Array work, mill plane, scale work, auto center etc. special
- processing demands are supported.

APPLICATION FIELDS

A19 DUAL HEADS LATHE MOTION CONTROL SYSTEM

SYSTEM FEATURES

- 3 axis interpolations motion control.
- Standard configure 8I/O interface board.
- 9 workpiece coordinates, 8 breakpoints storage positions.
- Spindle speed and feed rate are adjustable during machining.
- Offer system alarms for drivers, inverter, E-stop switch and hard limits.
- Support tool broken continue, breakpoint resume, intelligent power failure recovery.
- Array work, mill plane, scale work, part work etc. special processing demands are supported.
- Stop position and status can be set as user's requested.
- It can also read DXF format files directly.
- Rough turning and finish turning at a time.
- Offering spiral processing technic, such as twist turning and slot turning etc.

APPLICATION FIELDS

A132 CARVING MILLING GRINDING INTEGRATED LATHE MOTION CONTROL SYSTEM

SYSTEM FEATURES

- 3 axis interpolations motion control.
- Standard configure 8I/O interface board.
- 9 workpiece coordinates, 8 breakpoints storage positions.
- Spindle speed and feed rate are adjustable during machining.
- Offer system alarms for drivers, inverter, E-stop switch and hard limits.
- Support tool broken continue, breakpoint resume, intelligent power failure recovery.
- Array work, mill plane, scale work, part work etc. special processing demands are supported.
- Stop position and status can be set as user's requested.
- It can also read DXF format files directly.
- Rough turning and finish turning at a time.
- Offering spiral processing technic, such as twist turning and slot turning etc.

APPLICATION FIELDS

RichAuto **B1X** Series
Motion Control System

- **High-performance core processor**
  DSP core, fast computing speed, strong data processing ability.

- **Confortable hand-held operation**
  24 buttons operation, easy to use, simple and quick.

- **Added more function buttons**
  New function keys for end users, make operation easier and more intuitive.

- **Multiple transmission and super large storage**
  Full offline operation, with large capacity storage, support U disk and SD card reading.

- **Flash disk mode**
  Controller can act as a U flash disk when it is connecting to PC to store processing files.

- **U port protection device**
  Newly increased easy-to-replace U-disk socket protection, anti-fall and easy-to-replace, with U-disk mode function, no longer need to worry about USB port damaging.

- **Intelligent file pre-reading function**
  B1X series controllers support more intelligent file pre-reading. The system only pre-read the same file for the first time, after that it start processing directly instead of pre-reading it again. In that way, it saves the valuable time a lot.

- **Intelligent memory function**
  Offer power failure recovery and break point resume functions, save processing location and file name. It is convenient for users to continue processing accurately and quickly.

- **Data backup and data restore function**
  Support to backup parameters to inner space or U-disk.

- **Two processing modes**
  High precision mode which ensures quality and accuracy of work piece while high speed mode guarantees the working efficiency which saves more processing time.

- **Safety pre-detection and alarm**
  Offer security warning and system failure alarm, such as axis mark for abnormal HOME motion, security prompts during distance motion mode, over-travel indicator light alarm etc. It guarantees the safety and consistency of processing in multi-aspects.

- **Encryption and decryption function**
  During trial period, RichAuto offers system encryption and decryption service remotely. Clients no need to remember the password.

- **Remote maintenance and system upgrading**
 The system has self-detection and remote system updating function.

PRODUCT PARAMETERS

| CPU	DSP	POWER SUPPLY	DC 24V 3A
BUILD-IN MEMORY	512Mb	PULSE FREQUENCY	1M/S
DISPLAY SCREEN	3" Monochrome Screen	CONTROLLABLE I/O	8/8
FILE TRANSFER	U Disk / Flash Disk Mode	CONTROL OF SPINDLE	8 multi-speed / analog control
CONTROL SIGNAL	Common Anode	DRIVE TYPE	Stepper/Servo
INPUT ACCURACY	0.001mm	LANGUAGE	Simplified Chinese/English/ Traditional China
STANDARD CONFIGURATION	Handle controller 1 pc, 2.5m 50-pin cable 1pc, IO board 1pc, USB cable 1 pc		

PRODUCTS CATEGORY TABLE

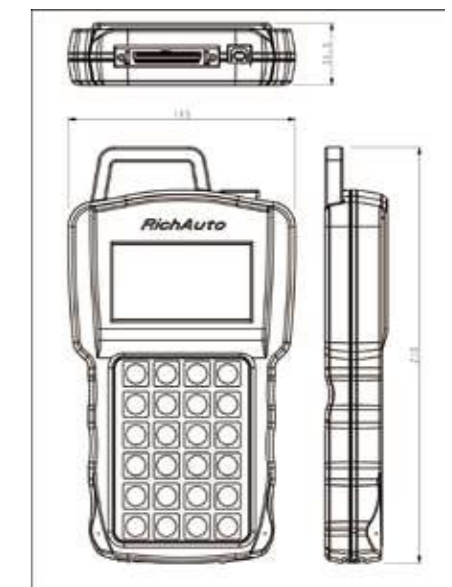| PRODUCT CATEGORY	MODEL NAME
3 axis linkages motion control system	B11
Multi-spindle motion control system	B15
4 axis linkages motion control system	B18
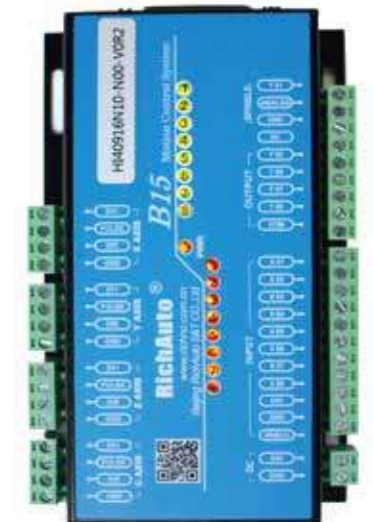
B1X Interface Board

B1X USB adapter
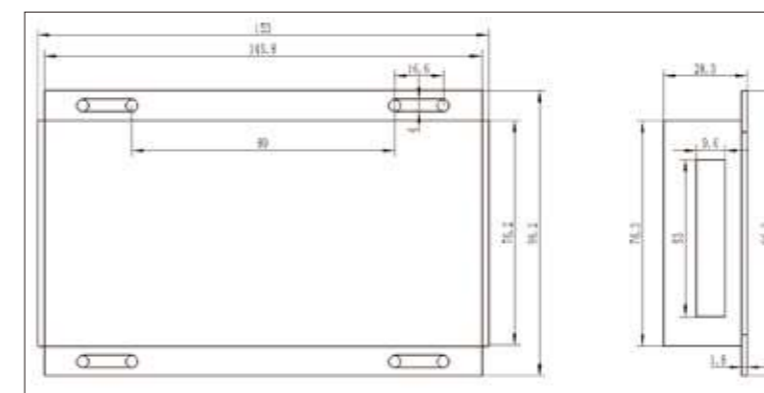
B1X Interface Board Dimension

B1X Handle Dimension

B11 — 3 AXIS LINKAGES MOTION CONTROL SYSTEM

SYSTEM FEATURES

- 3 axis interpolations motion control，Standard configure 8I/O interface board.
- Beautiful appearance design, A new keypad, simple and clear key layout.
- Increased U disk interface protection device, extend the service life of the interface.
- 9 workpiece coordinates, 8 breakpoints storage positions.
- Support mobile calibration & fixed calibration.
- Configurable position and speed of tool setting.
- HIGH/LOW manual speed switching, fine adjusting and distance setting.
- Spindle speed and feed rate are adjustable during machining.
- Offer system alarms for drivers, inverter, E-stop switch and hard limits.
- Support tool broken continue, breakpoint resume, intelligent power failure recovery.
- Array work, mill plane, scale work, part work etc. special processing demands are supported.
- Extensive application of mechanical engraving field such as advertising, woodworking, stone carving and mould machines etc.

APPLICATION FIELDS

B15 — MULTI-SPINDLE MOTION CONTROL SYSTEM

SYSTEM FEATURES

- Support 1 to 4 cylinders working, 3 axis interpolations motion control.
- Customized analog IO interface board for B15 only .
- Offer one tool change shortcut key.
- Support mobile calibration & fixed calibration.
- Tool setting position and speed are configurable .
- Read T command to control cylinders, spindles can switch flexibly.
- Spacing between cutting tools can be set freely, system calculates compensation automatically.
- User only need to calibrate the cutter which is changed
- 9 workpiece coordinates, 8 breakpoints storage positions.
- Support tool broken continue, breakpoint resume, intelligent power failure recovery.
- HIGH/LOW manual speed switching, fine adjusting and distance setting.
- Offer system alarms for drivers, inverter, E-stop switch and hard limits.
- Stop position and status can be set as user's requested.

APPLICATION FIELDS

B18 4 AXIS LINKAGES MOTION CONTROL SYSTEM

SYSTEM FEATURES

- 4 axis interpolations motion control.
- Standard configure 8I/O interface board.
- Single key takes the place of combined keys, easy to operation.
- 9 workpiece coordinates, 8 breakpoints storage positions.
- Support mobile calibration & fixed calibration.
- Configurable position and speed of tool setting.
- Support free mark for rotary axis (can be marked as A, B or C).
- The 4th axis can be set as standard axis or rotary axis.
- Support HIGH/LOW manual speed switching, fine adjusting and distance setting.
- Offer system alarms for drivers, inverter, E-stop switch and hard limits.
- Support tool broken continue, breakpoint resume, intelligent power failure recovery.
- Stop position and status can be set as user's requested.
- Two extended function buttons(F1 and F2) are configurable.
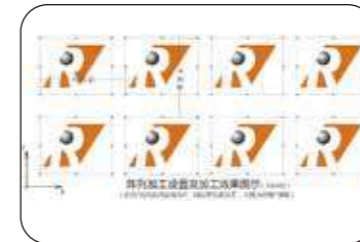
APPLICATION FIELDS
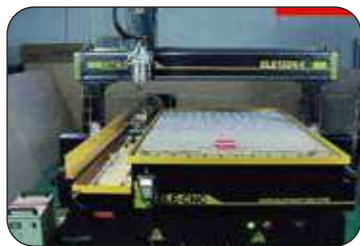
RichAuto B1X ADVANCED FUNCTIONS

Automatic tool switching

Multi operation

Array work

Find break No.

- **SCALE WORK**
  Both single axis and entire axes zoom, apply in door production or relative machining which needs frequently change material size.

- **MIRROR WORK**
  X/Y axis is settable for the mirror processing, much easier to realize symmetrical pattern or mirror image processing.

- **ARRAY WORK**
  Realized multi positions alternative or single position repeat automatic production line by setting array work parameters and combining with processing technology.

- **FIND BREAK NO**
  After the tool bit broken or sudden processing stop, move the tool to the location near the breakpoint to continue processing.

- **AUTOMATIC CENTERING**
  To find the center of workpiece quickly and accurately according to the boundary dimensions of the workpiece. It can help the user quickly determine the location of center origin point.

RichAuto **B5X** Series

Motion Control System

■ **5" color screen, handle operation**
5 inches color screen, support tool path simulation and G code display during processing.

■ **Industrial shell design**
Greatly progress in solid, reliable, dust proof and anti-interference.

■ **BUTTON-TYPE OPERATION**
Adopting 24 buttons, contains function shortcut keys, intuitive and convenient, easy to teach and use.

■ **Trajectory simulation and browsing**
Support file preview and work path real time browsing, check processing effect and scope.

■ **Multi I/O ports, and support extensions**
Standard configuration 16/8 IO interface board, can be extended to 16/16 IO interface board, meets various input and output control.

■ **Stepper and servo compatibility is better**
Differential signal output, servo dedicated ports, support alarm and signal feedback.

■ **Electronic handwheel guidance function**
The B5X system servo interface board supports handwheel, meets different operation habits of the user.

■ **Advanced function**
Complete function such as Resume Work, Array Work, Part Work, Find break no., power failure protection. Meet special processing requirements, such as mirror work, auto center and scale work.

■ **Intelligent file pre-reading function**
Pre-reading only one time, saving time and improving work efficiency, also allows user to skip pre-reading.

■ **System self-check and alarm prompt**
Supporting I/O port self-check, users can view and control any port, convenient for equipment self-check and troubleshooting.

■ **Parameter protection and data recovery**
Support backup and recovery of internal parameters. It can be backed up to external storage or internal storage space in file format.

■ **Customization and secondary development**
Strong software/hardware platform foundation, supports secondary development, meets special process customization of various industries.

PRODUCT PARAMETERS

CPU	DSP	POWER SUPPLY	DC 24V 3A
BUILD-IN MEMORY	512MB	PULSE FREQUENCY	1M/S
NUMBER OF LINKAGES AXES	1 to 4 axis	HANDWHEEL OPERATION	Allow
DISPLAY	5" color screen	CONTROLLABLE I/O	Max. 64
TRANSMISSION PORT	U Disk/PC	SPINDLE CONTROL	8 shifts/ Analog
SIGNAL CONTROL	Differential	DRIVE TYPE	Stepper/Servo
MIN. INPUT ACCURACY	0.001mm	LANGUAGES	English/Chinese
STANDARD CONFIGURATION	Handle controller 1 pc, IO board 1pc, 19-pin HDMI cable 1pc.		

PRODUCTS CATEGORY TABLE

PRODUCT CATEGORY	MODEL NAME
3 AXIS CARVING MOTION CONTROL SYSTEM	B51
HIGH PRECISION JADE CARVING MOTION CONTROL SYSTEM	B517
LINEAR ATC CARVING MOTION CONTROL SYSTEM	B57
4 AXIS 3D CARVING MOTION CONTROL SYSTEM	B58
4 AXIS ATC CARVING MOTION CONTROL SYSTEM	B581
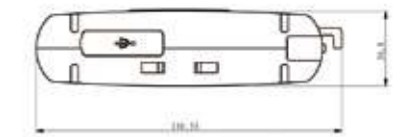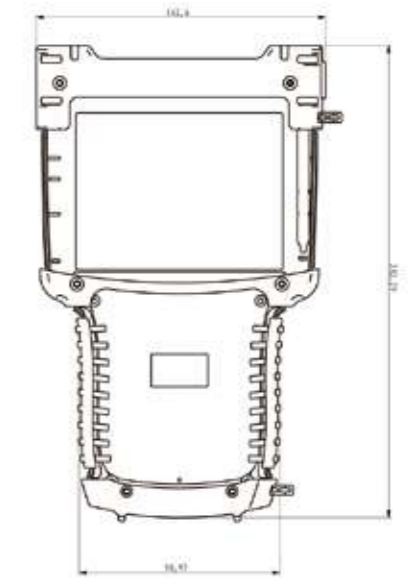
B5X Handle Dimension

Servo interface board

Stepper interface board

B51 3 AXIS CARVING MOTION CONTROL SYSTEM

SYSTEM FEATURES

- 3 axis interpolations motion control.
- Standard configure 16I/8O interface board; 16I/16O extending board optional.
- 9 workpiece coordinates, 8 breakpoints storage positions.
- Support mobile calibration & fixed calibration.
- Configurable position and speed of tool setting.
- HIGH/LOW manual speed switching, fine adjusting and distance setting.
- Spindle speed and feed rate are adjustable during machining.
- Offer alarms for drivers, inverter, E-stop switch and hard limits.
- Support tool broken continue, breakpoint resume, intelligent power failure recovery.
- Array work, mill plane, scale work, part work etc. special processing demands are supported.
- Stop position and status can be set as user's requested.
- The extending 16I/16O board supports hand wheel connecting.
- Extensive application of mechanical engraving field such as advertising, woodworking, stone carving and mould machines etc.

APPLICATION FIELDS

B57 LINEAR ATC CARVING MOTION CONTROL SYSTEM

SYSTEM FEATURES

- 3 axis interpolations motion control.
- Supports 8 tools, tool rack location can be customized.
- New technology of tool change and tool setting method, greatly improve the efficiency of tool setting process.
- Detection mechanism such as tool holding, tool magazine in place, hard limit etc. ensures security of the operation.
- Identify tool change T instruction, support multiple tool changing.
- Support tool library lift and fall, tool magazine cover and dust hood.
- Support servo driver alarm and inverter alarm etc.
- Support both domestic and imported tool change spindles.
- Extensive application of mechanical engraving field, such as advertising, woodworking, stone carving and molding machines.

APPLICATION FIELDS

B58 4 AXIS 3D CARVING MOTION CONTROL SYSTEM

SYSTEM FEATURES

- 4 axis interpolations motion control.
- Standard configure 16/8 I/O interface board, support 16/16 extended I/O interface board.
- 9 workpiece coordinates, 8 breakpoints storage positions.
- Support mobile calibration & fixed calibration.
- Tool setting position and speed are configurable .
- Support free mark for rotary axis (can be marked as A, B or C).
- The 4th axis can be set as standard axis or rotary axis.
- Support HIGH/LOW manual speed switching, fine adjusting and distance mode.
- Offer system alarms for drivers, inverter, E-stop switch and hard limits.
- Support tool broken continue, breakpoint resume, intelligent power failure recovery.
- Array work, mill plane, scale work, auto center etc. special processing demands are supported.
- Stop position and status can be set as users' requested.

APPLICATION FIELDS

B517 HIGH PRECISION JADE CARVING MOTION CONTROL SYSTEM

SYSTEM FEATURES

- 3 axis interpolations motion control.
- 9 workpiece coordinates, 8 breakpoints storage positions.
- Support mobile calibration & fixed calibration.
- Configurable position and speed of tool setting.
- HIGH/LOW manual speed switching, fine adjusting and distance setting.
- Spindle speed and feed rate are adjustable during machining.
- High accuracy and strong stability, offer High Precise mode and High Speed mode settings.
- Offer alarms for drivers, inverter, E-stop switch and hard limits.
- Support tool broken continue, breakpoint resume and intelligent power failure recovery.
- Array work, mill plane, scale work, part work etc. special processing demands are supported.
- Stop position and status can be set as user's requested.
- Widely used in jade carving machine, mold carving machine, watch movements fabrication and other high precision equipment.

APPLICATION FIELDS