

VEICHI

VH Series Compact PLC



Stock Code: 688698

About Us



VEICHI Electric (stock code: 688698) is a high-tech company focused on electrical drive and industrial control, offering a full range of industrial automation products. With facilities in Suzhou, Shenzhen, Xi'an, and a subsidiary in India, VEICHI serves customers worldwide with reliable and competitive offerings.

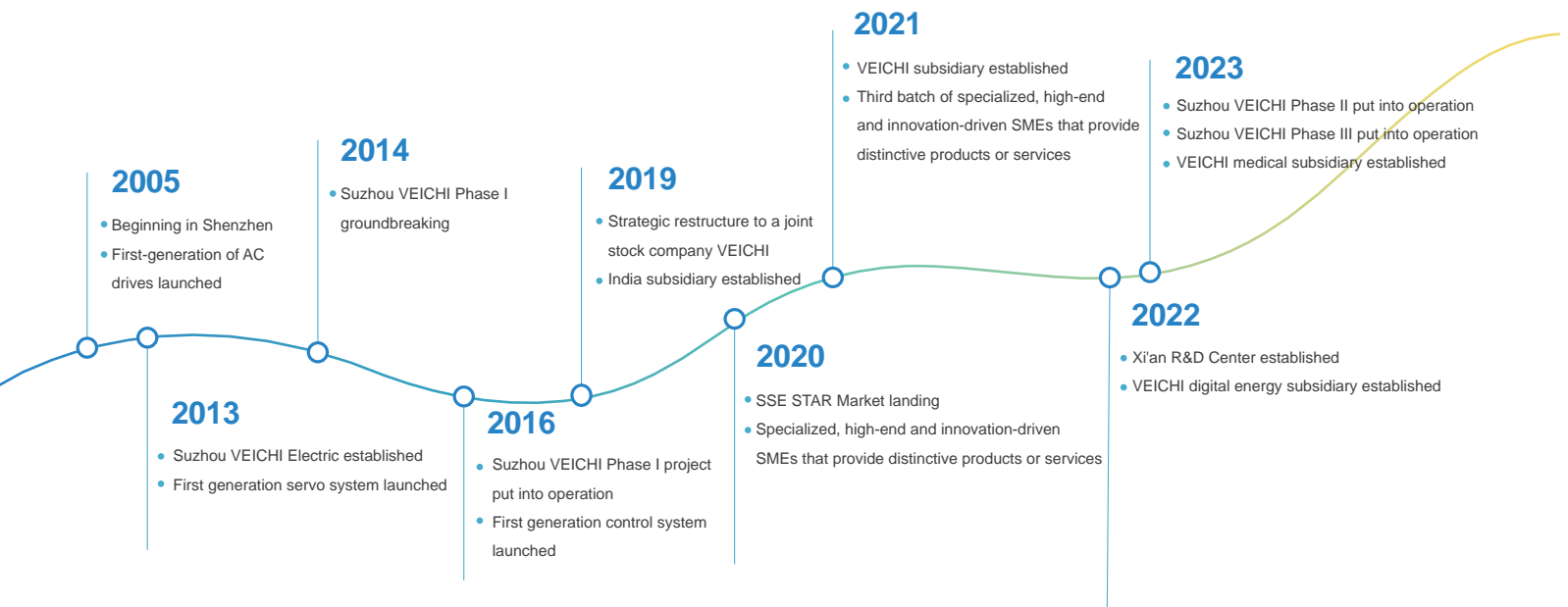
The company boasts an extensive portfolio of products, encompassing AC drives, servo systems, and control systems, which are widely utilized across various sectors such as heavy industry, light industry, and high-end equipment, providing scenario-based solutions that support the digital and intelligent transformation of the manufacturing industry. Moreover, the company is in lockstep with the zeitgeist, expanding its reach into burgeoning fields like robotics, renewable energy, and healthcare with a suite of innovative products, including hollow cup motors, frameless motors, hybrid inverters, and surgical power systems. These cutting-edge offerings significantly enhance the prosperity and advancement of the industries they serve.

Years of R&D efforts have led to mastery in the core technologies of motor control such as vector control of PMSM, V/F control, high-frequency pulse injection control,

field-weakening control for higher speed etc, and of silicon carbide application, motor auto tuning, motor protection and fly track start-up. And it has also successfully cultivated a series of patented technologies with independent intellectual property rights. As of June 30, 2024, a total of 221 patents have been granted, including 51 patents for inventions.

Over the course of 19 years, VEICHI has earned recognition and certifications from national and authoritative bodies like the third batch of specialized, high-end and innovation-driven SMEs that provide distinctive products or services, "high-tech enterprise", "Jiangsu Provincial Engineering Technology Research Center", "Jiangsu Provincial Enterprise Technology Center", and "Jiangsu Industrial Internet Development Demonstration Enterprise (Benchmarking Factory Category)".

Steadfast in its commitment to the business philosophy of "guided by market demand and driven by technological innovation", VEICHI will fortify its research in key core technologies and enhance product iteration to expand relentlessly across the spectrum of high-performance and quality applications. This strategic focus will enable us to make significant contributions to the evolution of electrical drive and industrial control systems, propelling the industry forward with determination and vigor.



Product Profile



VH Series Compact PLC:

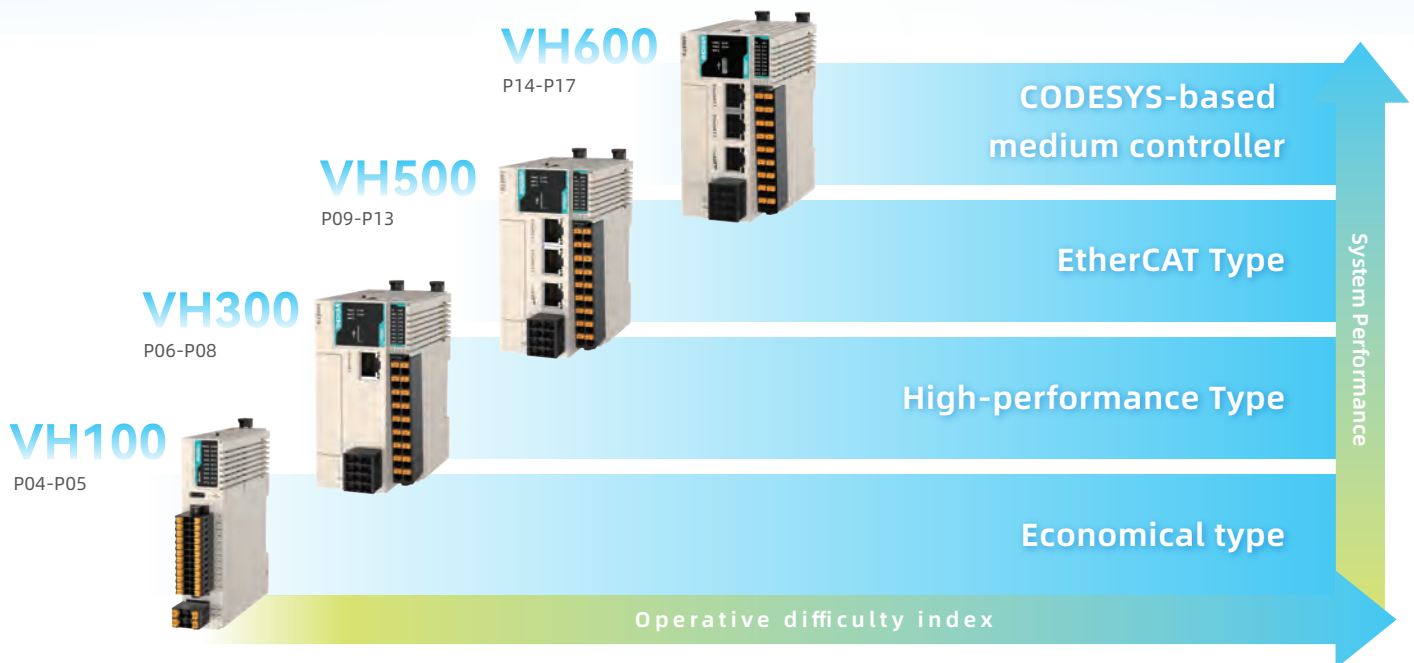
This lineup includes the VH100, VH300, VH500, VH600, and VH series remote modules, covering the applications from small to medium-sized automation control in multi-axis motion control, temperature and other analog control, as well as communication networking.

The slim footprint allows more expansion boards and modules to fit in the narrow space without compromise on performance.

A variety of industrial network communication protocols are integrated for easier data acquisition with other devices on site.

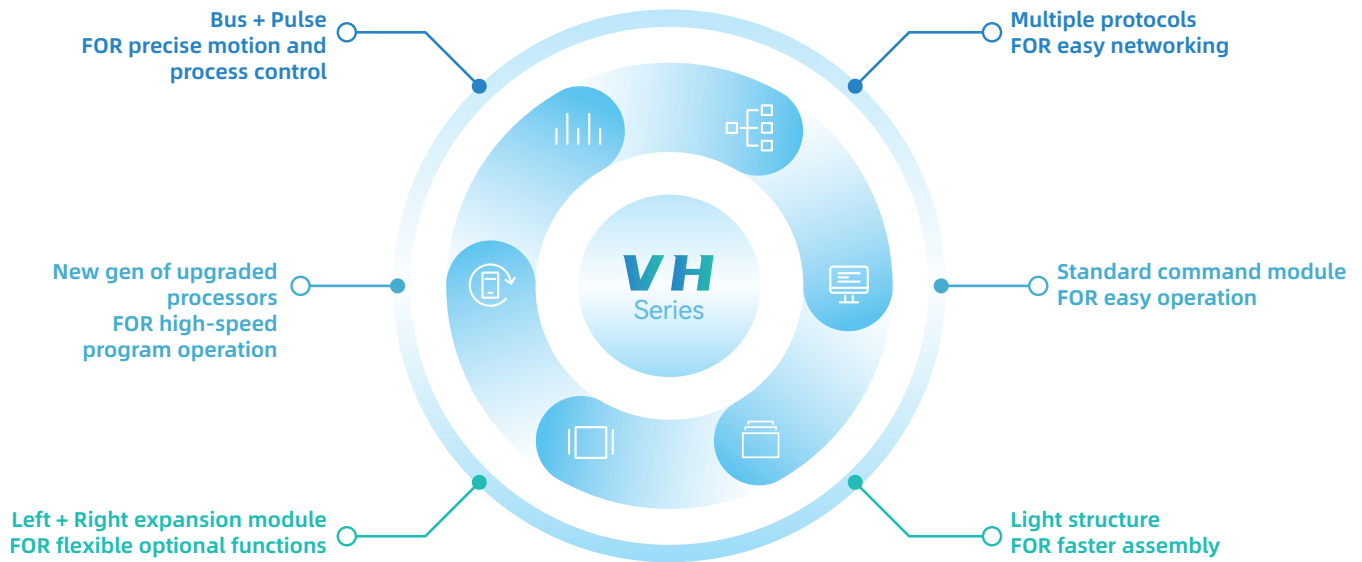
And the programming software is continuously updated with more functions and easy operation in line with the customer needs.

Product Orientation

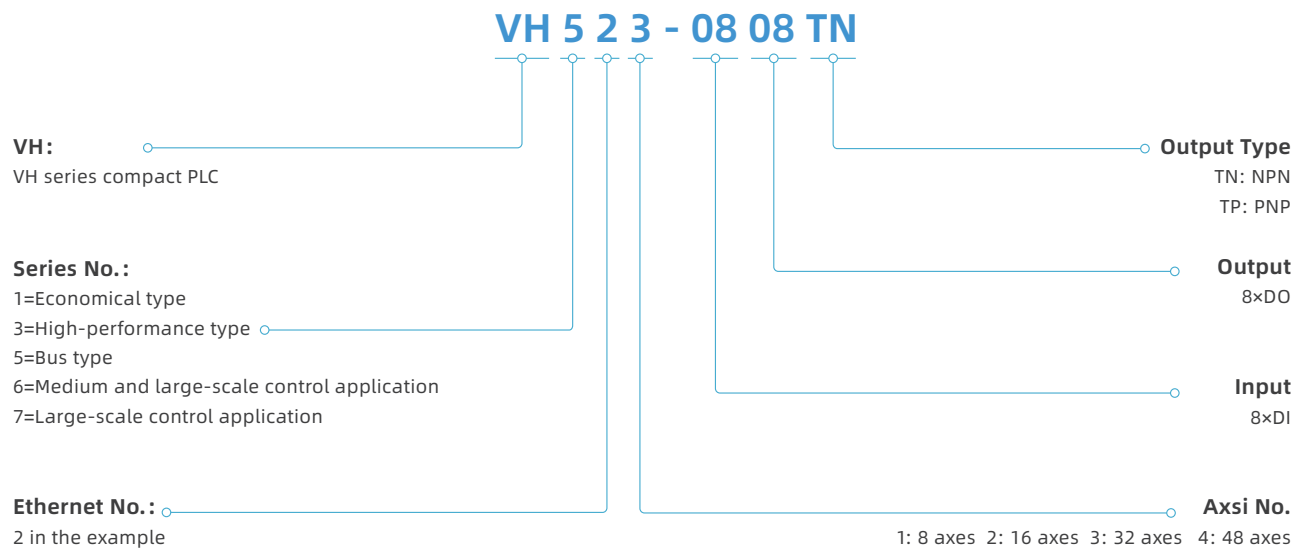


Note: For details of expansion modules related to VH series products, please refer to P18-P29; for product installation dimensions, please refer to P32.

Product Features

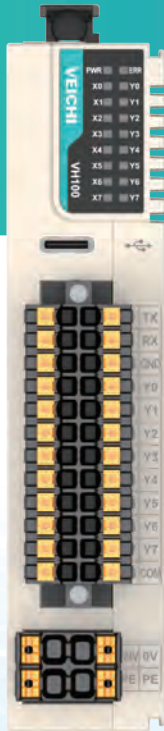


Naming Rules



VH100-0808TN

Economical Type



- Stand-alone PLC
- Narrow scenario application
- Excellent price/performance ratio
- RS-232 and RS-485 communication
- 8×DI and 8×DO
- Small-scale automation application

Product Features

8 × HSC

2×high-speed counting(50kHz)
6×high-speed counting(10kHz)
Single/two-phase(Up/Down) and
AB phase(1x and 4x) counting

Serial Comm Port

1×RS232 and 1×RS485
COM0 and COM1 respectively, up to 115.2K
COM0 for programming port and Modbus RTU slave
COM1 for Modbus RTU master and slave, FreePort and N:N
Built-in termination resistor selected by dip switch

3 × PTO

3×high-speed pulse train output(100kHz)
Positioning control command
group for easy start

USB Port

USB2.0
Common Type-C USB cable-compliant
Quicker firmware upgrade

Slim Structure

24mm in the width for smaller footprint
Plug-in wiring for easy maintenance

Technical

	Item	Specification
Communication	Interface	2×Asynchronous serial port: COM0 for RS232 and COM1 for RS485. 1×USB interface
	Baud rate	1.2kbps~115.2kbps
	Communication protocol	Modbus/FreePort/N:N
	USB	USB 2.0, Type-C for uploading/downloading/monitoring/firmware update
DI and DO Characteristics	Input type	Sourcing/sinking
	Rated voltage	DC24V, 4mA
	Logic 1 [Voltage range]	> 15VDC
	Logic 0 [Voltage range]	< 5VDC
	Input filter	Digital filter to X0 ~ X7, up to user programs
	Max. leakage current	1mA
	Isolation	2kV capacitor isolation
	High-speed counter	Single-phase: 2×50kHz; 6×10kHz Two-phase: 1×25kHz; 3×5kHz
	Max.pulse output(transistor)	3×100kHz high-speed pulse train output
Common Characteristics	Basic command time	0.2us
	Program capacity	16k Bytes
	Real-time clock	No
	Max expansion module	No
	Power-down save	FLASH for permanent save, 2k word elements max
	Power supply	DC24V
	Programming language	Self-developed software AutoStudio, LD,IL and SFC supported

VH300 Series

High-performance Type



- Slim modular design
- Strong performance with dual CPUs of 600M clock speed
- Improved arithmetic processing
- Multi-channel pulse control application
- 16×right expansion modules addable
- 1×left expansion board for more functions

Product Features

Flexible Expansion

Optional left expansion boards and right expansion modules covering a variety of communication functions and analog/digital I/O control.

Various Comm. Interface

1×RS-485 for CANopen and Modbus TCP master/slave
TYPE-C port for debugging and SD card for firmware upgrade

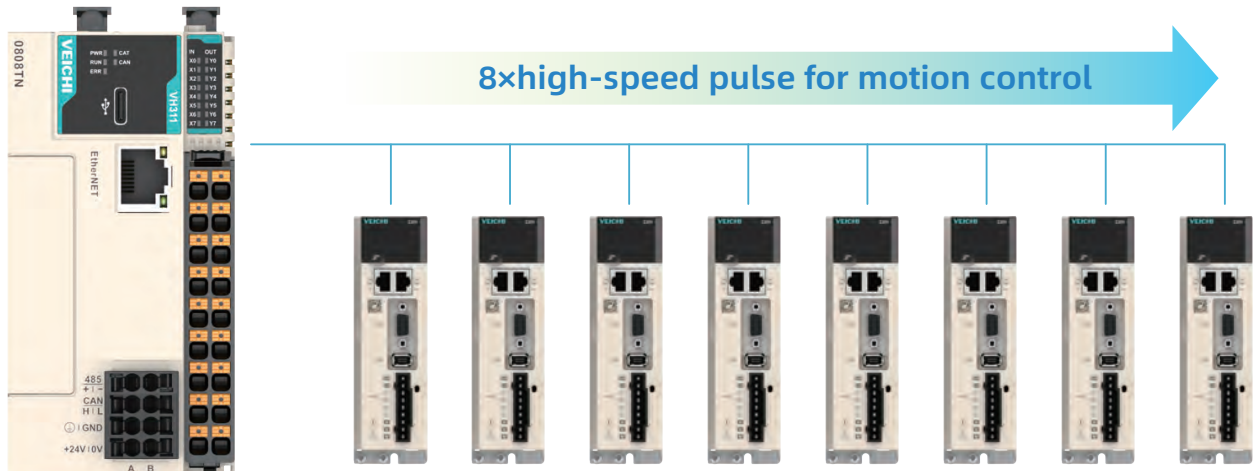
8×PTO/PTI

8×high-speed pulse train input and output
Positioning control command group for easy start


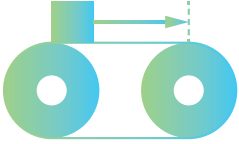
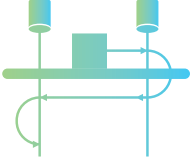
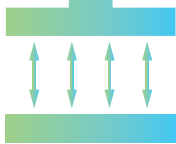



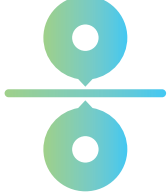

Slim Structure

Vertical structure for smaller footprint
Quick release terminals for faster maintenance
Direct wiring with push-in terminals for tool-free installation

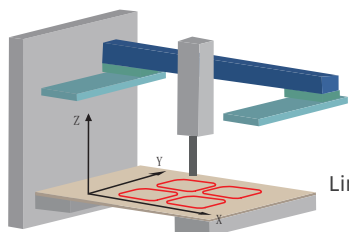
Multiple Motion Control Channels



Various Motion Control Modes

<p>Single-axis</p>	 <p>Speed control</p>	 <p>Position control</p>	 <p>Home</p>	 <p>Torque control</p>
<p>Multiple-axis</p>	 <p>Electronic gear Speed sync</p>	 <p>Electronic cam Position sync</p>	 <p>Interpolation Multiple-axis interpolation</p>	
<p>Others</p>	 <p>Rotary cut Easy command for easy operation</p>		 <p>Probe High speed and high precision capture</p>	

Linear and Circular Interpolation



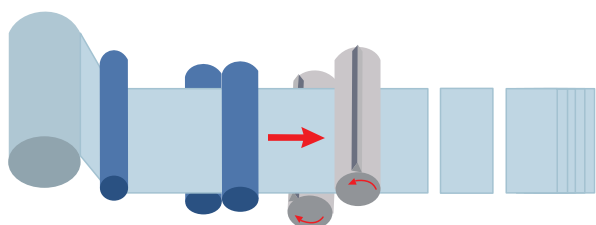
Linear interpolation



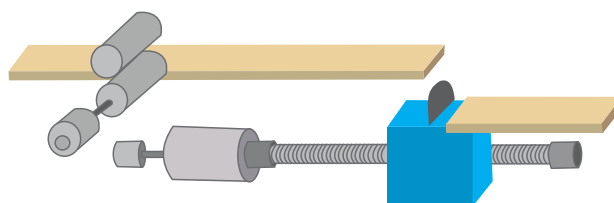
Circular interpolation

2-axis linear and circular interpolation corresponds to the 2-axis XY platform control to realize the accurate positioning of the slide.

Electronic Gear and Cam



Flying Shear: By tracking the progress of the material and setting the cutting length, it can automatically plan the movement trajectory to cut the material at fixed length.



Chasing Shear: Set the starting point and length of the sync zone to determine the allowable travel range of the chasing shear axis and the starting point and end point of the round-trip movement, and plan the cam trajectory curve to realize sync cutting.

Technical Specifications

Item	VH301-0808TN/P	VH311-0808TN/P
Power supply	DC24V	
Program capacity	200K Bytes	
Power-down save	128K bytes for user soft components, about 84k bytes for power-down save 128k bytes for power-down save	
Programming language	Self-developed software AutoStudio, LD, ST, FBD, and SFC supported	
Right expansion No.	16 modules expandable on the right	
Real-time clock	No real-time clock, expandable on the left expansion	
Left expansion	1 expansion board	
SD card	For firmware upgrade	
USB	USB 2.0, Type-C for uploading/downloading/monitoring/firmware update	
I/O	Input	8×high-speed pulse train Input(200kHz) for single/two-phase(Up/Down) and AB phase (1x and 4x) counting
	Output	8×high-speed pulse train output(100kHz), and positioning control command group supported
Serial Port RS-485	Baud rate	1.2kbps~115.2kbps
	Comm protocol	1×built-in and 2 more expandable on the left for Modbus/FreePort/N:N
	Termination resistor	Built-in, master or slave application, 31 Modbus-RTU slaves max
CAN	No	CANopen master with up to 31 slaves
EtherNET	No	Modbus TCP master/slave for uploading/downloading and monitoring.16 slaves and 4 masters max at the same time.TCP free protocol for 4 connections
Motion control	Positioning control command group, linear and circular interpolation, electronic gear, and electronic cam	



VH500 Series

EtherCAT Type

- Slim modular design
- 16×right expansion modules and 1× left expansion board
- EtherCAT bus control and dual-port network switching
- Process encapsulation and re-application through FB/FC functions
- Multi-level network communication through RS485, Ethernet, CAN and EtherCAT interfaces

Product Features

1G CPU

Substantial increase in command processing speed over previous products for high speed and high precision motion control and stable process control

Multi-level Network

1×RS 485 on the product for CANopen communication, 72 EtherCAT slaves max.
Dual Ethernet ports for easy networking over levels

Bus + Pulse Motion Control

Up to 48 real axes for EtherCAT bus motion control, 64 real and virtual axes in total
8×high-speed pulse input and output(200kHz)

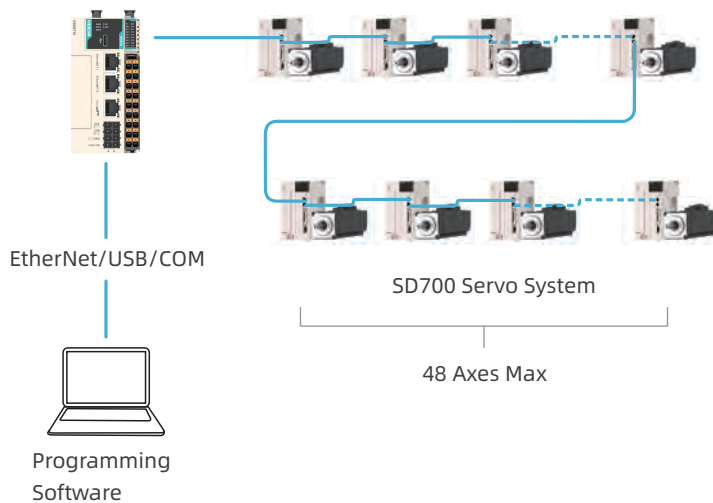
Self-developed Programming Soft

ST in programming to write complex algorithms and logic
Offline debugging and online modification functions to reduce on-site debugging time
Function block encapsulation to quick apply the process algorithms

48-Axis EtherCAT

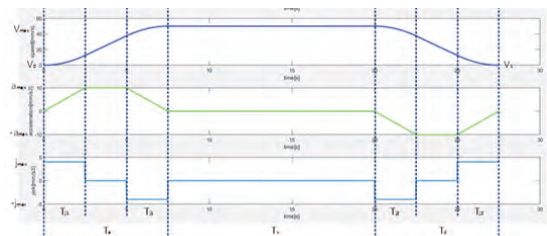
48-axis high-speed bus control with sync movement for complex production. Fast and precise control for higher end-user benefits.

Simple wiring for lower design and labor cost and quicker maintenance.



Jerk ACC and DEC

Jerk value regulation for smoother ACC/DEC curve and less mechanical shock



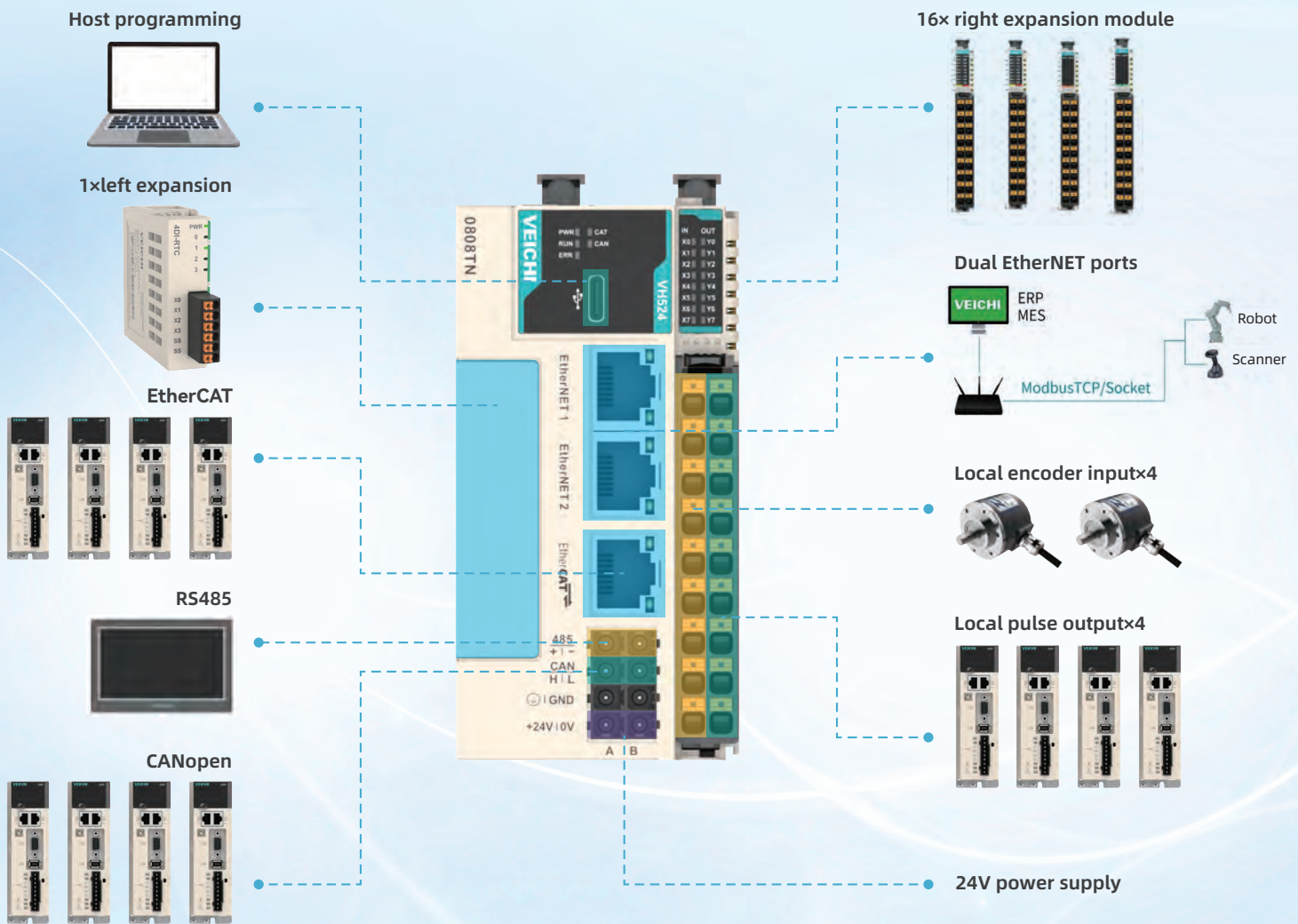
x-coordinat: Time
 1st Y-coordinate: Speed
 2nd Y-coordinate: Acceleration
 3rd Y-coordinate: Acceleration change rate

- Change rate of ACC/DEC speed obtained directly from the ACC/DEC time without calculation
- Change rate visualized in the smoothness of the ACC/DEC curves

Real/visual axes 64	Max real axis EtherCAT buses 48	Max EtherCAT slaves 72
Communication cycle 250 μ s	Sync accuracy ±80 ns	High-speed I/O 8×200kHz 8×200 kHz

Advanced industrial Ethernet and distributed master/slave
 Easy installation for faster information transfer cycle and faster communication and sync
 Linear arc interpolation, cams and other modes available

- Motion network bus EtherCAT with communication cycle as fast as 250 μ s.
- Multi-axis commands such as e-gear and e-cam.
- Single-axis motion commands such as position, speed, and home.
- Main axis for encoder or virtual axis, real axis, external input, etc.
- Servo probe, high-speed counter probe, encoder probe available
- Phase compensation, motion superposition, etc.



Multi-level Network One-stop Control

Technical Specifications

Item		VH511-0808TN/P	VH522-0808TN/P	VH523-0808TN/P	VH524-0808TN/P
Power supply		DC24V			
Program capacity		200K Bytes			
Power-down save		128K bytes for user soft components, about 84K bytes for power-down save 1M bytes for user-defined variables, about 128K bytes for power-down save			
Programming language		Self-developed software AutoStudio, LD, ST, FBD, and SFC supported			
Right expansion No.		16 modules			
Real-time clock		No real-time clock, expandable on the left expansion			
Left expansion		1 expansion board			
SD card		For firmware upgrade			
USB		USB 2.0, Type-C for uploading/downloading/monitoring/firmware update			
I/O	Input	8	8×high-speed pulse train Input(200kHz) for single/two-phase(Up/Down) and AB phase(1x and 4x) counting		
	Output	8	8×high-speed pulse train output(100kHz), and positioning control command group supported		
Serial Port RS-485	Comm port	1×built-in and 2 more expandable on the left for Modbus/FreePort/N:N			
	Termination resistor	Built-in. PLC for master/slave application, 31 Modbus-RTU slaves max.			
CAN		No	CANopen master with up to 31 slaves		
EtherNET	Port No.	1	2×Ethernet ports with shared network board and IP address, network switching supported		
	Protocol	Modbus TCP master/slave for uploading/downloading and monitoring.16 slaves and 4 masters max at the same time. TCP free protocol for 4 connections			
Motion control		Positioning control command group, linear and circular interpolation, electronic gear, and electronic cam			
EtherCAT	Axis No.	8	16	32	48
	Slave No.	72 slaves max(including servo axes), real and visual axes 48 in total			
	Axis performance	Communication cycle in 250us~8ms			

Programming Software

Self-developed Programming Software

AUTO STUDIO

Upgrade Non-stop



Oscilloscope



ST Language



Network Configuration



FB Function Block



Customized Function Block



Offline Simulation



VH600 Series

CODESYS-based Medium Controller



This is the first medium-sized PLC independently developed by VEICHI. Based on years of experience in the industrial control development and analysis of actual situations from various cases, this robust medium controller comes out specifically for high-end equipment and factory automation.

It provides users with ultra-high-speed computing and processing, excellent system performance, and a range of integrated functions. So, it is ideal for large-scale automation control of different processes, production lines and the whole factories.

Product Features

Standard Development Platform

Full conformity to IEC61131-3 and PLCopen specification.
 Diversified programming languages (LD, FBD, ST, SFC, CFC)
 Customized function library encapsulation
 Integrated with rich motion control libraries, mathematical models, etc. for rapid development

Multi-level Network

2×EtherNet (shared IP, built-in switch)□2×EtherCAT for up to 128 slaves.
 Sync cycle for 8 axes in 1ms, 16 axes in 2ms
 EtherNet/IP(master/slave)
 ModbusTCP(master/slave)
 3×RS485, each for 50 slaves□16×OPCUA client connection
 CANopen communication for 31 slaves

Modular Free Configuration

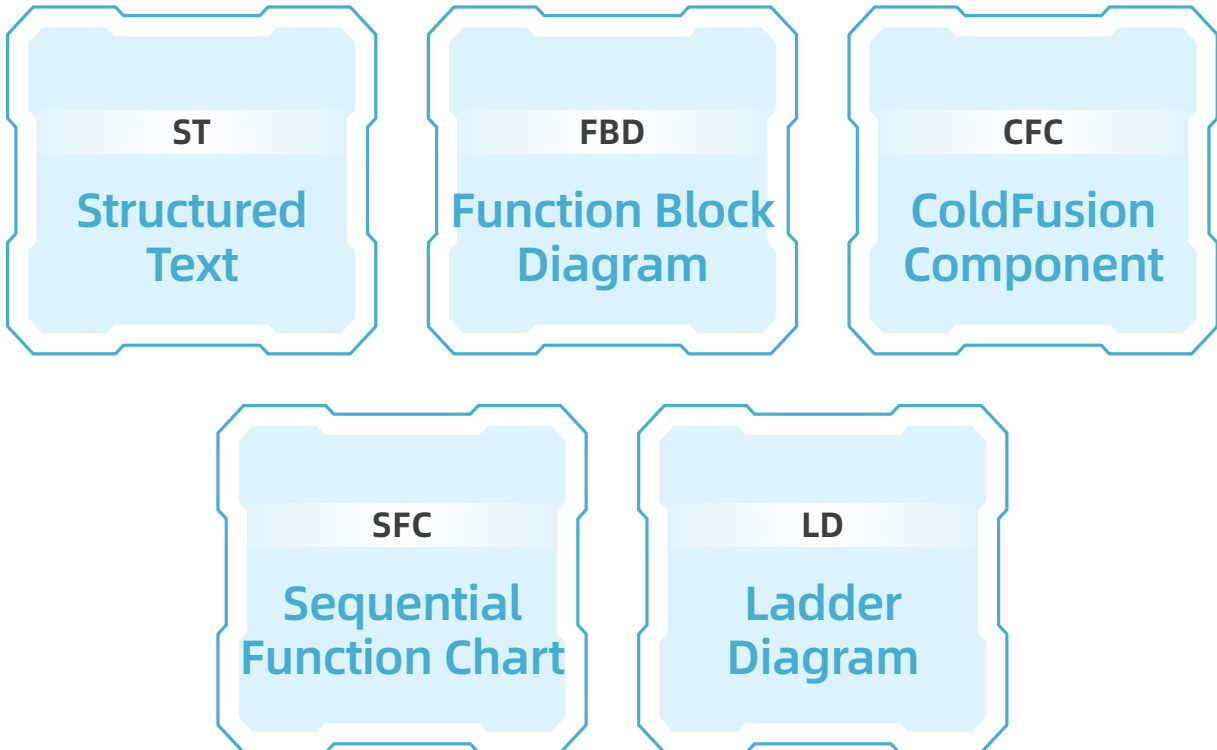
16 modules expandable on the right
 Analog I/O, digital I/O, RS485, RCT clock optional on the left
 SD card for upgrade

Fast and Precise Motion Control

8×high-speed counting input(200K) and 8×high-speed pulse output(200K)
 Complex control functions such as single-axis/multi-axis movement, interpolation, electronic cams and electronic gears, G-code, robots, etc.

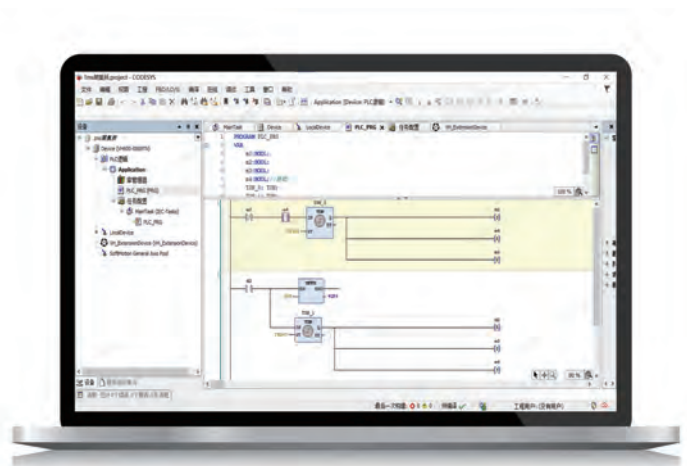
Standard Programming

- CODESYS-based programming in full conformity to IEC61131-3
- Diversified programming languages of ST, FBD, CFC, SFC and LD



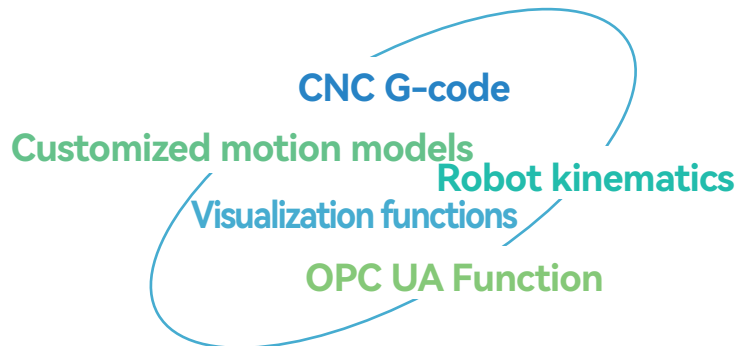
Convenient Programming

- Online program modification, breakpoint tuning, and single-step cycle for enhanced efficiency
- Perfect error diagnosis function with TRACE function to monitor the movement track and locate the fault
- Powerful project management covering multi-task and multi-device download to deal with large-scale projects



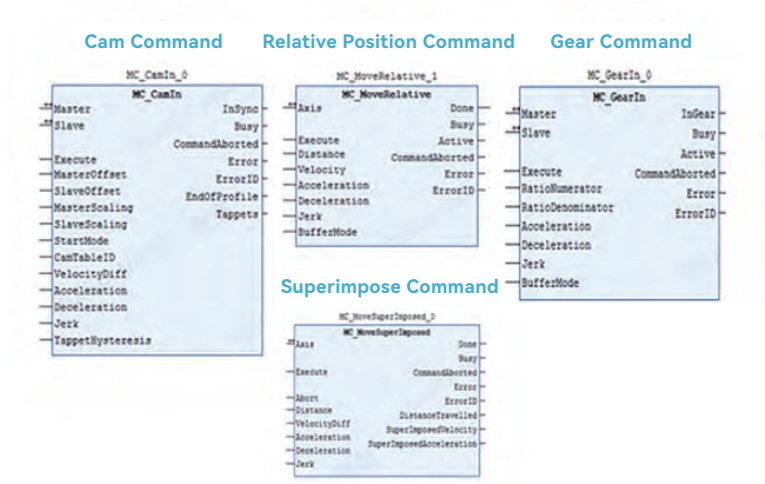
Motion Control

- Multi-core processors assignment, Multicore 4 Cores supported
- Faster command processing and response, 8-axis sync cycle under bus control as fast as in 1ms.
- Single/multi-axis commands such as e-gear and e-cam Linear, circular, and axis combination interpolation
- Robot motion control, customized motion models, visualization functions, OPC UA functions, etc. available for complex and diverse scenarios

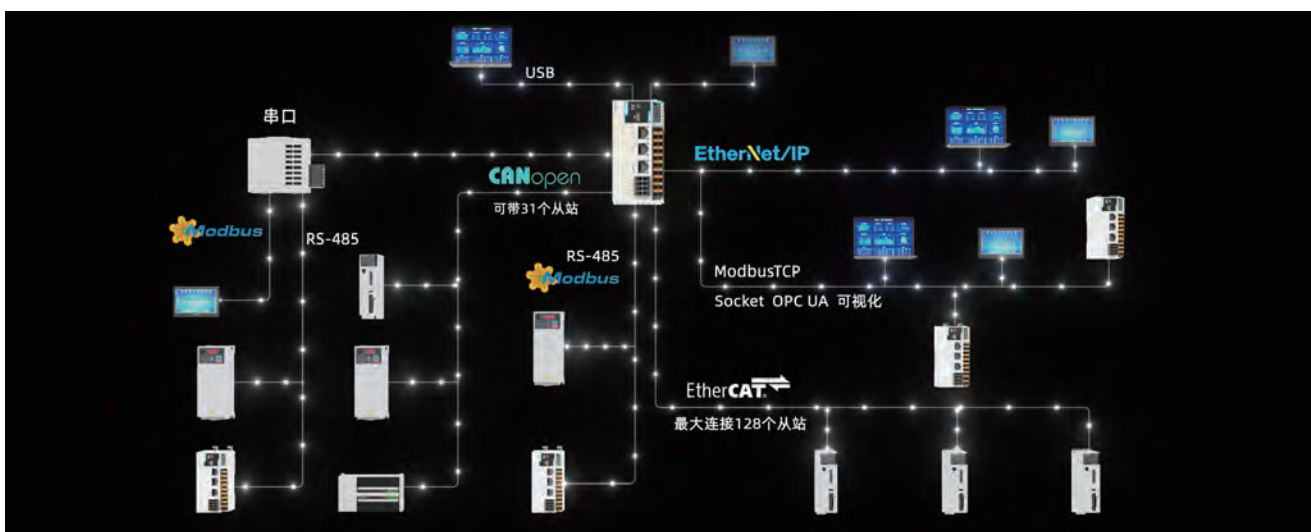


Rich Motion Library

- Motion control libraries in conformity to PLCopen specifications
- User-defined encapsulation of function libraries and function blocks available
- Motion control libraries, robot libraries, customized kinematics and mathematical models integrated



Extensive Standard Industrial Network



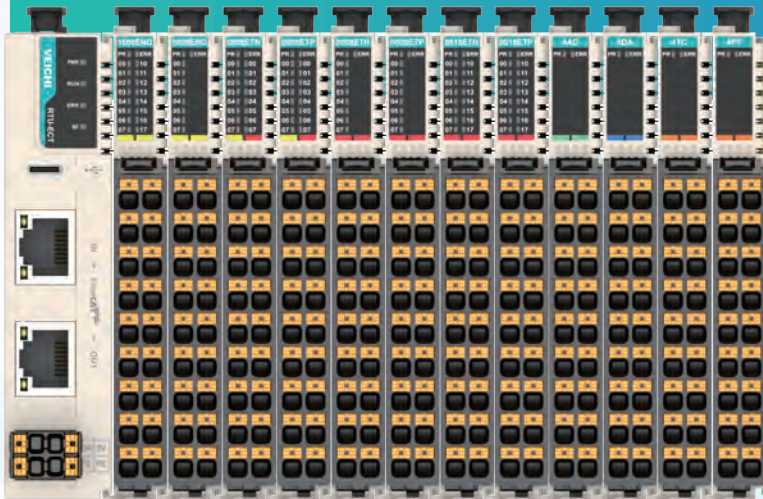
VH600-0808TN Specification

Item	Specification			
Model	VH600-0808TN/P	VH601-0808TN/P	VH602-0808TN/P	VH603-0808TN/P
Axis No.	128 axes max	8	16	32
Rated voltage	DC24V			
RS485	1×RS485			
CAN	CANopen master with up to 31 slaves			
EtherNet	2×EtherNet(built-in switch) for ModbusTCP, and program upload/download			
EtherCAT	128 EtherCAT slaves max. (including servo axes)			
High speed input	8×200K			
High speed output	8×200K, sourcing/sinking for option			
Left expansion	2×RS485 expandable			
Right expansion	16×expansion modules max.			
SD card	1×32G SD card			
Data capacity	10MB for programs, and 512kb for power-down save (Flash),20MB for data			
Language	LD, FBD, IL, ST, SFC, CFC in conformity to IEC 61131-3 Programming Language			
Motion control	Linear and circular interpolation, electronic gear, and electronic cam			



VH Series

Remote Expansion Module





The VH series remote module, a cutting-edge expansion module from VEICHI, is distinguished by its compact and lightweight design, rapid signal sampling, straightforward assembly, and exceptional reliability. It is perfectly suited for standard bus networks and boasts a response time in the micro-second range.


The Remote IO system comprises a communication interface module and an expansion module, the former handles fieldbus communication between the master controller or host computer software. Users can configure the communication modules and right expansion according to the site requirements and adopt the remote IO system for lower cost if needed.


- Free Configuration
- Stable Performance
- Easy operation

Product Features

 16×modules max.

 New generation of bus speeds up to **100Mbps**

 Cabinet space reduced by **2/3**

 **D-BUS design**
Metal plate fitted on both sides for higher reliability

VH-RTU-ECT Communication Module

Item	Specification
Expansion No.	16 in total, including IO and special modules
Backplane bus	VBUS, VEICHI-defined
Backplane speed	100M
Transfer cycle	125 μ s
Backplane bus compatibility	Remote modules compatible with local module communication protocols
Backplane communication	Hand-shaking for fast forwarding
EtherCAT port	IN: EtherCAT input
	OUT: EtherCAT output for EtherCAT slaves
Rated input voltage	24V DC (20.4V DC~ 28.8V DC)
Rated input current	0.6A (typical at 24V)
Power output derating	Derate 85% at 55°C
Isolation	24V not isolated from DO/DI, while DO/DI isolated from AO/AI
Power protection	Overcurrent protection, anti-reverse connection protection, and surge absorption
Input PDO No.	1024 bytes max.
Output PDO No.	1024 bytes max.
Input mailbox	256 bytes max.
Output mailbox	256 bytes max.
IO mapping	Three IO mapping methods: bit access, byte access, and word access
Stop output mode	Output according to fault stop mode and preset value, no more refresh



VH-RTU-PN Communication Module

Item	Specification
Communication mode	RT mode
Min.transfer cycle	1ms
I&M data	I&M0~I&M3
Profinet version	V2.3
Expansion No.	16 modules max.
Profinet port	2
PROFINET switch	Networking supported
Physical layer	100BASE-TX
Traffic rate	100 Mbit/s (PROFINET)
Communication	Full duplex
Topology	Line, star, and tree type
Transmission medium	Cat5e and above
Transmission distance	<100m between two nodes
Prioritized startup	YES
Port disable	YES
Reconfiguration after replacent	NO(PN module of the same kind)
Factory reset	YES
Expansion factory reset	NO
Firmware upgrade	YES



VH Series

Right Expansion Module



- VH300, VH500, VH600 and VH Series Communication Module
- 16×right expansion modules addable for all
- New generation of bus speed up to 100Mbps

Product Features



Status diagnostics indicators for quick checks
 Colored plates for quick I/O function checks
 Clearly codes on wiring



D-BUS connectors
 Corrosion-resistant connector materials
 Better stability than SMD design



Removable terminals
 Convenient terminals for module replacement
 without rewiring



Large terminal diameter for higher cable
 compatibility
 Push-in terminals for higher wiring efficiency

DI Module Specification

Item	Specification
Input method	Sourcing/sinking selectable via "S/S" terminal (except the Input/output hybrid module)
Isolation	Comes with the module
Input voltage	24Vdc
Input current	4mA(Typical)
Input impedance	6k(reference)
ON voltage	>15V DC
OFF voltage	<5V DC
Response time	100us
Software filter time	(0~255) *0.25us
Operating temperature	-20°C~55°C
Bus power rated current	100mA (Typical at 5V DC)
Module hot swap	NO

Model	Specification
VH-1600END	16×DI module
VH-0800END	8×DI module
VH-0808ETN	8×DI module, sinking 8×NPN DO module
VH-0808ETP	8×DI module, sourcing 8×PNP DO module

DI Module Specification

Item	Specification
Output mode	Sourcing or sinking for different models
Isolation	Optocoupler-isolated
Output voltage	24Vdc
Output load (Resistance)	0.5A/terminal, 2A/module
Output load (Inductance)	7.2W/terminal,12W/module
Output load (Lamp)	5W/terminal, 9W/module
Response time	100us
Indicator	Indicator lights up when the optocoupler works
Leakage current under open circuit	<0.1Ma/30V DC
Min. load	5mA (5 ~ 24Vdc)
Protections	Short circuit protection
Operating temperature	-20°C~55°C
Bus power rated current	100mA (Typical at 5V DC)
Module hot swap	NO

Model	Specification
VH-0016ETN	16×NPN DO
VH-0016ETP	16×PNP DO
VH-0008ETN	8×NPN DO
VH-0008ETP	8×PNP DO
VH-0808ETN	8×DI module, sinking 8×NPN DO module
VH-0808ETP	8×DI module, sourcing 8×PNP DO module

AI Module Specification

Model	Specification
VH-4AD	4×AI

Item	Specification
Input type	AI
Isolation	Capacitor isolation between analog and digital circuits Internal isolation between analog circuit and module 24V DC power No isolation between analog channels
Input method	Voltage/current
Input channel	4
Resolution	16-bit
Switching time	60us/channel
Voltage range	±10V, 0V~10VV, ±5V, 0V~5V, 1V~5V
Voltage impedance	1MΩ
Voltage accuracy (25°C)	±0.1% (full-scale)
Voltage limit	±12V
Voltage diagnosis	No disconnection detection
Current range	±20mA, 0mA~20mA, 4mA~20mA
Current sampling impedance	250Ω
Current accuracy (25°C)	±0.1%(full-scale)
Voltage limit	±30mA for instantaneous range, ±24mA avg
Current diagnosis	Disconnection detection on under 4mA~20mA
Operating temperature	-20°C~55°C
Bus power rated current	120mA (Typical at 5V DC)
Module hot swap	NO

AO Module Specification

Model	Specification
VH-4DA	4×AO

Item	Specification
Output type	AO
Isolation	Communication between analog and digital circuits isolated by capacitors Internal isolation between analog circuit and module 24V DC power No isolation between analog channels
Output method	Voltage/current
Output channel	4
Resolution	12-bit
Switching time	250us/channel
Voltage range	±10V, 0V~10V, ±5V, 0V~5V, 1V~5V
Voltage impedance	1KΩ
Voltage accuracy (25°C)	±1% (full-scale)
Voltage diagnosis	No short circuit detection
Current range	0mA~20mA, 4mA~20mA
Current sampling impedance	0Ω~600Ω
Current accuracy (25°C)	±1% (full-scale)
Current diagnosis	No open circuit detection
Bus power rated current	80mA (Typical at 5V DC)
Module hot swap	NO

Temperature Sampling Module-RTD Input

Model	Specification
VH-4PT	4×RTD temperature sampling module

Item	Specification			
	Celsius (°C)		Fahrenheit (°F)	
Input signal	PT100, PT500, PT1000, Cu50, Cu100, KTY84, NTC5K, NTC10K, 4 channels in total			
Resolution	24-bit			
Slew rate	(15±2%) ms × 4 channels (unused channels not converted)			
Rated temperature	PT100/500/1000	-150.0°C ~ 600.0°C	PT100/500/1000	-238.0°F ~ 1112.0°F
	Cu100/Cu50	-30°C ~ 120°C	Cu100/Cu50	-22°F ~ 248°F
	KTY84	0.0°C ~ 200.0°C	KTY84	32.0°F ~ 392.0°F
	NTC5K/10K	-30.0°C/-25°C ~ +200.0°C	NTC5K/10K	-22.0°F/-13°F ~ 392.0°F
Sensitivity	0.1°C		0.1°F	
Accuracy (25°C)	Full scale*±0.1%			
Accuracy (-20°C~+55°C)	Full scale*±0.3%			
Isolation	Communication between analog and digital circuits isolated by capacitors Internal isolation between analog circuit and module 24V DC power No isolation between analog channels			
Bus power rated voltage	5V DC (DC4.75V DC~5.25V DC)			
Bus power rated current	120mA (Typical at 5V DC)			
Module hot swap	NO			

Temperature Sampling Module-TC Input

Model	Specification
VH-4TC	4×TC temperature sampling module

Item	Specification			
	Celsius (°C)		Fahrenheit (°F)	
I/O occupancy	No			
Input signal	Thermocouples: Types K, J, E, B, N, T, R, S for channels, 4 channels in total			
Resolution	24-bit			
Slew rate	(240±2%)ms × 4 channels (unused channels not converted)			
Compensation method	Cold junction compensation			
Rated temperature	Type K	- 100°C ~ 1200°C	Type K	- 148°F ~ 2192°F
	Type J	- 100°C ~ 1000°C	Type J	- 148°F ~ 1832°F
	Type E	-100.0°C ~ 1000°C	Type E	- 148°F ~ 1832°F
	Type B	200°C ~ 1800°C	Type B	392°F ~ 3272.°F
	Type N	- 100°C ~ 1200°C	Type N	- 148°F ~ 2192°F
	Type T	- 200°C ~ 400°C	Type T	- 328°F ~ 752°F
	Type R	0°C ~ 1600°C	Type R	32°F ~ 2912°F
	Type S	0°C ~ 1600°C	Type S	32°F ~ 2912°F
Sensitivity	0.1°C		0.1°F	
Accuracy (25°C)	(±0.1%) (±100mV full scale) + cold junction compensation error			
Accuracy (-20°C~+55°C)	(±0.3%) (±100mV full scale) + cold junction compensation error			
Isolation	Communication between analog and digital circuits isolated by capacitors DC/DC isolation between the analog circuit power supply and the 24Vdc power supply			
Bus power rated voltage	5V DC (DC4.75V DC~5.25V DC)			
Bus power rated current	120mA (Typical at 5V DC)			
Module hot swap	NO			

Note: With appropriate mode settings, both °C and °F data can be obtained.

VH Series

Left Expansion Module



VH300, VH500, VH600 Series
One expansion board to the left for all

VH-RS485(-RTC)

Item		Specification
RS485	Channel No.	2
	Isolation	YES
	Termination resistor	Controlled by a dip switch, connected by default
	Slave No.	Up to 31 slaves (VH600 for 50 slaves), the distance between each slave <3m
	Baud rate	9.6 kbit/s, 19.2 kbit/s, 38.4 kbit/s, 57.6 kbit/s, 115.2 kbit/s
	Distance	<100m for 115.2kbit/s <1000m for 19.2kbit/s

VH-2AD1DA-V/I-(RTC)

Item	Input	Output
Channel No.	2	1
Voltage range	0V ~ 10V	
Current range	0mA ~ 20mA	
Voltage input impedance/output load	> 200kΩ	> 2kΩ
Current sampling impedance/output load	250Ω	<500Ω
Slew rate	2ms/channel	
Input accuracy (25°C)	Voltage ±1%, current ±1% (full-scale)	±1% (full-scale)
Input accuracy (full temperature scale)	Voltage ±3%, current ±3% (full-scale)	±5% (full-scale)
Resolution	12bit	
Digital Output	0 ~ 10000	



VH-4DI-(RTC)

Item	Specification	
Input type	DI	
Input channel	4	
Input method	Sourcing and sinking	
Input voltage level	24V DC±10% (21.6V DC~26.4V DC)	
Common input(0~3)	Current when input ON	> 2.5mA
	Current when input OFF	< 1mA
	Response time	≈10ms(RC filter time)
	Input impedance	6kΩ
ON voltage	≥15V DC	
OFF voltage	≤5V DC	
Software filter time	NO	
Isolation	Optocoupler isolated	
Public terminal	One public terminal shared by 4 inputs (Input power supply polarity +/- changeable)	
Input display	Indicator ON during input (controlled by hardware)	



VH-4DO-TN-(RTC)

Item		Specification
Output type		Digital transistor low side output
Output channel		4
Voltage level		24V DC (21.6V DC~26.4V DC)
Common output	Output load (Resistance)	0.5A/terminal, 1A/Public terminal
	Output load (Inductance)	6W/24V DC
	Output load (Lamp)	1W/24V DC
	Hardware response time ON/ OFF	≤100μs (OFF→ON and ON→OFF)
	Load current	≥5mA
	Max. output frequency	Resistance load 100Hz, inductance load 0.5Hz, lamp load 10Hz
OFF leakage current		<50μA
Max. ON residual voltage		<0.5V DC
Isolation		Optocoupler isolated
Public terminal		NPN
Surge suppressor		Zener diode
Short circuit protection		No
Output display		Indicator ON during output (controlled by hardware)



VH-RTC

Item	Specification
Communication	I ² C
Clock accuracy	120 seconds/month
Clock format	Year-Month-Day Hour-Minute-Second
Battery	CR2354-corded coin cell battery, 5 years life, replaceable



VH Series Main Module Models

Model	Specification
VH600-0808TN	General-purpose medium-sized PLC, 8×NPN input, 8×NPN output(8×200kHz high-speed input, 8×200kHz high-speed output),2×serial port, 1×CANopen, 2×Ethernet, 1×EtherCAT, 128 axes max. 24V DC power supply
VH600-0808TP	General-purpose medium-sized PLC, 8×PNP input, 8×NPN output(8×200kHz high-speed input, 8×200kHz high-speed output),2×serial port, 1×CANopen, 2×Ethernet, 1×EtherCAT, 128 axes max. 24V DC power supply
VH601-0808TN	General-purpose medium-sized PLC, 8×NPN input, 8×NPN output(8×200kHz high-speed input, 8×200kHz high-speed output),2×serial port, 1×CANopen, 2×Ethernet, 1×EtherCAT, 8 axes max. 24V DC power supply
VH601-0808TP	General-purpose medium-sized PLC, 8×PNP input, 8×NPN output(8×200kHz high-speed input, 8×200kHz high-speed output),2×serial port, 1×CANopen, 2×Ethernet, 1×EtherCAT, 8 axes max. 24V DC power supply
VH602-0808TN	General-purpose medium-sized PLC, 8×NPN input, 8×NPN output(8×200kHz high-speed input, 8×200kHz high-speed output),2×serial port, 1×CANopen, 2×Ethernet, 1×EtherCAT, 16 axes max. 24V DC power supply
VH602-0808TP	General-purpose medium-sized PLC, 8×PNP input, 8×NPN output(8×200kHz high-speed input, 8×200kHz high-speed output),2×serial port, 1×CANopen, 2×Ethernet, 1×EtherCAT, 16 axes max. 24V DC power supply
VH603-0808TN	General-purpose medium-sized PLC, 8×NPN input, 8×NPN output(8×200kHz high-speed input, 8×200kHz high-speed output),2×serial port, 1×CANopen, 2×Ethernet, 1×EtherCAT, 32 axes max. 24V DC power supply
VH603-0808TP	General-purpose medium-sized PLC, 8×PNP input, 8×NPN output(8×200kHz high-speed input, 8×200kHz high-speed output),2×serial port, 1×CANopen, 2×Ethernet, 1×EtherCAT, 32 axes max. 24V DC power supply
VH522-0808TN	Motion control PLC, 8×24V DC input, 8×NPN output, 1×serial port, 1×USB, 1×CANOPEN, 2×Ethernet, 1×EtherCAT, 16 axes max, 24V DC power supply
VH523-0808TN	Motion control PLC, 8×24V DC input, 8×NPN output, 1×serial port, 1×USB, 1×CANOPEN, 2×Ethernet, 1×EtherCAT, 32 axes max, 24V DC power supply
VH524-0808TN	Motion control PLC, 8×24V DC input, 8×NPN output, 1×serial port, 1×USB, 1×CANOPEN, 2×Ethernet, 1×EtherCAT, 48 axes max, 24V DC power supply
VH511-0808TN	Motion control PLC, 8×24V DC input, 8×NPN output, 1×serial port, 1×USB, 2×Ethernet, 1×EtherCAT, 8 axes max, 24V DC power supply
VH522-0808TP	Motion control PLC, 8×24V DC input, 8×PNP output, 1×serial port, 1×USB, 1×CANOPEN, 2×Ethernet, 1×EtherCAT, 16 axes max, 24V DC power supply
VH523-0808TP	Motion control PLC, 8×24V DC input, 8×PNP output, 1×serial port, 1×USB, 1×CANOPEN, 2×Ethernet, 1×EtherCAT, 32 axes max, 24V DC power supply
VH524-0808TP	Motion control PLC, 8×24V DC input, 8×PNP output, 1×serial port, 1×USB, 1×CANOPEN, 2×Ethernet, 1×EtherCAT, 48 axes max, 24V DC power supply
VH511-0808TP	Motion control PLC, 8×24V DC input, 8×PNP output, 1×serial port, 1×USB, 2×Ethernet, 1×EtherCAT, 8 axes max, 24V DC power supply
VH311-0808TN	Network-type PLC, 8×24V DC input, 8×NPN output, 1×serial port, 1×USB, 1×CANOPEN, 1×Ethernet axes max, 24V DC power supply
VH301-0808TN	Network-type PLC, 8×24V DC input, 8×NPN output, 1×serial port, 1×USB, 24V DC power supply
VH311-0808TP	Network-type PLC, 8×24V DC input, 8×PNP output, 1×serial port, 1×USB, 1×CANOPEN, 1×Ethernet axes max, 24V DC power supply
VH301-0808TP	Network-type PLC, 8×24V DC input, 8×PNP output, 1×serial port, 1×USB, 24V DC power supply
VH-RTU-ECT	EtherCAT remote communication module, 24V DC power supply
VH-RTU-PN	PROFINET remote communication module, 24V DC power supply
VH100-0808TN	Ultra slim PLC, 8×NPN input, 8×NPN output(2×50kHz high-speed input, 3×100kHz high-speed output),2×serial port, 24V DC power supply

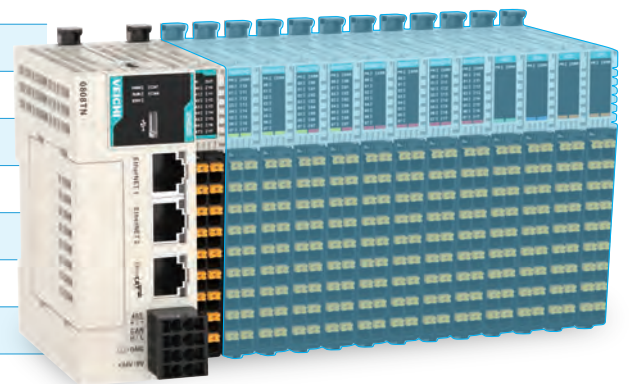
Left Expansion Models

Model	Specification
VH-RS485	2×RS485
VH-RS485-RTC	2×RS485+Real-time clock
VH-4DI	4×DI
VH-4DI-RTC	4×DI+Real-time clock
VH-4DO-TN	4×Sinking DO
VH-4DO-TN-RTC	4×Sinking DO+Real-time clock
VH-2AD1DA-I	2×AI,1×AO(Current)
VH-2AD1DA-I-RTC	2×AI,1×AO(Current)+Real-time clock
VH-2AD1DA-V	2×AI,1×AO(Voltage)
VH-2AD1DA-V-RTC	2×AI,1×AO(Voltage)+Real-time clock
VH-RTC	Real-time clock



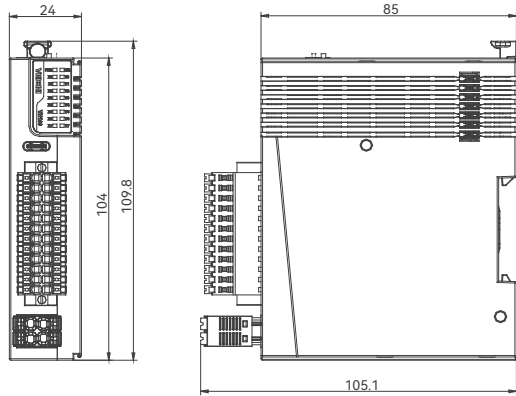
Right Expansion Module Models

Model	Specification
VH-1600END	16×DI module
VH-0800END	8×DI module
VH-0016ETN	16×NPN DO module
VH-0016ETP	16×PNP DO module
VH-0808ETN	8×DI module and 8-channel NPN DO module
VH-0808ETP	8×DI module and 8-channel PNP DO module
VH-0008ETN	8×NPN DO module
VH-0008ETP	8×PNP DO module
VH-4AD	4×AI
VH-4DA	4×AO
VH-4PT	4×RTD temperature sampling module
VH-4TC	4×TC temperature sampling module

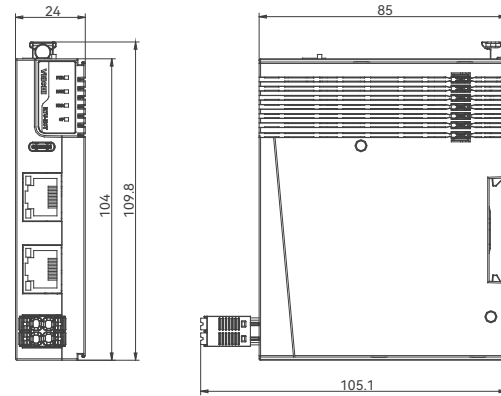


Installation Dimensions(mm)

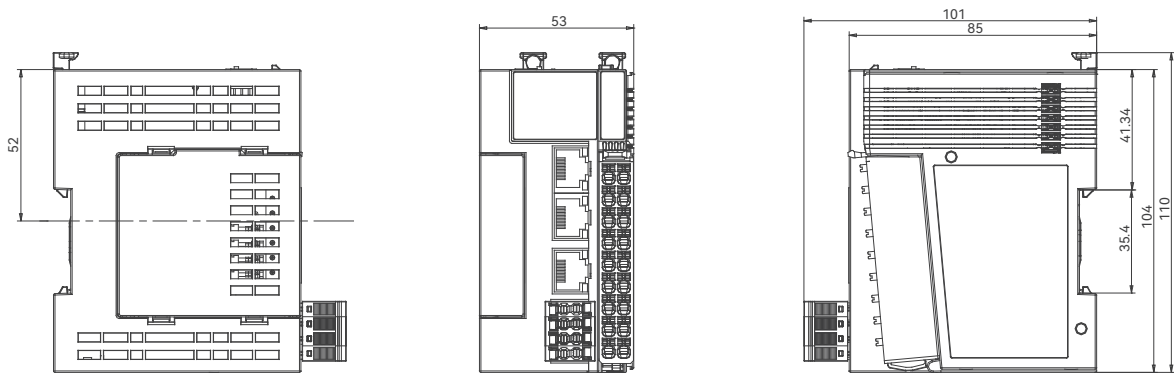
VH100-0808TN



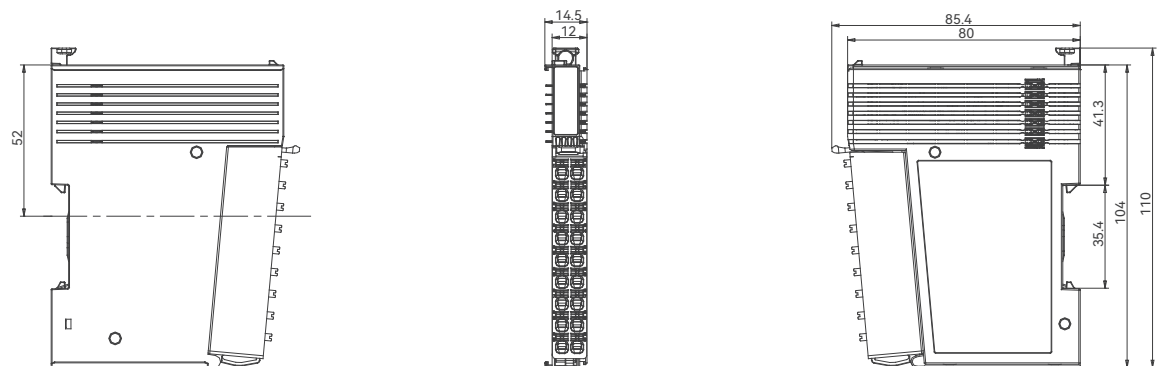
VH-RTU



VH300/500/600



VH Right Expansion



Research and Production

R&D and Technology Platform

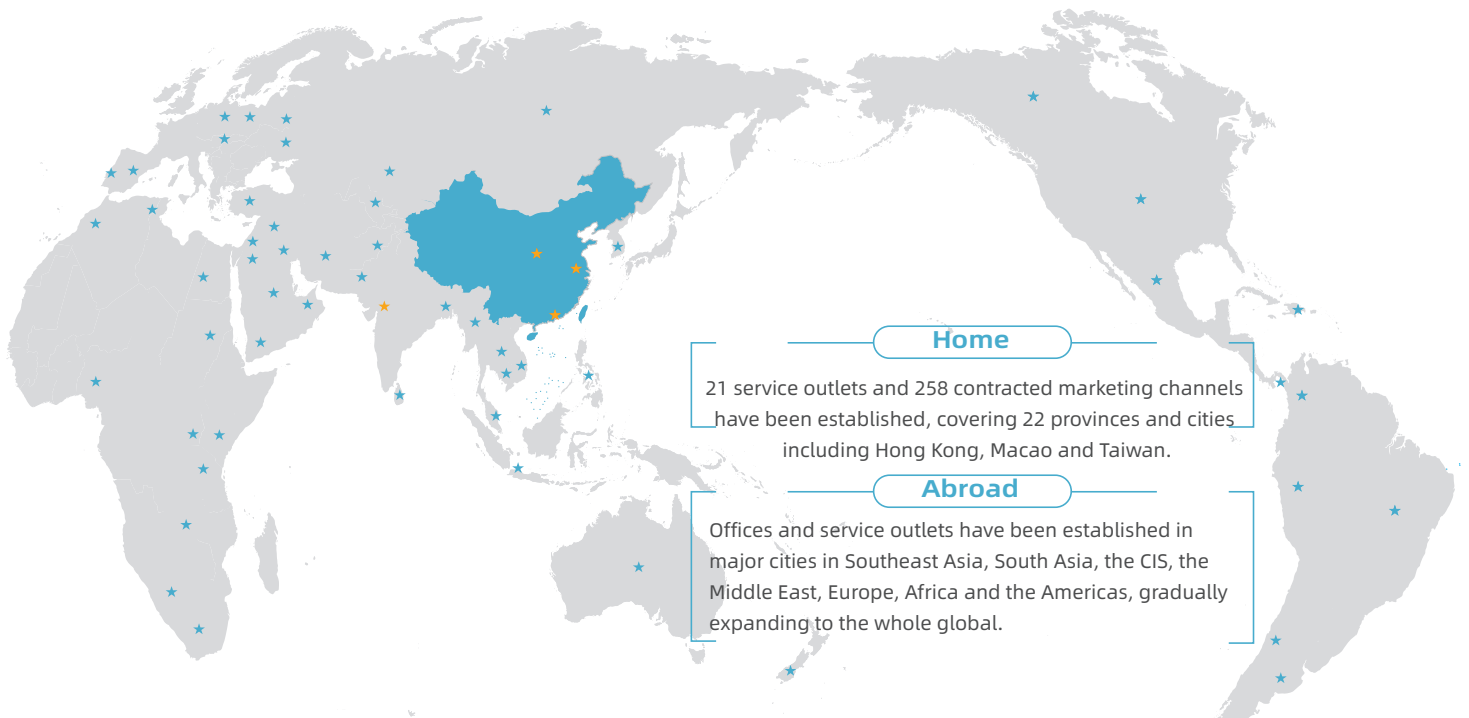
- Consolidating a dynamic force of top-tier professionals and technical experts in domestic industrial control, our R&D team represents 37.16% of our workforce, with 74.62% of our technical staff boasting bachelor's degrees or higher.
- Guided by philosophy of "Innovate with technology and strive for excellence," VEICHI is deeply customer-centric by providing stable and reliable products and technologies designed to the evolving needs of our clients.
- Investing 10% of our revenue into R&D, VEICHI has crafted advanced labs for EMC, safety, reliability, and performance testing to ensure product quality.
- In-depth cooperation with many famous universities and research institutions in China has been established and "Jiangsu Postdoctoral Innovation Practice Base" and "Jiangsu Postgraduate Workstation" are set up successively.

Intelligent Automation

- Digitally driven from inception to production, VEICHI boasts an annual capacity of 914,600 units with streamlined efficiency.
- 5 imported SMT placement lines, 5 automated coating lines, 4 DIP test lines, a robotic arm-equipped automated line, and 12 production lines are equipped with the latest intelligent manufacturing tools.
- All of the product checks are carried out automatically by the management mode of 3 (tri-inspection system)+ 1 (proportional inspection) during the whole process for standard performance.
- Three major production management system WMS, MES and ERP together ensure that the unique code of each product is traceable in the system to manage product quality.



Service and Support



01 Pre-sales
Technology promotion, site survey and energy efficiency assessment

02 In-sales
Customization, design consultation, installation and commissioning, and site training

03 Post-sales
Regular return visits, timely maintenance and repair and user training



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