

PLC automation has achieved significant industry recognition for delivering high performance,

LK Large Scale PLC



Medium and Large Applications of Industrial Automation

Rail transit, water treatment, tunnel, integrated pipeline, heating, water conservancy, oil & gas, electric power, production line, metallurgy, tunnel, energy, chemical, mining

LKS Safety PLC



Functional Safety for Factories and Infrastructure

Petrochemical, chemical, oil & gas, electric power, metallurgy, energy, power generation, gas plant, pharmaceutical, natural gas

LX High-Performance PLC



High-End Equipment and Complicated Production Line

Semiconductor, lithium battery, new energy, logistics, automotive, port

LE Compact PLC



Single Device Control

Water supply equipment, Heating Ventilation Air Conditioning (HVAC), packaging equipment, environmental protection equipment, building materials, environmental monitoring, printing machinery

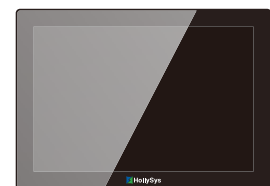
MC Motion Controller



Complicated Single Device Control

Bending machines, cross-cutting machines, multi-wire sawing machines, flying saws, folding machines, crack-chasing saws

HMI



High-Performance Control Panel

Multi-size touchscreens from 4.3 to 15.6 inches and well integrated with mainstream controllers, inverters, and servos

LK Large Scale PLC is designed for medium to large-scale control systems and high-performance control applications. It boasts single CPU and dual-rack redundant CPU design, ensuring fast operation and stable control. Drawing upon over 20 years of professional expertise, LK offers reliable, innovative factory automation, evolving for better reliability. With 10,000+ global installations, LK is rigorously validated for optimal performance.

- Field-to-system and channel-to-channel isolation
- Fault diagnosis, limit alarm, and fail-safe output
- MRAM non-volatile memory for power-loss data retention

- Operating temperature from -20°C to +70°C
- Storage temperature from -40°C to +80°C
- PCB with conformal coating
- Compliant with EMC standards (IEC61000-4/IEC61131-2)

- Less than 100 ms of CPU switchover time
- Less than 100 μ s of minimum task scheduling time
- Less than 200 ms of loop response time

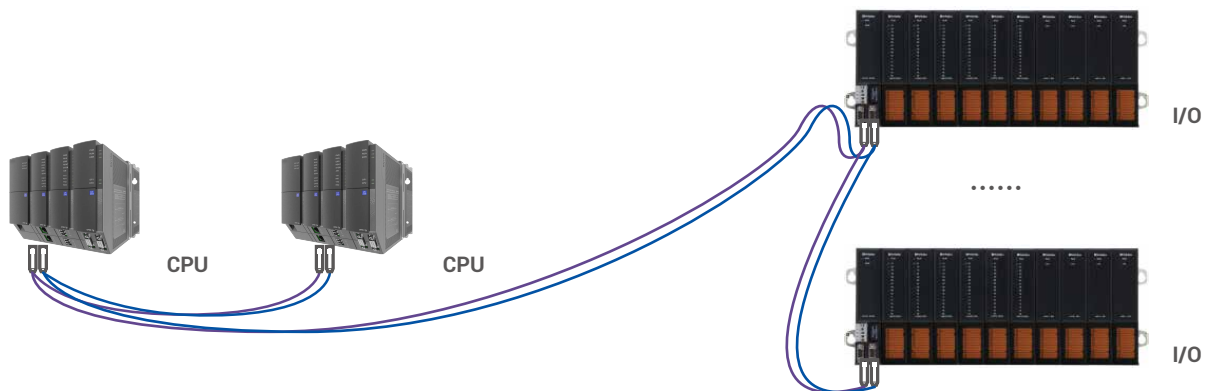
- Hot swap for all modules
- Foolproof design for module mounting



LK Large Scale PLC

Technical Data

Model		LK220	LK222	LK224
Controller clock speed		600 MHz	667 MHz	766 MHz
Instruction execution time	Bit operation	15 ns	10 ns	7 ns
	Fixed-point operation	15 ns	10 ns	7 ns
	Floating-point operation	25 ns	18 ns	12 ns
Memory	Integrated memory (program + data)	24 MB	32 MB	64 MB
	Power-loss retentive memory	512 KB MRAM (R area: 64 KB; M area: 4 KB)	512 KB MRAM (R area: 96 KB; M area: 6 KB)	512 KB MRAM (R area: 128 KB; M area: 8 KB)
Communication interface	Integrated Ethernet	2 × RJ45 Interface, 10/100M adaptive, dual-network-port redundancy; supporting Modbus TCP and HolliTCP protocols		
Communication protocols	Modbus TCP (max. master/slave connections)	16	32	64
	Powerlink (max. PL slaves)	128	256	256
	Profibus-DP (max. PL slaves)	124	124	124
	Communication modules	LK240 × 1, LK249 × 1, LK246 × 2, LK241 × 1	LK240 × 1, LK249 × 1, LK246 × 2, LK241 × 2	LK240 × 1, LK249 × 1, LK246 × 2, LK241 × 2
Configuration capacity	Input variable area (I)	32 KB max.	64 KB max.	128 KB max.
	Output variable area (Q)	32 KB max.	64 KB max.	128 KB max.
	Global variable area (N)	1 MB	4 MB	6 MB
	Free variable area (M)	1 MB	2 MB	4 MB
	Power-loss retentive area (R)	64 KB max.	96 KB max.	128 KB max.



*Dual-rack redundancy in CPU, power supply, and network

LK Large Scale PLC

Ordering Data

Model	Specifications
CPU module	
LK130	4-slot control backplane
LK132	6-slot control backplane
LK133	7-slot control backplane
LK220	600 MHz, 24 MB integrated storage zone, and redundancy
LK222	667 MHz, 32 MB integrated storage zone, and redundancy
LK224	766 MHz, 64 MB integrated storage zone, and redundancy
LK240	Redundant synchronization module, two optical fiber communication interfaces, LC interface type
LK241	Powerlink master station communication module
LK246	Ethernet communication processor module, two 10/100/1000 Mbit/s Ethernet ports
LK249	Profibus-DP master station communication module, 2-channel DB9 communication interface
LK921	DC power adapter module, input voltage: 12 to 30 V DC
LK922	Redundant DC power module, input voltage: 19.5 to 60 V DC
LKA102	LK220 battery power box module
LKA103	LK220 capacitor power box module
LKA104	Profibus-DP bus connector
LKA106	Synchronous fiber, 1 m
LK141	Empty module of the main control backplane
GACS-1312-20ID	Optical module, single-mode, 20 km transmission distance, hot-plug, used for the LK240 module
GACS-8512-02ID	Optical module, multi-mode, 2 km transmission distance, hot-plug, used for the LK240 module
Power module	
LK910	Power module, 24 V DC @ 5 A output
HPW2405G	85 to 264 V AC input, 24 V DC @ 5 A output
HPW2410G	85 to 264 V AC input, 24 V DC @ 10 A output
HPW2420G	85 to 264 V AC input, 24 V DC @ 20 A output
HPWR01G	Input: 22 to 60 V DC, 20 A; output vin-0.65 V, 20 A @ max.
Communication module	
LK255	Profibus-DP slave station communication module for access to third party master station
LK238	4-channel serial port communication module
LK239	Modbus RTU master/slave station communication module
Interface module	
LK231	Profibus-DP communication transfer module
LK232	Profibus-DP bus repeater module with relay function
LK233	Profibus-DP bus photoelectric transceiver
LK234	Ethernet interface module, used with LK220 series PLC
LK235	Powerlink interface module, used with LK220 series PLC
LK250	Profibus-DP communication interface expansion module, which can expand 10 Profibus-DP slave modules
LE5406	Profibus-DP to LE bus communication interface expansion module, used with LK220 series PLC

Digital I/O module	
LK610	16-channel digital input module, 24 V DC, sinking type
LK616	32-channel digital input module, 24 V DC, sinking type
LK710	16-channel digital output module, 10 to 30 V DC, transistor output, 0.5 A capacity
LK716	32-channel digital output module, 24 V DC, transistor output
LK720	8-channel normally open relay output module, 10 to 265 V AC / 5 to 125 V DC, relay output, 2 A @ max
Analog I/O module	
LK410	8-channel analog input module, voltage type, -10.25 V to 10.25 V / 0 to 10.25 V / 0 to 5.125 V
LK411	8-channel analog input module, current type, 0 to 20 mA / 4 to 20 mA
LK412	6-channel analog input module, voltage/current type, ± 10 -channel 0 to 5 V / 0 to 10 V / 0 to 20 mA / 4 to 20 mA, inter-channel isolation
LK430	6-channel analog input module, PT100/200/500/1000, Ni 100/120/200/500, Cu 10/50
LK432	8-channel isolated thermoresistive analog input module
LK441	8-channel analog input module, B/C/E/J/K/N/R/S/T thermocouple, -12 mV to 32 mV (78 mV), with cold end compensation
LK511	4-channel analog output module, current type, 0 to 20 mA / 4 to 20 mA, inter-channel isolation
LK512	8-channel analog output module, voltage/current type, 0 to 20 mA / 4 to 20 mA / 0 to 5 V / 0 to 10 V / 1 to 5 V / -5 to 5 V / -10 to 10 V
Special function module	
LK620	2-channel high-speed counting module up to 1 MHz
LK621	2-channel SSI absolute value coder module
LK622	6-channel high-accuracy frequency measurement module
LK630	16-channel SOE module with a resolution of 1 ms, used with LK210 series PLC
LK631	14-channel SOE module, event resolution 0.5 ms, time scale precision 1 ms, used with LK220 series PLC
I/O backplane	
LK117	Extension backplane, 11 slots, DB9 interface
LK118	Extension backplane, 5 slots, DB9 interface
POWERLINK switch	
SP100-2FP4T-SFP	Powerlink Ethernet switch, 2 SFP optical ports, 4 Ethernet electrical ports, ring network, star topology, dual 24 V power inputs, and guide rail installation
SP010-1FP1T-SFP	Powerlink industrial Ethernet optical-to-electrical converter, one SFP optical port, one Ethernet electrical port
SFP-FS-LC	Optical module, single-mode, 20 km transmission distance, hot-plug, used for SP100/SP010 modules
SFP-FM-LC	Optical module, multi-mode, 2 km transmission distance, hot-plug, used for SP100/SP010 modules
Accessories	
LKX1030	DIO prefabricated cable, 3 m, color ring
LKX1130	AIO prefabricated cable, 3 m, color ring
LKX1030L	DIO prefabricated cable, 3 m, number tube, tubular terminal
LKX1130L	AIO prefabricated cable, 3 m, number tube, tubular terminal
LKF003	Backplane anti-mixing pin rotating tool
LKC131	Empty slot module
LKC171	Terminal cover

LKS Safety PLC

Key Features

LKS Safety PLC is SIL2-certified by TÜV SÜD and tailored for complex safety applications that require high reliability, efficiency, and flexibility. It protects people, equipment, processes, and investments, giving customers confidence in their safety needs. Utilizing 1oo1D architecture, it is ideal for critical applications such as Emergency Shutdown Systems (ESD), Process Shutdown Systems (PSD), Burner Management Systems (BMS), Fire & Gas Systems (FGS), Emergency Trip Systems (ETS), and Gas Detection Systems (GDS).

Enhanced Safety

- 1oo1D architecture
- Software with de-compilation verification
- Compliant with SIL2 standards (IEC61508/IEC61511/EN50128/ EN50129/EN50126)

High Reliability

- 99.99% safety loop availability
- Over 90% of diagnosis coverage
- 100,000-hour MTBF

High Scalability

- 124 I/O slave stations / 900+ I/O points per control station
- Seamless integration with LK modules



LKS Safety PLC

Technical Data

Safety CPU Module LK220S	
Item	Specifications
Operation speed	
CPU dominant frequency	Dual-core, 667 MHz
Instruction execution speed	Typical value: 2.5 DMIPS/MHz
Memory	
Program storage	32 MB (16 MB for the system and 16 MB for users)
Memory	512 MB, 800 Mbit/s, 32-bit width
Power-loss retentive	512 KB
Expanding storage	SD card, up to 32 GB
Ethernet	
10/100M	2-channel, dual-network-port redundancy, Modbus TCP protocol supported
Real-time clock	
Data format	Year: month: day: hour: minute: second, BCD code
Clock accuracy	Not more than 1 minute/month @ 25°C
Backplane bus	
Communication speed	2-channel high-speed counting module up to 1 MHz
Load capacity	2.5 Gb/s
Hot swap	
Hot swap module	Support
System capacity	
I/O capacity	I/O capacity supported by the system: greater than 900 points
Configuration capacity	
Input variable area (I)	Maximum space: 128 KB
Input variable area (Q)	Maximum space: 128 KB
Global variable area (G)	Maximum space: 1 MB
Free variable area (M)	Maximum space: 1 MB
Power-loss retentive area (R)	Maximum space: 64 KB
Special register area (S)	16 KB
Power	
Power supply	Provided by backplane
Module (max.)	300 mA @ 24 V DC
Backup battery	Capacitor power supply
Redundancy	
Dual backplane redundancy	Support hot standby
Start time	
Duration from module power-on to user project start	≤ 60s
Physical characteristics	
Installation mode	Backplane slot
Module dimensions (W × H × D)	44.7 mm × 166 mm × 152 mm
Weight	382 g
Environmental conditions	
Operating temperature	0°C to 60°C
Storage temperature	-40°C to + 70°C
Relative humidity	5% to 95% non-condensing

LKS Safety PLC

Ordering Data

Model	Specifications
CPU module	
LK220S	Safety CPU module, 667 MHz, bit instruction 0.013 ms/K, program 32 MB, power-loss retentive: 512 KB
LK240S	Safety redundant synchronous communication module, 2-channel redundant optical fiber communication interface, interface type: LC
LK249S	Safety PROFIsafe master station communication module, dual DB9 connectors, dual redundant bus links, support for hot plugging
LK921S	Safety 24 V DC power module, input voltage 12 to 30 V DC, input terminals can be independently plugged.
LK130	4-slot control backplane
LKA103	LK220 capacitor power box module
LKA104	PROFIBUS-DP bus connector
LKA106	Synchronous fiber, 1 m
GACS-1312-20ID	Optical module, single-mode, 20 km transmission distance, hot-plug, used for LK240S
GACS-8512-02ID	Optical module, multi-mode, 2 km transmission distance, hot-plug, used for LK240S
Interface module	
LK232S	Safety PROFIsafe bus repeater module with terminal resistor
Digital I/O module	
LK610S	Safety 8-channel digital input module, non-polarity dry contact input, field voltage 20.4 V DC to 28.8 V DC
LK611S	Safety 8-channel digital input module, non-polarity dry contact input (with line fault detection function), field voltage 20.4 V DC to 28.8 V DC
LK630S	Safety 8-channel digital input module, supporting SOE event recording, non-polarity dry contact input, field voltage 20.4 V DC to 28.8 V DC
LK710S	Safety 8-channel digital output module with output voltage range: 20.4 V DC to 28.8 V DC
Analog I/O module	
LK411S	Safety 8-channel analog input module, 0 to 20 mA / 4 to 20 mA, supporting 2-wired and 4-wired instruments
I/O backplane	
LK117	Extension backplane, 11 slots, DB9 interface
LK118	Extension backplane, 5 slots, DB9 interface
Power module	
QS10.241	Safety power module, 220 V AC, 10 A, 24 V
YR2.DIODE	Redundant module, 24 V DC/10 A input, 20 A output
Accessories	
LKC132	I/O backplane empty module
LK141	Empty module of the main control backplane

LX High-Performance PLC

Key Features

LX high-performance PLC, the result of 10 years of R&D, stands out for its ultra-thin design, speed, and reliability. It meets rigorous standards for compactness, rapid response, and ISO 13849 functional safety. It is ideal for high-end applications in semiconductor manufacturing, lithium battery production, new energy, logistics, automotive, port operations, etc.

High Scalability

- Abundant communication protocols
- End-to-end EtherCAT
- I/O compatible with 3rd-party controllers and EtherCAT/PROFINET master station

Mini Footprint

- Card-type I/O with only 12 mm in width

High Performance

- Supporting up to 64-axis servo or inverter, and 30 slave stations
- Compliant with PLCopen standard for motion control
- Supporting C language for advanced applications

High Speed

- 3 ns to complete bit operation instructions
- 128 dio/ μ s to complete bus scanning
- 500 μ s of minimum task cycle



LX High-Performance PLC

Technical Data

LX-CU500 Controller		
Item		Specifications
Power supply		
Field power	Voltage range	24 V DC (19.2 V to 30 V)
	Anti-reverse connection	Support
	Redundancy input	Support
System power	Voltage range	24 V DC (19.2 V to 30 V)
	Anti-reverse connection	Support
Storage		
Input variable area (I)		256 KB
Output variable area (Q)		256 KB
Global variable area (G)		6 MB
Global variable area (M)		8 MB
Power-loss retentive area (R)		500 KB
Program storage (Users)		6 MB
SD expansion card		Expandable with a micro SD card, up to 32 GB
Program scanning and multi-tasking		
Multi-tasking		Supporting both single-task and multi-task configurations
Number of tasks		16
Task type		Supporting periodic, loop, state, event, and one-time task
Periodic task scope		1ms to 2000 ms, default is 20 ms
Motion control		
Servo task cycle		500 μs of the minimum task cycle
Motion control instruction		Multi-axis control, electronic gear, electronic cam, absolute positioning, relative positioning, synchronization, speed control, origin, jog interpolation
The maximum axis		64-axis servo or inverter
Motion control method		Supporting EtherCAT motion control and pulse control
Ethernet bus 1 (P0/P1 northbound network)		
Communication ports		2 ports (P1, P2)
Voltage level standard		IEEE 802.3
Communication rate (bps)		1000 Mbps
Communication protocol 1: ModbusTCP master/slave station protocol	Polling time: 10 ms	
	Connections: 32	
Communication protocol 2: TCP/IP free protocol	Data input and output areas size: 1 to 32 K	
	Connections: 16	
Communication protocol 3: EtherNet/IP protocol	Data input and output areas size: 502 B ×15	
	Connections: 15 (read while write)	
Communication protocol 4: hlink protocol	Data input and output areas size: 1 KB	
	Connections: 10	

Serial communication	
Interface quantity	1
Interface type	Pluggable
Voltage level standard	RS-485
Protocol type	ModbusRTU master/slave, free ports
Transmission mode and frame format	RTU
Supported function codes	01, 02, 03, 04, 05, 06, 0F, 10 (in hexadecimal)
Maximum number of supported slave stations	Connecting 32 Modbus slave stations
Cable impedance	120 Ω
Communication rate	Supporting 1200, 2400, 4800, 9600 (default), 19200, 38400, 57600, 115200 bps, configurable
Parity check	Odd, even, or no parity bit (configurable)
Trigger mode	Supporting trigger mode to write a function
Diagnostics function	Supporting diagnostic reporting (including diagnostics of the status of each slave station)
Isolation	Isolation between the field and the system
Real-time clock	
Data format	Year: month: day: hour: minute: second, BCD code
Clock accuracy	$\leq \pm 60$ s/month, supporting time synchronization
Power-loss retentive time	1 year (needs to be equipped with an RTC battery)
Others	
Power-loss retentive	Support
Time synchronization	Supporting NTP time synchronization
Log function	Minimum of 10,000 logs
Module protection level	IP20
Time from module startup to user program initiation	≤ 30 s
Environmental conditions	
Operating environment temperature	-20°C to 60°C
Operating environment relative humidity	5% to 95% non-condensing
Storage environment temperature	-40°C to 70°C
Storage environment relative humidity	5% to 95% non-condensing

LX High-Performance PLC

Ordering Data

Model	Specifications
CPU module	
LX-CU500	Ring network CPU module
Digital input module	
LX-DI002	16-channel PNP DI module (24 V DC)
LX-DI001	16-channel NPN DI module (24 V DC)
LX-DI005	8-channel DI module (5 V DC)
Digital output module	
LX-DO003	16-channel DO module
LX-DO005	8-channel DO module (5 V DC)
LX-DO004	4-channel relay DO module
Position interface module	
LX-ECI001	2-channel 5 V incremental encoder input module
LX-ECI002	2-channel 24 V incremental encoder input module
Pulse output module	
LX-PO001	2-channel pulse output module



LE Compact PLC

Key Features

LE compact PLC is tailored for small-scale applications, including single devices, small production lines, and integration with large-scale PLCs. Offering high performance and easy maintenance in a compact design, LE provides reliable, flexible and cost-effective solutions.

High Scalability

- Supporting functional expansion boards
- Supporting communication and I/O expansion
- Expansion of up to 20 I/O modules / 680 digital I/O or 162 analog I/O
- Supporting multi-PLC interconnection for data sharing

High Performance

- Up to 8-channel high-speed counters
 - Unidirectional: 200 kHz
 - Bidirectional: 400 kHz (4x frequency)

Easy to Use

- Removable terminals for avoiding misoperation
- Supporting USB memory card for program download



LE Compact PLC

Technical Data

Model		LE5107L	LE5118	LE5119
Product type		Economical	Standard	
On-board digital input/output		14 DI / 10 DO	24 DI / 16 DO	
Digital output type		Relay	Transistor	Relay
On-board analog input/output		0		
Number of expansion modules		4	20	
Function expansion board		Yes		
High speed counter	Single phase counter	2 channels, 5 KHz	8 channels, 200 KHz	
	Double phase quadruple frequency	1 channel, 20 KHz	8 channels, 200 KHz	
High speed counter range		-231 to 231-1		
High speed output		N/A	4 channels, 100 KHz	N/A
Pulse capture		2 channels, 200 μ s	8 channels, 10 μ s	
Fast external interruption		2 channels, 200 μ s	6 channels, 10 μ s	
Immediate output		N/A	16 channels	N/A
External memory		USB flash drive	TF card	
Program upload support		No	Yes	
Forced function support		No	Yes	
Real-time clock	Built-in clock	Yes		
	Clock accuracy	± 3 minutes/month		
Program memory		128 KB	256 KB	
Data memory		10496 bytes	64 KB	
Power-loss retentive memory		2 KB	8 KB	
Operation speed (bit operation instruction)		0.1 μ s		
Communications	Communication interface	Yes	1 $\times$ RS485, 1 $\times$ Ethernet	
	Communication protocol	Modbus master/slave station, free port protocol, multi-PLC interconnection (only for terminal connection)	Modbus master/slave station, free port protocol, multi-PLC interconnection (only for terminal connection), AT communication (for program uploading and downloading)	
Input power voltage		100 to 240 V AC	24 V DC	100 to 240 V AC
Output power voltage		N/A	24 V DC	
Dimension (W $\times$ H $\times$ D) mm		116 $\times$ 97 $\times$ 90	147 $\times$ 97 $\times$ 90	

LE Compact PLC

Ordering Data

Model	Specifications
CPU module	
LE5107L	24-channel CPU module, 220 V AC power supply, 24 I/O, DI 14 × 24 V DC, DO 10 × relay output, economical
LE5118	40-channel CPU module, 24 V DC power supply, 40 I/O, DI 24 × 24 V DC, DO 16 × transistor output
LE5119	40-channel CPU module, 220 V AV power supply, 40 I/O, DI 24 × 24 V DC, DO 16 × relay output
Digital I/O module	
LE5210	8-channel digital input module, DI 8 × DC 24 V input
LE5211	16-channel digital input module, DI 16 × DC 24 V input
LE5212	32-channel digital input module, DI 32 × DC 24 V input
LE5220	8-channel digital output module, DO 8 × DC 24 V transistor output
LE5221	8-channel digital output module, DO 8 × relay output
LE5223	16-channel digital output module, DO 16 × relay output
LE5224	32-channel digital output module, DO 32 × DC 24 V transistor output
Communication module	
LE5400	Dual serial port (RS485/RS232) communication module
LE5401	Profibus-DP slave communication module
LE5403	Ethernet communication module
LE5405	Ethernet to LE Bus Interface Module. It is used for expanding LE IO modules for the MC series controllers, and it integrated with 1 Ethernet port
LE5406	Profibus-DP to LE bus gateway module
Analog I/O module	
LE5310	4-channel analog input, 4 to 20 mA / 0 to 20 mA / 0 to 10 V
LE5311	8-channel analog input, 4 to 20 mA / 0 to 20 mA / 0 to 10 V
LE5320	2-channel analog output, 4 to 20 mA / 0 to 20 mA / 0 to 10 V
LE5321	4-channel analog output, 4 to 20 mA / 0 to 20 mA / 0 to 10 V
LE5330	4-channel analog input, 4 to 20 mA / 0 to 20 mA / 0 to 10 V, 2-channel analog output, 4 to 20 mA / 0 to 20 mA / 0 to 10 V
LE5340	4-channel TC input, J, K, E, N, T, R, S, B-type TC / ±80 mV
LE5341	4-channel RTD input, Cu50, Pt100 (385), Pt100 (3916)
LE5341T	4-channel RTD input, Pt1000 (385), Pt1000 (3916)
LE5342	8-channel thermistor input
Function expansion board	
LE5600	RS232 communication expansion board
LE5601	RS485 communication expansion board
LE5610	4-channel digital input function expansion board
LE5620	4-channel transistor digital output function expansion board
LE5611	2-channel analog input expansion board, 4 to 20 mA / 0 to 20 mA / 0 to 10 V
LE5621	1-channel analog output expansion board, 4 to 20 mA / 0 to 20 mA / 0 to 10 V
Accessories	
LEX5810	485 round connector-to-USB download cable, 3 m
LEX5812	Extension cable, 2 m
LEX5813	485 round connector to two-core 485 cable, 3 m
LEX5817	Communication cable between LE and HT8001 (round connector to DB9), 3 m
LEA5820	Memory card for backup / restore procedures
LE5405	MCTOLE-IO gateway communication module
LEX5820	MC200X expansion LE module cable

MC Motion Controller

Key Features

MC motion controller is designed for complex single-device motion control applications, such as CNC machines, industrial robots, semiconductors, and engineering machinery. MC delivers high-speed, high-precision multi-axis control, supporting up to 64 axes in one system. It also features extensive, user-friendly algorithm libraries for versatile performance.

High Compatibility

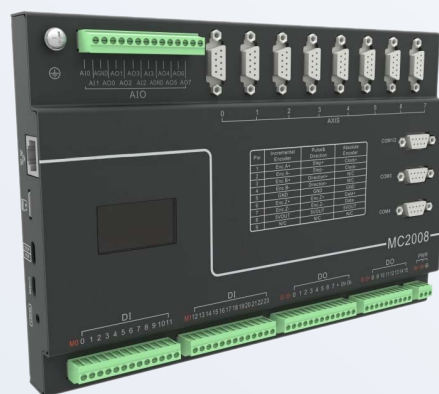
- Supporting EtherCAT MC1002E and RTEX MC1002R
- Compatible with servo drivers from multiple manufacturers
- Seamless integration with LE

High Performance

- 250 μ s servo control cycle
- Up to 64-axis control per system
- 64-level look-ahead buffer

Multiple Control Modes

- Open/closed-loop pulse servo control
- Open/closed-loop analog servo control
- Open/closed-loop bus servo control



MC Motion Controller

Technical and Ordering Data

Function	Model	MC2004L	MC2004	MC2008L	MC2008	MC1002R	MC1002E
Axes	Maximum number of axes	64	64	64	64	64	64
	Number of directly connected axes	4	4	8	8	2	2
	Number of bus axes	N/A	N/A	N/A	N/A	32	64
Performance	Processor	ARM cortex-A9 dual core 667 MHz		ARM Cortex-A9 dual core 667 MHz			
	Memory	256 MB DDR3 SDRAM		256 MB DDR3 SDRAM			
	Servo cycle	0.25 to 4 ms		0.25 to 4 ms			
	Position calculation precision	64-bit double-precision floating point		64-bit double-precision floating point			
	Flash	16 MB		16 MB			
	SD card	32 GB, FAT32		32 GB, FAT32			
	Real-time clock	Yes		Yes			
	Power-loss retentive area	8 KB	8 KB	8 KB	8 KB	4 KB	4 KB
Driver interface	Position closed loop Analog output	N/A	4	None	8	2	2
	Position closed loop Encoder input	4	4	8	8	2	2
	Position open loop	4	4	8	8	2	2
	Pulse output frequency	2 M	2 M	2 M	2 M	2 M	2 M
	Pulse + direction output	Yes	Yes	Yes	Yes	Yes	Yes
	AB phase quadruple frequency output	Yes	Yes	Yes	Yes	Yes	Yes
	CW/CCW input	Yes	Yes	Yes	Yes	Yes	Yes
	Panasonic RTEX bus	N/A	N/A	N/A	N/A	Yes	N/A
	EtherCAT bus	N/A	N/A	N/A	N/A	N/A	Yes
Communication interface	Ethernet interface	10/100/1000 Mbit/s auto negotiation		10/100/1000 Mbit/s auto negotiation			
	Modbus-TCP/IP master/slave	Yes	Yes	Yes	Yes	Yes	Yes
	RS232	1	1	1	1	1	1
	RS422	1	1	1	1	0	0
	RS485	2	2	2	2	1	1
	MODBUS-RTU master/slave	Yes	Yes	Yes	Yes	Yes	Yes
	CAN2.0B, CAN open	Yes	Yes	Yes	Yes	Yes	Yes
Ontology I/O	Fast DI (24 V DC)	8 (200 KHz)	8 (200 KHz)	8 (200 KHz)	8 (200 KHz)	12 (10 KHz)	12 (10 KHz)
	Slow DI (24 V DC)	16 (1 KHz)	16 (1 KHz)	16 (1 KHz)	16 (1 KHz)	N/A	N/A
	Fast DO (24 V DC)	16 (200 KHz)	16 (200 KHz)	16 (200 KHz)	16 (200 KHz)	8 (10 KHz)	8 (10 KHz)
	Slow DO (24 V DC)	0	0	0	0	0	0
	AI 0V-10V	N/A	2	N/A	4	2	2
	AO -10V-10V	N/A	4	N/A	8	2	2
	High speed capture channel	8	8	8	8	2	2
	High speed output channel	4	4	4	4	1	1
	High speed sampling channel	4	4	4	4	1	1
	PWM	2	2	2	2	2	2
Software	AutoThink programming software	IEC61131-3 (LD/S17SFC/CFC)		IEC61131-3 (LD/S17SFC/CFC)			
	Third-party software connection	Yes		Yes			
Physical characteristics	Dimensions (mm) Width × Height × Depth	246.0 × 164.4 × 43.2		246.0 × 164.4 × 43.2		156.0 × 154.4 × 52.0	186.0 × 154.4 × 52.0
	Weight	1.6 kg	1.6 kg	1.6 kg	1.6 kg	1.0 kg	1.0 kg
	Installation mode	Guide rails or supports		Guide rails or supports			
	Operating temperature range	0 to 60°C		0 to 60°C			
Power supply	Rated operating voltage	24 V DC		24 V DC			
	Output load	300 mA @ 5 V DC		300 mA @ 5 V DC			
Certification	CE certification	Yes		Yes			