CIMON PLC CATALOGUE



CIMON PLC

PROGRAMMABLE LOGIC CONTROLLER



PROGRAMMABLE LOGIC CONTROLLER

Programmable logic controller (PLC) is a general-purpose control device that automates processes by controlling machinery such as assembly lines. PLC operates based on user-defined programs which includes a variety of functions for sequence, motion, and process control.

CIMON PLC series provides innovative solutions not only for general automation fields but also for enterprise information integration. CIMON will meet your needs by delivering the highest productivity and performance.

- 03 Product Lineup
- 07 CPU XP Redundancy
- 11 CPU XP
- 17 **CPU CP**
- 25 **Power Module**
- 27 Additional Redundancy Module
- 30 Digital I/O Module
- 33 Analog I/O Module
- 38 Thermometer Module
- 41 Special Module
- 47 Communication Module
- 53 Expansion Module
- 54 **Base**
- 55 Remote I/O (CIMON-NET)
- 57 Accessory
- 58 Dimensions
- 61 General Specification
- 62 CIMON-PLC Lineup
- 65 CIMON-PLC Programming S/W (CICON)



CINON





PLC PERFORMANCE

CIMON PLC can access various devices such as sensors, controllers, and motors to control the industrial process, allowing you to enhance your manufacturing operations.





Extensive Lineup

Covers a wide range of applications from a simple device control to large scale factory operations

H∎H

Redundancy System

Provides high reliability of control with network redundancy

Easy Expansion

Allows the system to be easily expanded via Ethernet ports

0



0 **High Precision Positioning**

Precise motor position control with EtherCAT communication



Product Line-up

Program Capacity(Steps) 128K Large-scale system 64K 32K Medium-scale system CM3 Series 16K 8K Small-scale PLC-S system 4K 128 384 1024

· Supports EtherCAT positioning, Data Logger (including 'Real-time data logging' function) / OPC UA Server module.

- Supports Ethernet and Serial modules including Ethernet TCP/UDP and RS232C/RS485 serial interfaces.
- · Compatible I/O modules between the CP and XP series. Supports high-speed expansion system.
- · Variety of special modules in the CM1 series supported (positioning, load cell, thermistor, etc)
- Embedded Auto-Tuning PID in the CM1 / CM3 series
- · Allows open network configuration in the CM1 series (Fieldbus / RIO Series)



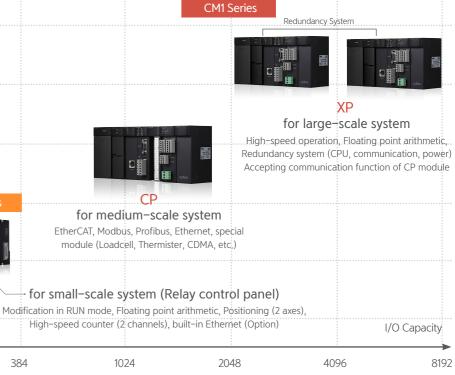
PLC Module Type: XP Series



PLC Module Type: CP series Provides extensive network solutions enabling

All-in-One Compact PLC: PLC-S series Compact PLC with high performance CPU which is suitable for all industrial sites * Please refer to PLC-S catalog for more information





Contains high speed operation, floating point arithmetic, and redundancy system with large memory capacity for large scale systems

medium scale system operations

PLC PERFORMANCE

Optimized for Industry 4.0, CIMON PLC offers powerful durability even in harsh environments of factories and facilities, ensuring stable operations in large scale processes.



CICON Software

• CICON is an interactive software to simply and easily create ladder programs.



Variety of network solutions supported

• The protocol program can be used to communicate according to the protocols of various control devices.



High-Speed MPU

• High-speed MPU enhances high-speed processes.

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Embedded Flash Memory

BASE Expansion

simple base extension.

 With built-in flash memory, RAM/ROM operation mode can be selected and used.

The extension function using Ethernet allows

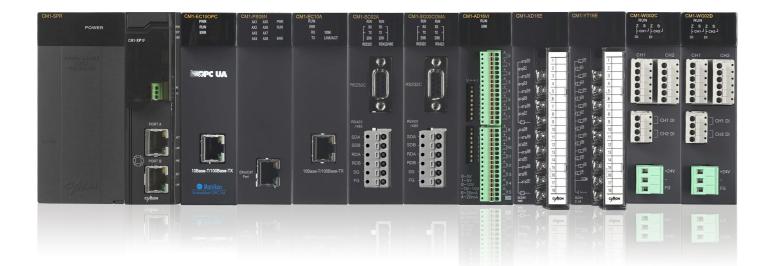


PLC Series Compatibility • XP, CP, and PLC–S can all be programmed using CICON software.

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Redundancy System

- · CPU module, power module, base, and communication redundancies available
- \cdot Redundancy configuration possible through separated base structure
- \cdot Backup CPU becomes active automatically when currently active CPU fails due to an error
- \cdot Takes less than 50ms to switch to the backup CPU
- \cdot Redundancy network can be built up with the host computer



CPU PERFORMANCE

XP Series

Model	Scan program	I/O	Built-in Serial	Built-in Ethernet	F/W Upgrade	SD Card	Ring Expansion
*CM1-XP1S		0 10 2	Y	Y	Y	Y	Y
*CM1-XP1F		8,192	Y	Y	Y	Y	Y
*CM1-XP2F		4,096	Y	Y	Y	Y	Y
*CM1-XP3F		2,048	Y	Y	Y	Y	Y
*CM1-XP1E	128k	8,192	Y	Ν	Y	Ν	N
*CM1-XP2E		4,096	Y	Ν	Y	Ν	N
*CM1-XP3E		2,048	Y	Ν	Y	Ν	N
CM1-XP1R		0.100	N	Ν	N	Ν	N
CM1-XP1A		8,192	N	Ν	N	Ν	N
CM1-XP2A	6.414	4,096	N	Ν	N	Ν	N
CM1-XP3A	- 64k	2,048	N	Ν	Ν	Ν	Ν

 $^{*}\mbox{USB}$ Loader, RTC, BASE extension supported in the entire model

*Line redundancy supported in CM1–XP1R *Floating point arithmetic supported

CP Series

Model	Scan Program	I/O	Built-in Serial	USB Loader	Expansion	ROM PACK
*CM1-CP3E	64K	1,536	RS-232	Y	Y	N
CM1-CP3A			N	Ν	Y	N
CM1-CP3B	2214		N	N	Y	N
CM1-CP3P	- 32K	1,024	N	N	Y	Y
CM1-CP3U	-		N	Y	Y	N
*CM1-CP4E			RS-232	Y	Ν	N
*CM1-CP4F			RS-232,RS-485	Y	Ν	N
CM1-CP4A	-		N	Ν	Ν	N
CM1-CP4B	16K	384	N	Ν	Ν	N
CM1-CP4C				N	Ν	N
CM1-CP4D			RS-485	Ν	Ν	N
CM1-CP4U				Y	Ν	N

*RTC not supported in CP3A, CP4A

*Floating point arithmetic not supported

*Ring Extension not supported in CP series

XPnF/G CPU provides newly added user-friendly features.

* New product

* New product

CPU XP REDUNDANCY (NEW MODEL)

Specification



lte	em	CM1-XP1S
Program	n Control	Repetitive operation, Stored Program (ROM mode), Periodic operation
Method for Controlling I/O		Indirect method, Direct method by instruction, Scan synchronous batch processing system (I/O refresh)
Program	Language	LD(Ladder Diagram), IL(Instruction List), SFC(Sequential Function Chart), FB (Function Block), FB Extension
Number of	Instruction	Basic Instruction : 60 , Application instruction : 480
	LD	0.028µs/step
Data Processing	Floating Point Arithmetic	+, -, x, / : 0.4µs / Instruction
Program	Memory	7M Byte(Including Upload, Parameter, System)
Number of P	rogram Block	Max 128, up to 65,530 STEPs per block (PID)
Numbe	er of I/O	8,192 Points (Max 12,288 Points)
Number of	I/O Device	Input : 131,072 points, output : 131,072 points
	LD	Scan, Subroutine, Initialize (COLD), Initialize (HOT), Periodic interruption
Supporting	Special Configuration	Initializing special card, PID control, Thermistor setting, Loadcell setting, IO Input module filter setting
Program	Communication	User protocol(Serial), User protocol(Ethernet), MODBUS TCP/ RTU Master, Ethernet High-speed link, CIMON-NET Master / Slave, DNP3, Public network IP setting, Fieldbus, OPC UA Server
	SFC	SFC Program
Periodic Interruption		Maximum 15, cycle setting (10~60,000msec, Unit :10ms), priority setting(0~14)
Base Ex	pansion	Maximum 16, Ring structure redundancy
Max. D	istance	S TYPE (Electricity 100M)
Redur	ndancy	Supported
RUN	mode	LOCAL / Remote (RUN, STOP, PAUSE)
Resta	arting	Cold, Hot Restart
Self-Di	agnosis	Monitoring delay of processing, problems of memory, IO, battery, power error
	ation Against Failure	K device and conservation (Latch) in M, L, T, C, S, D device
W	DT	Maximum 5000msec (Unit: 10msec)
Tir	ner	On Delay, Off Delay, Addition, Monostable, Retriggerable Cycle: Either 10 or 100msec TC(Current value)/TS(Setting value)
Counter		UP, DOWN, UP/DOWN, RING COUNTER, CC(Current value)/CS(Setting value) No limitation on number of points Count range : -32,768 ~ +32,767
P	ID	32 Channels, Auto-Tuning
	USB	USB 2.0 Mini-B : For Loader Protocol
Communication Channels	Serial	RS-232C (Maximum 115,200bps) : CICON Loader, CIMON-HMI, MODBUS RTU Slave
		For expanded communication :10/100Base -T/TX , -FX

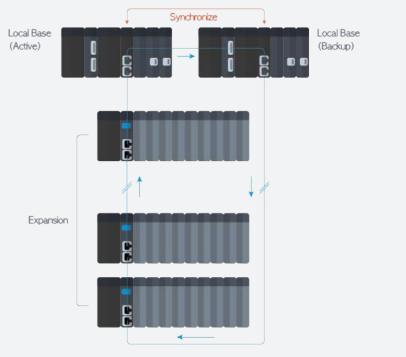


ltem	
Event Log	
Power	
Weight(g)	
Floating Point Arithmetic	

Capacity

Item		CM1-XP1S
Event Log		Maximum 100 (Power, Mode, Error)
Pov	wer	5Vdc , 220mA
Weig	ht(g)	138g
Floating Point Arithmetic		Supporting instructions for floating point arithmetic
Capacity of S	ican Program	128K Step
	Х	8,192
	Y	8,192
	М	16,000
	L	16,000
	K	16,000
	F	2,048
Device Memory	Т	4,096 (Select between 10ms and 100ms)
riemory	С	4,096
	S	100Card * 100Step
	D	32,000 Word
	Z	1,024 Word
	R	16 Word
	Q	512 Word

(Active)



Expansion



CPU XP REDUNDANCY



Redundancy

lte	em	CM1-XP1R	
Program	n Control	Repetitive operation, Stored Program (ROM mode)	
Method for Controlling I/O		Indirect method, Direct method by instruction, Scan synchronous batch processing system (I/O refresh)	
Program	Language	LD(Ladder Diagram), IL(Instruction List), SFC(Sequential Function Chart), FB (Function Block), FB Extension	
Number of	Instruction	Basic Instruction : 60 , Application instruction : 480	
	LD	0.028µs/step	
Data Processing	Floating Point Arithmetic	+, -, x, / : 0.4µs / Instruction	
Program	Memory	7M Byte (Including Upload, Parameter, System)	
Number of P	rogram Block	Max 128, up to 65,530 STEPs per block (PID)	
Numbe	r of I/O	8,192 Points (Max 12,288 Points)	
Number of	I/O Device	Input : 131,072 points, output : 131,072 points	
	LD	Scan, Subroutine, Initialize (COLD), Initialize (HOT), Periodic interruption	
Supporting Program	Special Configuration	Initializing special card, PID control, Thermistor setting, Loadcell setting, IO Input module filter setting	
riogram	Communication	User protocol(Serial), User protocol(Ethernet), MODBUS TCP/ RTU Master, Ethernet High-speed link, CIMON-NET Master / Slave, DNP3, Public network IP setting, Fieldbus	
Periodic Interruption		Maximum 15, cycle setting (10~60,000msec, Unit :10ms), priority setting(0~14)	
Base Ex	pansion	Maximum 16 (10Base – T)	
Max. D	istance	Electricity 100M	
Redur	idancy	Supported	
RUN	mode	LOCAL / Remote (RUN, STOP, PAUSE)	
Resta	arting	Cold, Hot Restart	
Self-Di	agnosis	Monitoring delay of processing, problems of memory, IO, battery, power error	
	ation Against Failure	K device and conservation (Latch) in M, L, T, C, S, D device	
W	DT	Maximum 5000msec (Unit: 10msec)	
Timer		On Delay, Off Delay, Addition, Monostable, Retriggerable Cycle: Either 10 or 100msec TC(Current value)/TS(Setting value)	
Counter		UP, DOWN, UP/DOWN, RING COUNTER, CC(Current value)/ CS(Setting value) No limitation on number of points Count range : -32,768 ~ +32,767	
Ρ	ID	32 Channels, Auto-Tuning	
Company i i'	USB	USB 2.0 B Type : For Loader Protocol	
Communication Channels	Serial	RS–232C (Maximum 38400bps) : CICON Loader / Connection type: RJ11	

ltem	
Event Log	
Power	
Weight(g)	
Floating Poin	t

Capacity

ltem		CM1-XP1R
Event Log		Maximum 100 (Power, Mode, Error)
Pov	wer	5Vdc, 315mA
Weig	ht(g)	157g
Floatin Arith	g Point metic	Supporting instructions for floating point arithmetic
Capacity of S	ican Program	128K Step
	Х	8,192
	Y	8,192
	М	16,000
	L	16,000
	K	16,000
Device	F	2,048
Memory	Т	4,096 (Select between 10ms and 100ms)
	С	4,096
	S	100Card * 100Step
	D	32,000 Word
	Z	1,024 Word
	R	16 Word

• Features

Built-in functions

- memory location.

Self-diagnosis functions

• Memory error – if an error occurs in the CPU flash memory or in a card, error is displayed in the F device memory location.

• Power - if the voltage supplied to the power supply is lower than the required level, the power error will be detected and malfunction preventative measures will be automatically executed.

PID Control – PID operation can be executed without an additional PID module.

 \cdot RTC – Reads the time from the RTC module and stores the value at the F device

 \cdot I/O Reservation – Detects whether the correct card is installed in the designated slot.

Additionally, when expanding or exchanging parts, reservation to writing a program can be made without making changes to the I/O.

 \cdot Modification of program during RUN mode – program can be modified while PLC is in the RUN mode.

 Monitoring processing delay – processing delay caused by user program errors can be monitored.

 Module removal check – checks if the module was removed from the base or mounted incompletely on the base.

• Battery – F0034 will be ON when the battery needs to be replaced.

CPU XP (NEW MODEL)

General

Specification



ltem		CM1-XP1F	CM1-XP2F	CM1-XP3F
Program	n Control	Repetitive oper	ation, Stored Prograr Periodic operation	n (ROM mode),
Method for Controlling I/O			d, Direct method by ir atch processing syste	,
Program Language			am), IL(Instruction List t), FB (Function Block)	
Number of Instruction		Basic Instructio	n : 60 , Application ir	nstruction : 480
	LD		0.028µs/step	
Data Processing	Floating Point '+, -, x, / : 0.4µs / Instruction Arithmetic			ction
Program	Memory	7M Byte(Incl	uding Upload, Param	eter, System)
Number of P	rogram Block	Max 128, up	to 65,530 STEPs per	block (PID)
Numbe	r of I/O	8,192	4,092	2,048
Number of	I/O Device	Input : 131,0	72 points, output : 13	1,072 points
	LD		ne, Initialize (COLD), Periodic interruption	
Supporting	Special Configuration	J J I	l card, PID control, Th ing, IO Input module	U ,
Program	Communication	User protocol(Serial), User protocol(Ethernet), MODBUS TCP, RTU Master, Ethernet High–speed link, CIMON–NET Master / Slave, DNP3, Public network IP setting, Fieldbus, OPC UA Serv		
	SFC		SFC Program	
Periodic Interruption		Maximum 15, cycle setting (10~60,000msec, Unit :10ms), priority setting(0~14)		
Base Ex	pansion	Max	kimum 16, Ring Topol	ogy
Max. D	istance	Elect	tricity (100m), Optic (2	2km)
Redun	idancy	-		
RUN I	mode	LOCAL /	CAL / Remote (RUN, STOP, PAUSE)	
Resta	arting		Cold, Hot Restart	
Self-Di	agnosis	Monitoring delay of	of processing, proble battery, power error	ms of memory, IO,
	ation Against Failure	K device and conse	ervation (Latch) in M,	L, T, C, S, D device
W	DT	Maximu	ım 5000msec (Unit: 1	Omsec)
Tin	ner		ay, Addition, Monostal Omsec TC(Current val	
Counter			WN, RING COUNTER, CS(Setting value) per of points Count rang	
PID		32	Channels, Auto-Tuni	ng
	USB	USB 2.0	Mini-B : For Loader I	Protocol
Communication Channels	Serial	RS–232C (Maximum	115,200bps):CICON MODBUS RTU Slave	Loader, CIMON-HMI
	Ethernet	Built-in Ethernet: CIC	Expanded / Built-in Ethernet :10/100Base -T/TX , -FX Built-in Ethernet: CICON Loader, CIMON-HMI, Modbus TCP S *Built-in Ethernet service available when expansion is not ir	



ltem		CM1-XP1F	CM1-XP2F	CM1-XP3F		
Event Log		Maximum 100 (Power, Mode, Error)				
Power		5Vdc, 220mA				
Weig	ght(g)		138g			
Floating Point Arithmetic		Supporting instructions for floating point arithmetic				
Capacity of S	Scan Program		128K Step			
	Х	8,192	4,096	2,048		
	Y	8,192	4,096	2,048		
	М	16,000				
	L	16,000				
	K	16,000				
	F	2,048				
Device Memory	Т	4,096 (Select between 10ms and 100ms)				
. letter y	С		4,096			
	S	100Card * 100Step				
	D		32,000 Word			
	Z		2,048 Word			
	R		16 Word			
	Q		512 Word			

Item		CM1-XP1F	CM1-XP2F	CM1-XP3F			
vent Log		Maximum 100 (Power, Mode, Error)					
Ροι	ver		5Vdc, 220mA				
/eight(g)			138g				
ating Point rithmetic		Supporting instructions for floating point arithmetic					
of S	can Program		128K Step				
	Х	8,192	4,096	2,048			
	Y	8,192	4,096	2,048			
	М	16,000					
	L	16,000					
	К	16,000					
	F		2,048				
/	Т	4,096 (Se	4,096 (Select between 10ms and 100ms)				
y	С	4,096					
	S	100Card * 100Step					
	D		32,000 Word				
	Z		2,048 Word				
	R	16 Word					
	Q	512 Word					

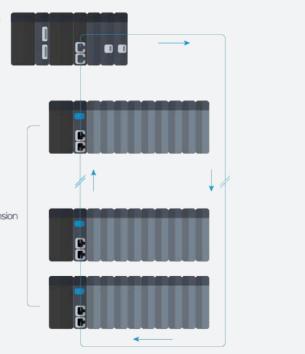
Ring Topology System

Local Base

Expansion







CPU XP (NEW MODEL)



General

lte	em	CM1-XP1E	CM1-XP2E	CM1-XP3E
Program Control		Repetitive operation, Stored Program (ROM mode), Periodic operation		
Method for Controlling I/O		Indirect method, Direct method by instruction, Scan synchronous batch processing system (I/O refresh)		
Program I	anguage		am), IL(Instruction List t), FB (Function Block	
Number of	Instruction	Basic Instructio	n : 60 , Application ir	nstruction : 480
	LD	0.028µs/step		
Data Processing	Floating Point Arithmetic	'+,·	-, x, / : 0.4µs / Instruc	ction
Program	Memory	7M Byte(Incl	uding Upload, Param	eter, System)
Number of P	rogram Block	Max 128, up	to 65,530 STEPs per	block (PID)
Numbe	r of I/O	8,192	4,092	2,048
Number of	I/O Device	Input : 131,0	72 points, output : 13	31,072 points
	LD	Scan, Subrouti	ne, Initialize (COLD), Periodic interruption	
Supporting	Special Configuration	Initializing special card, PID control, Thermistor setting, Loadcell setting, IO Input module filter setting		
Program	Communication	User protocol(Serial), User protocol(Ethernet), MODBUS TCP/ RTU Master, Ethernet High-speed link, CIMON-NET Master / Slave, DNP3, Public network IP setting, Fieldbus, OPC UA Serve		
	SFC	SFC Program		
Periodic Interruption		Maximum 15, cycle setting (10~60,000msec, Unit :10ms), priority setting(0~14)		
Base Ex	pansion	Maxin	num 16 (10/100 Base -	-T/TX)
Max. D	istance	Electricity (100m)		
Redun	idancy	-		
RUN I	mode	LOCAL / Remote (RUN, STOP, PAUSE)		, PAUSE)
Resta	arting		Cold, Hot Restart	
Self-Di	agnosis	Monitoring delay of processing, problems of memory, IO battery, power error		ms of memory, IO,
	ation Against Failure	K device and cons	ervation (Latch) in M,	L, T, C, S, D device
W	DT	Maximu	um 5000msec (Unit: 1	l0msec)
Tin	ner	On Delay, Off Delay, Addition, Monostable, Retriggerable Cycle: Either 10 or 100msec TC(Current value)/TS(Setting value		
Counter		UP, DOWN, UP/DOWN, RING COUNTER, CC(Current value)/CS(Setting value) No limitation on number of points Count range : -32,768 ~ +32,767		
PI	D	32	Channels, Auto-Tuni	ing
ommunication	USB	USB 2.0 Mini-B : For Loader Protocol		
Communication Channels Serial		RS–232C (Maximum 115,200bps) : CICON Loader, CIMON–HMI MODBUS RTU Slave		

lte	em	CM1-XP1E	CM1-XP2E	CM1-XP3E
Event Log		Power, Mode, Error		
Po	wer		5Vdc, 220mA	
Weig	ght(g)		138g	
	ng Point Imetic	Supporting instructions for floating point arithmetic		
Capacity of S	Scan Program		128K Step	
	Х	8,192	4,096	2,048
	Y	8,192	4,096	2,048
	М	16,000		
	L	16,000		
	K	16,000		
	F	2,048		
Device Memory	Т	4,096 (Select between 10ms and 100ms)		d 100ms)
riemory	С	4,096		
	S	100Card * 100Step		
	D		32,000 Word	
	Z	2,048 Word		
	R		16 Word	
	Q		512 Word	

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CPU XP



General

ltem		CM1-XP1A	CM1-XP2A	CM1-XP3A
Program Control		Repetitive operation, Stored Program (ROM mode), Periodic operation		
Method for Controlling I/O		Indirect method, Direct method by instruction, Scan synchronous batch processing system (I/O refresh)		
Program	Language	LD(Ladder Diagram), IL(Instruction List), FB (Function Block), FB Extension		
Number of	f Instruction	Basic Instruction : 60 , Application instruction : 480		
	LD		0.028µs/step	
Data Processing	Floating Point Arithmetic	' +, -, x, / : 0.4µs / Instruction		tion
Program	Memory	7M Byte(Incl	uding Upload, Parame	eter, System)
Number of P	Program Block	Max 128, up	to 65,530 STEPs per	block (PID)
Numbe	er of I/O	8,192	4,092	2,048
Number of	I/O Device	Input : 131,0)72 points, output : 13	1,072 points
	LD	Scan, Subroutine, Initialize (COLD), Initialize (HOT), Periodic interruption		
Supporting Program	Special Configuration	Initializing special card, PID control, Thermistor setting, Loadcell setting, IO Input module filter setting		
Program	Communication	User protocol(Serial), User protocol(Ethernet), MODBUS TCP/ RTU Master, Ethernet High–speed link, CIMON–NET Master / Slave, DNP3, Public network IP setting, Fieldbus		
Periodic Interruption		Maximum 15, cycle setting (10~60,000msec, Unit :10ms), priority setting(0~14)		
Base Ex	pansion	Maximum 16 (10/100 Base -T/TX)		
Max. D	istance	Electricity (100m)		
Redur	ndancy	-		
RUN	mode	LOCAL / Remote (RUN, STOP, PAUSE)		
Resta	arting	Cold, Hot Restart		
Self-Di	iagnosis	Monitoring delay	of processing, probler battery, power error	ms of memory, IO,
	vation Against Failure	K device and conservation (Latch) in M, L, T, C, S, D device		
W	DT	Maximum 5000msec (Unit: 10msec)		
Tir	ner	On Delay, Off Delay, Addition, Monostable, Retriggerable Cycle: Either 10 or 100msec TC(Current value)/TS(Setting value)		
Counter		UP, DOWN, UP/DOWN, RING COUNTER, CC(Current value)/ CS(Setting value) No limitation on number of points Count range : -32,768 ~ +32,76		
PID		32	Channels, Auto-Tuni	ng
~ • ••	USB	USB 2.0	B Type : For Loader F	Protocol
Communicatior Channels	Serial	USB 2.0 B Type : For Loader Protocol RS-232C (Maximum 38,400bps) : CICON Loader / Connection Type: RJ11		

Capacity

ltem		CM1-XP1A	CM1-XP2A	CM1-XP3A		
Event Log		Power, Mode, Error				
Po	wer	5Vdc, 315mA				
Weig	ght(g)		157g			
Floating Point Arithmetic		Supporting instructions for floating point arithmetic				
Capacity of Scan Program		128K Step	64K Step	64K Step		
	Х	8,192	4,096	2,048		
	Y	8,192	4,096	2,048		
	М	16,000				
	L	16,000				
	K	16,000				
Device	F	2,048				
Memory	Т	4,096 (Select between 10ms and 100ms)		nd 100ms)		
	С		4,096			
	S	100Card * 100Step				
	D		32,000 Word			
	Z		2,048 Word			
	R	16 Word				

Features

Built-in functions

- - location.
- \cdot I/O Reservation Detects whether the correct card is installed in the designated slot. Additionally, when expanding or exchanging parts, reservation to writing a program can be made without making changes to the I/O.
- Modification of program during RUN mode program can be modified while PLC is in the RUN mode.
- \cdot Module Replacement during RUN mode modules can be replaced during RUN mode (does not apply to XPnA models)

Self-diagnosis functions

- Monitoring processing delay processing delay caused by user program errors can be monitored.

- Battery F0034 will be ON when the battery needs to be replaced.
- \cdot Power if the voltage supplied to the power is lower than the required level, the power error will be detected and malfunction preventative measures will be automatically executed.

 \cdot PID Control – PID operation can be executed without an additional PID module.

• RTC – Reads the time from the RTC module and stores the value at the F device memory

- Module removal check checks if the module was removed from the base or mounted incompletely on the base.
- \cdot Memory error if an error occurs in the CPU flash memory or in a card, error is displayed in the F device memory location.

CPU CP (NEW MODEL)

General



Item		CM1-CP3E	CM1-CP4E CM1-CP4F	
Program Control		Repetitive operation, Stored Program (ROM mode), Periodic operation		
Method for Controlling I/O		Indirect method, Direct method by instruction, Scan synchronous batch processing system (I/O refresh)		
Program	Language	LD(Ladder Diagram), IL(Instruction List), SFC(Sequential Function Chart), FB (Function Block), FB Extension		
Number of	Instruction	Basic Instructio	n : 60 , Application instruction : 480	
Data Processing	LD	0.084µs/step	0.028µs/step	
Program	Memory	512Kbyte	256 Kbyte	
Number of P	rogram Block	Max 128, up	to 65,530 STEPs per block (PID)	
Numbe	er of I/O	1,536	384	
Number of	I/O Device	32,768	8,192	
	LD		ne, Initialize (COLD), Initialize (HOT), Periodic interruption	
Supporting	Special Configuration	Initializing special card, PID control, Thermistor setting, Loadcell setting, IO Input module filter setting		
Program	Communication	User protocol(Serial), User protocol(Ethernet), MODBUS TCP/ RTU Master, Ethernet High–speed link, CIMON–NET Master / Slave, DNP3, Public network IP setting, Fieldbus		
	SFC	SFC Program		
Periodic Interruption		Maximum 15, cycle setting (10~60,000msec, Unit :10ms), priority setting(0~14)		
Base Ex	pansion	Maximum 3 (10Base -T)	_	
Max. D	istance	Electricity (100m)	_	
Redur	ndancy		-	
RUN	mode	LOCAL / Remote (RUN, STOP, PAUSE)		
Resta	arting		Cold, Hot Restart	
Self-Di	agnosis	Monitoring delay of processing, problems of memory, IO, battery, power error		
	ation Against Failure	K device and conse	ervation (Latch) in M, L, T, C, S, D device	
W	DT	Maximu	m 5000msec (Unit: 10msec)	
Timer		On Delay, Off Delay, Addition, Monostable, Retriggerable Cycle: Either 10 or 100msec TC(Current value)/TS(Setting value)		
Counter			WN, RING COUNTER, CC(Current value)/ CS(Setting value) er of points Count range : -32,768 ~ +32,76	
P	ID		Channels, Auto-Tuning	
	USB		Mini–B : For Loader Protocol	
Communication Channels	Serial	RS-232C (Maximum 38,400bps) : CICON Loader, CIMON-HN MODBUS RTU Slave / Connection Type: Terminal Block		

 Item

 Communication

 Channels

 Event Log

 Power

 Weight(g)

Capacity of Scan Progra

	Х
	Y
	М
	L
	K
	F
Device Memory	Т
. leniery	С
	S
	D
	Z
	R
	Q



	CM1-CP3E	CM1-CP4E	CM1-CP4F		
l	-	-	RS-485 (Maximum 115,200) : Same option is provided with RS- 232C / Connection type: RJ45		
		Power, Mode, Error			
	5Vdc , 195mA	5Vdc,70mA	5Vdc , 100mA		
	140g	127g	137g		
ram	n 32K Step 16K Step				
	1,536	34			
	1,536 384				
	8192				
		2,048			
		2,048			
		2,048			
	1,024 (Sel	ect between 10ms ar	nd 100ms)		
		1,024			
	100Card * 100Step				
	10,000 Word 5,000 Word				
		1,024 Word			
	16 Word				
	512 Word				

CPU CP

Specification

General

ltem		СМ1-СРЗА	СМ1-СРЗВ	CM1-CP3U
Program	n Control		ration, Stored Progra c operation, Fixed cy	
Method for Controlling I/O		Indirect method, Direct method by instruction, Scan synchronous batch processing system (I/O refresh)		
Program Language		LD(Ladder Diagram), IL(Instruction List), SFC(Sequential Function Chart), FB (Function Block), FB Extension		
Number of	Instruction	Basic Instructio	n : 60 , Application i	nstruction : 480
Data Processing	LD		0.2µs / Step	
Program	Memory		512Kbyte	
Number of P	rogram Block	Max 128, up	to 65,530 STEPs per	r block (PID)
Numbe	r of I/O		1,024	
Number of	I/O Device	Inp	ut: 32,768 Output: 32	,768
	LD	Scan, Subrouti	ne, Initialize (COLD), Periodic interruption	
Supporting Program	Special Configuration	Initializing special card, PID control, Thermistor setting Loadcell setting, IO Input module filter setting		
riogiam	Communication	RTU Master, Ethern	ser protocol(Serial), User protocol(Ethernet), MODBUS To TU Master, Ethernet High–speed link, CIMON–NET Master Slave, DNP3, Public network IP setting, Fieldbus	
Periodic Interruption		Maximum 15, cycle setting (10~60,000msec, Unit :10ms), priority setting(0~14)		
Base Ex	pansion	M	aximum 16 (10Base -	T)
Max. D	istance	Electricity (100m)		
Redun	idancy	_		
RUNI	mode	LOCAL / Remote (RUN, STOP, PAUSE)		
Resta	arting	Cold, Hot Restart		
Self-Di	agnosis	Monitoring delay	Monitoring delay of processing, problems of memory, IO, battery, power error	
	ation Against Failure	K device and cons	ervation (Latch) in M	, L, T, C, S, D device
W	DT	Maximum 5000msec (Unit: 10msec)		10msec)
Tin	ner	On Delay, Off Delay, Addition, Monostable, Retriggerable Cycle: Either 10 or 100msec TC(Current value)/TS(Setting value)		
Counter		UP, DOWN, UP/DOWN, RING COUNTER, CC(Current value)/ CS(Setting value) No limitation on number of points Count range : -32,768 ~ +32,765		
PI	ID	32	Channels, Auto-Tun	ing
Communication	USB		_	USB 2.0 B Type : For Loader Protocol
Channels	Serial	RS-232C (Maximum 38,400bps) : CICON Loader / Connecti Type: RJ11		Loader / Connection

lte	ltem				
Even	Event Log				
Pov	Power				
Weig	ht(g)				
Capacity of S	ican Progra				
	Х				
	Y				
	М				
	L				
	K				
Device	F				
Memory	Т				
	С				
	S				
	D				

Z R CIMON PRODUCT CATALOGUE

	CM1-CP3A	CM1-CP3B	CM1-CP3U			
	Power, Mode, Error					
	5Vdc, 240mA					
	13	5g	153g			
ram		32K Step				
		1,024				
	1,024					
	8,192					
	2,048					
	2,048					
	2,048					
	1,024 (Select between 10ms and 100ms)					
	1,024					
	100Card * 100Step					
	10,000 Word					
	1,024 Word					
		16 Word				

General



l+/					
Itte	em	CM1-CP4A	CM1-CP4B	CM1-CP4C	CM1-CP4D/U
Program Control		Repetitive operation, Stored Program (ROM mode), Periodic operation			
Method for Controlling I/O		Indirect method, Direct method by instruction, Scan synchronous batch processing system (I/O refresh)			
Program	Language	LD(Ladder Diagram), IL(Instruction List), SFC(Sequential Function Chart), FB (Function Block), FB Extension			
Number of	Instruction	Basic Instruction : 60 , Application instruction : 480			
Data Processing	LD		0.2µs / Step		
Program	Memory		256	Kbyte	
Number of P	rogram Block	Max 12	8, up to 65,530	STEPs per bloc	k (PID)
Numbe	er of I/O		3	84	
Number of	I/O Device		Input: 32,768	Output: 32,768	
	LD Scan, Subroutine, Initialize (COLD), Initialize (F Periodic interruption		lize (HOT),		
Supporting Program	Special Configuration			control, Therm out module filter	
riogram	Communication	User protocol(Serial), User protocol(Ethernet), MODBUS TCP/ RTU Master, Ethernet High-speed link, CIMON-NET Master / Slave, DNP3, Public network IP setting, Fieldbus		–NET Master /	
Periodic Interruption		Maximum 15, cycle setting (10~60,000msec, Unit :10ms), priority setting(0~14)			
Base Expansion				_	
Redundancy				-	
RUN mode		LO	CAL / Remote (RUN, STOP, PAU	ISE)
Restarting			Cold, Ho	ot Restart	
Self-Diagnosis		Monitoring delay of processing, problems of memory, IO, battery, power error			
	ation Against Failure	K device and conservation (Latch) in M, L, T, C, S, D device			
W	DT	Maximum 5000msec (Unit: 10msec)			
Tir	ner	On Delay, Off Delay, Addition, Monostable, Retriggerable Cycle: Either 10 or 100msec TC(Current value)/TS(Setting value)			
Counter		UP, DOWN, UP/DOWN, RING COUNTER, CC(Current value)/ CS(Setting value) No limitation on number of points Count range : -32,768 ~ +32,767			
P	ID	32 Channels, Auto-Tuning			
USB			_		USB 2.0 B Type : For Loader Protocol
Communication		RS–232C (Maximu	ım 38,400bps) : Cl	CON Loader / Con	nection Type: RJ11
Channels	Serial		-	RS-232C: CICON Loader, CIMON-HMI / Connection Type: RJ45	RS-485: CICON Loader, CIMON-HMI / Connection Type: RJ45

Item Event Log Power Weight(g)

Capacity of Scan Progra

	Х
	Y
	М
	L
	K
Device	F
Memory	Т
	С
	S
	D
	Z
	R

CIMON PRODUCT CATALOGUE

	CM1-CP4A	CM1-CP4B	CM1-CP4C	CM1-CP4D/U	
	Power, Mode, Error				
		5Vdc,	240mA		
	130g 133g / 137g			133g / 137g	
Iram	16K Step				
		38	34		
	384				
	8,192				
	2,048				
	2,048				
	2,048				
	1,024 (Select between 10ms and 100ms)				
	1,024				
	100Card * 100Step				
	5,000 Word				
		1,024	Word		
	16 Word				

• Features



CP CPU Comparison

The new CPnE/F CPU series includes more convenient features when compared to the older CPnA/B/U/P models.

Mini-B Type USB Connector

PLC can be easily connected to CICON software with a Mini-B type USB connector.

RS232C

- Simply connect the serial port to the PLC. There is no need to use connection tools or soldering on the terminal block.
- Enhanced communication compatibility by supporting three protocols and increased convenience with auto-verifying protocol feature which allows the user to skip the additional settings.
- · Supported protocol : MODBUS/RTU Slave, CIMON-HMI, CICON (Loader)

FB (Function Block) and SFC Program Language Support

Programs can be built with various languages providing a flexible environment for the users. Not only programs can be written using IL and LD languages, but they can also be written using SFC language.

OS Upgrade

CPU module can be upgraded to the latest OS using CICON software on-site without any additional tools.

Enhanced Expansion System

Speed of communication in the expansion system improved from 10Mbps to 100Mbps. Users can now experience rapid performance when designing a system with the expansion module.

I/O module replacement during RUN mode (CPU XP Series E, F type)

In case of failure of the I/O module while the PLC is in operation, the I/O module can be replaced while the PLC is in RUN mode so that the PLC processes are not interrupted.

Built-in Functions

- PID Control PID operation can be executed without an additional PID module. • RTC (Excluding CP*A Type) – Reads the time from the RTC module and stores the value at the F device memory location.
- · I/O Reservation Detects whether the correct card is installed in the designated slot. Additionally, when expanding or exchanging parts, reservation to writing a program can be made without making changes to the I/O.
- Modification of program during RUN mode program can be modified while PLC is in the RUN mode.
- RS-232 port (CP4C, CP3E, CP4E/F)
- RS-422 / 485 port (CP4D/U, CP4F)
- RS-232 port for Loader communication (CP3A/B/P/U, CP4A/B/C/D/U)

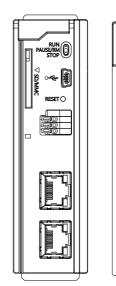
Self-diagnosis Functions

- Monitoring processing delay processing delay caused by user program errors can be monitored. Module removal check – checks if the module was removed from the base or mounted
- incompletely on the base. • Memory error – if an error occurs in the CPU flash memory or in a card, error is displayed
- in the F device memory location. · Battery – F0034 will be ON when the battery needs to be replaced.
- \cdot Power if the voltage supplied to the power is lower than the required level, the
- power error will be detected and malfunction preventative measures will be automatically executed.

Appearance

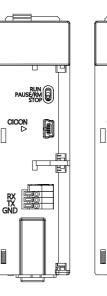
CPU XP / Redundancy

 CM1–XP1S 	• C
CM1-XP1F	• Cl
 CM1–XP2F 	• CI
CM1-XP3E	

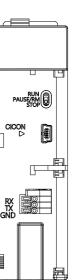




• CM1-CP4E • CM1-CP4F



- CM1-XP1E M1-XP2E
- CM1-XP3E



CM1–CP3U

• CM1-CP4U

PAUSE/RM

• CM1-CP3A

CM1-CP3B

• CM1-CP4A

CM1-CP4B

 CM1–CP4C • CM1-CP4D

CICON

- CM1-XP3A

- CM1-XP1A

• CM1-XP1R

MON RODUCT CATALOGUE

CIMON - PLC

24

- CM1–XP2A

POWER

Specification



Redundancy power

	<u>, , , , , , , , , , , , , , , , , , , </u>	
lt	em	CM1-SPR
Input	Input Voltage	AC100-240V, 50/60Hz
	Input Current	1.8A(110V) / 0.95A(220V)
	Inrush Current	50A Peak
	Efficiency	65%
	Power Disturbance Susceptibility	10ms
Output	Output Voltage / (Output Current)	+24V(0.3A) / +5.5V(3.5A) / +15V(0.5A) / -15V(0.3A)
Voltage Indicator		LED ON when output voltage is normal

 \cdot The status of the Power module is displayed by the LED.

 \cdot Outputs are provided for the operations of Power. (DC24V, TR Sink)

General power

ltem		CM1-SPA	CM1-SPC	CM1-SP2B	CM1-SPW	
Input	Input Voltage	AC100-240V, 50/60Hz		DC19-28V	DC70-110V	
	Input Current	1.15A(110V) 0.57A(220V)	1.71A(110V) 0.85A(220V)	1.9A(24V)	0.6A(100V)	
	Inrush Current	50A Peak				
	Efficiency	65%				
	Power Disturbance Susceptibility	10ms				
Output	Output Voltage / (Output Current)	+24V(0.3A) +5V(3.5A)	+24V(0.3A) +5V(3.5A) +15V(0.5A) -15V(0.3A)	+5V(3.5A) +15V(0.5A) -15V(0.3A)	+24V(0.3A) +5V(3.5A) +15V(0.5A) -15V(0.3A)	
Voltage Indicator		LED ON when output voltage is normal				

* Use CM1–SPC for Analog Input / Output module.

Usage according to output voltage

ltem	Function
+5V	Operating power for all PLC modules
+24V	Sensor and switch power, analog current output module
+15V	Operating power for analog module (Except current output)
-15V	Operating power for analog module (Except current output)

 \cdot The power supply for CIMON PLC XP / CP series provides DC +5V/+24V/+15V/-15V to each PLC. \cdot 'Internal power disturbance monitoring' function prevents system malfunctions or data damages.

Model	Current Consumption
CM1-XPnF/1S/1E	220mA
CM1-XPnA/1R	315mA
CM1-CP3E	195mA
CM1-CP4E	70mA
CM1-CP4F	100mA
CM1-CP3A/B/U/P	240mA
CM1-CP4A/B/C/D/U	200mA
CM1-RM01B	70mA
CM1-RC01A/10A	290mA
CM1-EP***	270mA
CM1-XD16*	60mA
CM1-XD32*	100mA
CM1-XD64C	220mA
CM1-XY16*	180mA
CM1-YR16E	370mA
CM1-YT16*	110mA
CM1-YT32*	130mA
CM1-YT64*	260mA
CM1-HS02*	290mA
CM1-AD04VI	50mA
CM1-AD08V	50mA
CM1-AD08I	55mA
CM1-AD04W	430mA
	50mA
	40mA
	40mA
	50mA
	50mA
	40mA
	50mA
	50mA
	60mA
	60mA
	170mA
	240mA
	240mA
	190mA
	170mA
	170mA
	170mA
	290mA
	290mA
	170mA
	290mA
	100ma A
CM1-EC0*DNP CM1-C*01*	290mA 60mA
	CM1-XPnF/1S/1E CM1-XPnA/1R CM1-CP3E CM1-CP4E CM1-CP4F CM1-CP3A/B/U/P CM1-CP4A/B/C/D/U CM1-RM01B CM1-RM01B CM1-RC01A/10A CM1-RD16* CM1-XD16* CM1-XD16* CM1-XD16* CM1-XD64C CM1-XY16* CM1-YT16* CM1-YT16* CM1-YT32* CM1-YT64* CM1-HS02* CM1-AD04V1 CM1-AD08V

* Please be sure to check that each module's current consumption does not exceed the regular output capacity of the power module.

CIMON - PLC

Current Consumption (5V DC)

ADDITIONAL REDUNDANCY MODULE

Specification



Redundancy Power Monitoring Module

Iter	n	CM1-RPW	
Status Output	Output Type	TR Sink Type	
(A_OK, B_OK,	Max. Output Current	0.5A / point	
A_NG, B_NG)	Rated Input Voltage	DC 24V	
Status Output	Rated Input Voltage	DC 24V	
(24V IN)	Max. Input Current	0.8 A	
Power Coupler Input (AIN/BIN)	Rated Input Voltage	DC 24V	
Power Coupler Output	Rated Input Voltage	DC 24V	
(24V OUT)	Max. Output Current	8A	
Operation Indication		LED ON when the power ON	
Insulation Type		Photo-coupler	

Redundancy Communication Module

ltem	CM1-RC01A	CM1-RC10A	
Communication Standard	10 BASE-T	100 BASE-TX	
Communication Speed	10Mbps 100 Mbps		
Distance of Communication	100m		
Protocol	CIMON internal redundancy protocol		
Standard of Cable	UTP/STP Category5, Twisted-pair cable		

CANCELLE Model No. CMI-RINO B S.N. 032 P1520 000036 C.B. Internet C. CMI-RINO B Internet C. Primary 9 Secondary .

Redundancy Interface

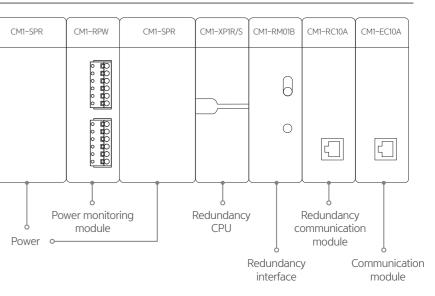
Item	CM1-RM01B
Primary/Secondary Switch	Toggle Type 2– position (UP:Primary, Down:Secondary)
Active/Back up Changeover Switch	Push Button Switch

* To prevent tampering or accidental operation, the Active/Backup switch is not located on the outside of the module. Instead, a small sized Primary / Secondary switch is placed to serve the same purpose.

Miscellaneous Redundancy Module

ltem	Unit	Model
	Base	CM1-BS05S or Redundancy base
Power	Power	CM1-SPR
Redundancy	Power monitor module	CM1-RPW
	CPU	All CPU Types
	Base	General base (CM1-BS05A)
	Power	CM1–SPA or standard power
	CPU	CM1-XP1R
System	Redundancy interface	CM1-RM01B
Redundancy	Redundancy communication module	CM1-RC01A / CM1-RC10A
	Redundancy cable	CM0-CBE
	Base	CM1–BS05S or Redundancy base
	Power	CM1-SPR
Power	Power monitor module	CM1-RPW
Redundancy	CPU	CM1-XP1R
+ System	Redundancy interface	CM1-RM01B
Redundancy	Redundancy communication module	CM1-RC01A / CM1-RC10A
	Redundancy cable	CM0-CBE

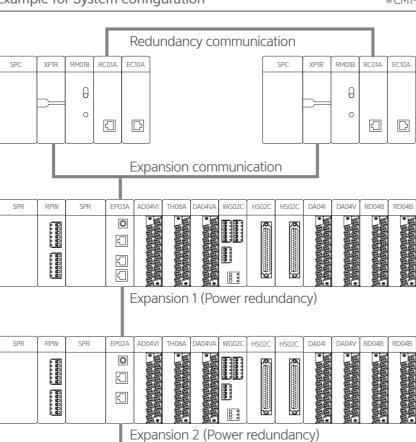
Redundancy Configuration



DIGITAL I/O

Example for System configuration

CM1-



		·											
SPR	RPW	SPR	EP01A	AD04VI	TH08A	DA04VA	WG02C	HS02C	HS02C	DA04I	DA04V	RD04B	RD04B
				 <u> </u>		 <u> </u>		¢ (¢ (<u> </u>	 <u> </u>	 <u> </u>	

Expansion N (Power redundancy)

* The system can be expanded with up to 16 modules. (The number may differ depending on the CPU's specification.)

• Features

- · CPU module, power module, base, and communication redundancies available
- · Redundancy configuration possible through separated base structure
- · Backup CPU becomes active automatically when currently active CPU fails due to an error
- \cdot Test button available to easily check and maintain the system
- · Backup CPU can be quickly switched
- · Redundancy network can be built with the host computer
- · Expansion power redundancy available

Specification



Input					
ltem					
Input	Туре				
Rated Inp	ut Voltage				
Rated Inp	ut Current				
On Voltage /	On Voltage / On Curre				
Off Voltage /	Off Voltage / Off Curre				
System	Off -> O				
Redundancy	On -> 01				
Number	Number of Input				
Commo	on Type				
Operation	Indication				
Insulatio	on Type				
Current Co	nsumption				
lte	em				
Input Type					

ltem -		DC Input				
		CM1-XD16F	CM1-XD32F			
Input Type		SINK/ SRC				
Rated Inp	ut Voltage	DC 24 V				
Rated Inp	ut Current	4 mA				
On Voltage / On Current		DC 15 V / 4 mA				
Off Voltage / Off Current		DC 9 V / 1mA				
System	Off -> On	3ms and below				
Redundancy	On -> Off	3ms and below				
Number of Input		16	32			
Commo	on Type	8 / 1 Com				
Operation Indication		LED ON when the input is ON				
Insulation Type		Photo-coupler				
Current Co	nsumption	60mA	100mA			

CIMON - PLC

		DC Input						
	CM1-XD16E	CM1-XD32E	CM1-XD64E					
		SINK/ SRC						
	DC 24 V							
	4 mA							
nt	DC 19 V / 4 mA							
nt	DC 11 V / 1 mA							
n	3ms and below							
ff	3ms and below							
	16	32	64					
	8 / 1 Com 32 / 1 Com							
	LED ON when the input is ON							
		Photo-coupler						
۱	60mA	100mA	220mA					



Ουιρυι	O	utput	
--------	---	-------	--

ltem -		Transistor Output			
		CM1-YT16E	CM1-YT16F		
Number of Output		SINK 16 points	SRC 16 points		
Rated Voltage		DC12~24V			
Rated	1 point	0.5A	0.5A		
Current	1Com	4	A		
Response	Off -> On	1ms and	d below		
Time	On -> Off	1ms and	d below		
Common Type		16	32		
Operation Indication		LED ON when the output is ON			
Insulatio	on Type	Photo-	coupler		

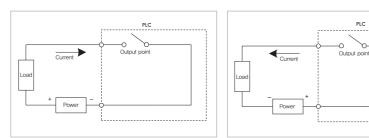
lto		Transistor Output				
ltem		CM1-YT32E CM1-YT32F CM1-YT6				
Number of Output		SINK 32 points	SRC 32 points	SINK 64 points		
Rated Voltage			DC12~24V			
Rated	1 point		0.2A			
Current	1Com	4A				
Response	Off -> On	1ms and below				
Time	On -> Off	1ms and below				
Common Type		32				
Operation Indication		LED ON when the output is ON				
Insulation Type		Photo-coupler				

Sink Type

CM1-YT16E, CM1-YT32E, CM1-YT64E

Sink Type

CM1-YT16F, CM1-YT32F



lto		Relay Output				
ltem -		CM1-YR16E				
Number of	of Output	16				
Rated Voltage		DC12~24V				
Rated	1 point	2A				
Current	1Com	5A				
Response	Off -> On	10ms and below				
Time	On -> Off	5ms and below				
Common Type		8 point / 1 Com				
Operation Indication		LED ON when the output is ON				
Insulatio	on Type	Relay				

• If this module is used as an inductive load switch, it will shorten the lifespan of the module.

If you wish to use the module for such purpose, please use the transistor output module instead.

CHION CE CHENCOLIT Model No. CHI-LYTEE SN: 147 P4512 000003 CHI WARKS Market CARS Market China China China Market China M

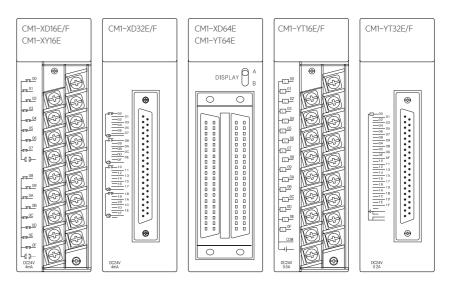
Item					
Number of I/O					
Rated I/O Voltage					
Rated I/O Current					
On Voltage / On Curren					
Off Voltage ,	Off Curren				
Response	Off -> On				
Time	On -> Off				
Common Type					
Operation Indication					
Insulatio	on Type				

I/O

Features

 All module contains photo-coupler or relay insulation type. • LED displays the operations of the module. · Since the module is designed using the terminal block method, the module can be moved during wiring or maintenance.

• Appearance



	CM1-2	XY16E
	Input	Output
	8	8
	SINK/ SRC	Relay
	DC24V	DC12/24V / AC220V
	4mA	2A
nt	DC 19V	/ 4mA
nt	DC 11V	/ 1mA
n	5ms and below	10ms and below
ff	5ms and below	5ms and below
	8 point / 1 Com	8 point / 1 Com
	LED ON when t	he output is ON
	Photo-coupler	Relay

ANALOG I/O

Specification



Input

Number of Analog Input 4 8 0~+5V(0~20mA) 0~+				
	3			
Analog Input 1~+5v(4~20mA) 1~+ 0~+10V 0~+ -10V~+10V -10V~	-5V 10V			
Accuracy ±0.3% (Full Scale)	±0.3% (Full Scale)			
Conversion Speed 5ms / 1ch	5ms / 1ch			
Absolute Max. Input Voltage : ±12V, Current : ±25mA ±12	2V			
Insulation Type Insulation between Analog and Digit	tal			
Occupied I/O points 16				
Connection Terminal 18 points Terminal Block				
+5V 50 50	0			
Current Consumption(mA) +15V 40 40	0			
-15V 35 20	0			
Item CM1-AD08I CM1-A	D16VI			
Number of Analog Input 8 16	6			
Analog Input 0 ~ 20mA 0~+5V(0 4 ~ 20mA 1~+5v(4 0~+ -10V~ -10V~ -10V~	~20mA) 10V			
Accuracy ±0.3% (Full Scale)				
Conversion Speed 5ms / 1ch				
Absolute Max. Input ±25mA Voltage : ±15V, C	Current:±25mA			
Insulation Type Insulation between Analog and Digit	tal			
	16			
	rminal Block			
Occupied I/O points 16 Connection Terminal 18 points Terminal Block 32 points Terminal Flock +5V 50 50				
Occupied I/O points 16 Connection Terminal 18 points Terminal Block 32 points Terminal	0			

Digital Output

Type of Input Signal	Min. Value	Measured Value	Max. Value
4~20mA	3,808	4,000~20,000	20,191
0~20mA	-240	0~20,000	20,239
1~5V	952	1,000~5,000	5,047
0~5V	-60	0~5,000	5,059
-10~10V	-12,000	-10,000~10,000	10,119
0~10V	-10,240, -240	0~10,000	10,239

Maximum Resolution

Input	Range of Analog Input	Max. Resolution	Digital Output
Voltage	0~+5V	312.5 µV	
	1~+5V	250 μV	
	0~+10V	625 µV	0~16000
	-10V~+10V	1.25 mV	-8000~8000
Current	0 ~ 20mA	1.25 µV	
	4 ~ 20mA	1.0 µV	



Input

Item
Number of Analog Input
Analog Input
Accuracy
Conversion Speed
Absolute Max. Input
Insulation Type
Occupied I/O points
Connection Terminal
Current Consumption (mA)

Digital Output

Weight (g)

		Voltage		
Input Signal	0~5V	1~5V	0~10V	-10~10V
Raw value		-32000	~32000	·
Measuring Value	0~5000	1000~5000	0~10000	-10000~10000
Percentile Value	0~10000			
Current				
Input Signal	0~20	0~20mA 4~20mA		0mA
Raw value	-32000~32000			
Measuring Value	0~20000 4000~20000		[,] 20000	
Percentile Value	0~10000			

Input Signal	
Raw value	
Measuring Value	
Percentile Value	
	Raw value Measuring Value

Maximum Resolution

Current	Range of Analog Input	Max. Resolution
	0~+5V	312.5 μV
Valtago	1~+5V	250 µV
Voltage	0~+10V	625 μV
	-10V~+10V	1.25 mV
Curront	0 ~ 20mA	1.25 µV
Current	4 ~ 20mA	1.0 µV

CM1-AD04W offers channel-to-channel isolation.

-	
	CM1-AD04W
	4
	0~+5V(0~20mA), 1~+5v(4~20mA), 0~+10V, -10V~+10V
	±0.3% (Full Scale)
	2.1ms / 4ch
	Voltage : ±15V, Current : ±30mA
	Insulation between Analog and Digital
	16
	18 points Terminal Block
	430mA
	187g



Output

ltem		CM1-DA04V/VA	CM1-DA08V/VA
Number of Analo	g Input	4	8
Analog Outp	out	-10V~+10V	
Digital Inpu	ıt	-192~16191 (-8192~8191)
Accuracy		No more t	han ±0.1%
Conversion Sp	beed	10ms	16ms
Absolute Max.	Input	Voltage : ±15V	
Insulation Ty	pe	Between Input terminal and PLC: Photo–coupler No insulation between output channels No insulation between power and analog output	
Power Supp	oly	None	
Occupied I/O p	points	16	
Connection Ter	minal	18 points Te	rminal Block
	+5V	5	0
Current	+15V	50	
Consumption(mA)	-15V	3	0
	24V	-	-

ltem		CM1-DA04I	CM1-DA08I
Number of Analog Input		4	8
Analog Outp	put 4~20mA)mA
Digital Inpu	ıt	-192~16191 (-8192~8191)
Accuracy		No more t	han ±0.1%
Conversion Sp	beed	10ms	16ms
Absolute Max.	Input	Voltage	e : ±15V
Insulation Ty	pe Between Input terminal and PLC: Photo-coupler No insulation between output channels No insulation between power and analog output		en output channels
Power Supp	oly	±24V	
Occupied I/O p	points	16	
Connection Ter	minal	18 points Terminal Block	
	+5V	5	0
Current	+15V	_	
Consumption(mA)	-15V	-	-
	24V	10	00

Maximum Resolution

Output	Digital Input	Range of Analog Output		Max. Resolution
Voltago	0 ~ 16000	V type	-10V~10V	1.25mV
Voltage	(-8000~8000)	VA type	0~10V	1,231110
Current	0 ~ 16000 (-8000~8000)	4 ~ 2	20mA	1.0µV

• Features

Analog Input Module

- current.
- CM1-AD08I has 8 channels of analog input for current.
- · CM1-AD08V has 8 channels of analog input for voltage.
- · AD08I (0~20mA, 4~20mA)
- Sampling processing.
- gets out of this, the value -192 ~ 16,191 (-8192 ~ 8191) is fixed.
- B. Measuring value: Refer to the specification.
- C. Percentile value: 0 ~ 10000 (0 ~ 100.00%)

Analog Output Module

- · DA08I has 8 channels of analog output for current (4~20mA).

- analog value.
- The DA module is used to convert digital value (Signed 16-bit binary data) into the analog signal (voltage or current output). It converts the digital value of 0 ~ 160000 (-8000 ~ 8000) into the analog value of $4 \sim 20$ mA ($-10 \sim 10$ V).
- Through the Hold/Clear setting, the user can select one of the states shown below: When the RUN mode is switched to the STOP mode, it outputs the offset value (4mA, -10V). Although the RUN mode is switched to the STOP mode, it maintains the same value.
- The offset/gain value can be simply set in the CICON software.
- There is no limitation for the number of modules that can be installed on a single base.
- The LED lights on in normal condition and blinks at 0.3 second intervals in error condition.

· CM1-AD04VI/CM1-AD04W is the AD module used to input 4 channels of voltage and

- AD04VI, AD04W, AD16VI (0~20mA, 4~20mA, 0~5V, 1~5V, -10~10V, 0~10V)
- AD08V (0~5V, 1~5V, -10~10V, 0~10V)
- \cdot There are two AD conversion methods that the user can choose: Average processing and
- Analog Input module converts input Max. and Min value into 0 ~ 16,000 (-8,000 ~ 8,000). If input value gets out of the range, it converts into -192 ~ 16,191 (-8192 ~ 8191). If value
- (*AD04W: An input signal is converted into 3 formats of digital value as below)
- A. Digital value: 0 ~ 64000 (or -32000 ~ 32000, 16 bit resolution of 1/64000)
- There is no limitation for the number of modules that can be installed on a single base.
- The LED lights on in normal condition and blinks at 0.3 second intervals in error condition.

- DA04I has 4 channels of analog output for current (4~20mA).
- DA08V has 8 channels of analog output for voltage (-10~10V).
- DA04V has 4 channels of analog output for voltage (-10~10V).
- DA08VA has 8 channels of analog output for voltage (0~10V).
- · DA04VA has 4 channels of analog output for voltage (0~10V).
- · If you select the changed digital value to 1/16000, it can be converted into high resolution of

• The channel for which conversion is prohibited outputs the offset value (4mA, -10V).

THERMOMETER

• Appearance

CM1-AD04VI/W	CM1-AD08V	CM1-AD08I
CM1-DA04V/VA	CM1-DA04I	CM1-DA08V/VA

CM1-AD16VI	
V++ 0 1 1 1 2 3 3 1 2 0 1 1 1 2 1 2 1 4 4 6 6 7 1 5 V 0-5V 0-5V 0-20mA 4-20mA	
CM1-D	A08I

	3

Specification



Range of Temperature Input	
Digital Output	D
Detecting the Broken Wires	

Max. Conversion Speed Number of Temperature Input Insulation Type Connection Terminal Occupied I/O Inputs

Accuracy

+5V Current Consumption +15V (mA) -15V

up to the first decimal place.

8 points respectively.

CIMON - PLC

CM1-RD04A	CM1-RD04B	
Pt100 (JIS C1640–1989, DIN 43760–1980) JPt100 (KS C1603–1991, JIS C1604–1981	Pt1000 (DIN EN 60751)	
Pt100:-200.0°C to 600°C (18.48 to 313.59Ω) JPt100:-200.0°C to 600°C (17.14 to 317.28Ω)	Pt1000:-200.0°C to 600°C (185.20 to 3137.08Ω)	
Digital converted value: Detected temperature value: -2 value	2000~6000 (First decimal place	
3 wires for each channel		
±0.1%[Full Scale]		
50ms / 1	channel	
4 Ch. / 1	module	
Between input terminal and Between cha		
18 points Terminal Block		
16		
50		
30		
10	0	

- By using the platinum resistance temperature sensor, Pt100, JPt100 or Pt1000, Ni1000, the temperature value ($^\circ C$ or $^\circ F)$ can be converted into signed 16–bit binary data, which can be processed as a digital value. The temperature can be processed as digital values

• A single module can connect with Pt100, JPt100 or Pt1000, Ni1000 with 4 points and

 \cdot Each channel can detect the wire disconnection and overrange of the input temperature.

38



TC

ltem		CM1-TC04A
Available	TC	K, J, E, T, B, R, S, N-Type
Digital Out	tput	Converted digital value : 0 ~ 16,000(-8000~8000) Converted temperature value : (Range of measured Temp. X10)
Compensatio	n Type	Automatic Compensation
Detecting Breaking of		Each channel
Accurac	y	±[(Full Scale)x0.3%+1°C(Error for base compensation)]
Max. Conve Speed		50ms / 1 channel
Number of Channe		4 channels / module
Connection Te	erminal	Between input terminal and PLC power: Photo–coupler Between channels: None
Occupied I/O	Inputs	18 points Terminal Block
Current	+5V	60
Consumption	+15V	30
(mA)	-15V	10

Range of Input Temperature

Type of TC	Range of Input	Range of Measured Temp.(°C)	Range of Measured Voltage(#V)
К		-200.0~1200.0	-5891~48828
J		-200.0~800.0	-7890~45498
E		-200.0~600.0	-8824~45085
Т	KC C1(00	-200.0~400.0	-5602~20869
В	KS C1602	400.0~1800.0	786~13585
R	-	0.0~1750.0	0~21006
S		0.0~1750.0	0~18612
Ν		-200.0~1250.0	-3990~43846

- TC module can connect 8 types of thermocouple (K, J, E, T, R, S, B, N) directly and displays converted temperature as Celsius or Fahrenheit (°C, °F).
- The temperature value can be converted into digital value up to the first decimal place.
- TC module converts temperature data into signed 16-bit binary digital value.
- · It converts maximum and minimum value of Thermocouple into 0~16,000 (-8,000 ~ 8,000).
- \cdot The temperature is displayed from minimum –50 °C to maximum +50 °C, and digital value is displayed from -192 to 16191.
- If minimum and maximum value are configured, TC module converts minimum value into 0(-8,000) and maximum value into 16,000(8,000).
- · Each channel of TC module can detect disconnection of Thermocouple and cable and excess of measuring range.
- · A single module has 4 channels for thermocouples.
- \cdot There is no limitation for the number of TC modules that can be installed on a single base
- The LED lights on in normal condition and blinks at 0.3 second intervals in error condition.

• Features

Thermistor

Ra R

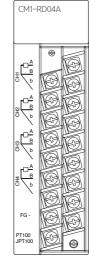
Tł

Model No. CM1-TH SIN : 068 04952 0

Item		CM1-TH08A
Range of The	ermistor Input	NTC TYPE
5	ermistor Input tance	0~1ΜΩ
		0 Ω~40kΩ:1Ω
	Power of out Resistance	40 kΩ~400kΩ : 10Ω
		400 kΩ~1ΜΩ : 30Ω
Conversion Range	Temp. Conversion value	℃, °F(0.1℃ Resolution)
Hange	Digital value	0~16000, -8000~8000
Resistance-Temperature Calculation		Steinhart-Hart thermistor polynomial
Αςςι	uracy	±0.3 %(Full Scale)
Max. Conversion Speed		1 sec(8ch)
Number of Temp. Input		8
Insulation Type		Between CPU and analog arithmetic: Photo–coupler Between Channels: None
Connectio	n Terminal	18 points Terminal Block

Coefficient) measuring thermistor.

• Appearance



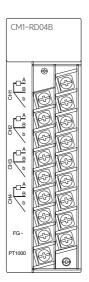
* Note: Please note that the thermistor module cannot be used with CM1–SPA power module.

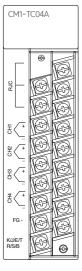
• A single module offers a maximum of 8 channels of NTC (Negative Temperature

 \cdot Temperature data (°C) can be measured down to the first decimal place.

• Each channel can detect the wire disconnection and the excess of measuring range.

 \cdot When using the thermistor temperature-resistance table, desired minimum, medium, and maximum temperature ($^{\circ}$ C) and resistance (Ω) can be set to be measured.







SPECIAL

Specification



High-Speed Counter

ltem			Мо	del	
item		CM1-HS02C	CM1-HS02F	CM1-HS02E	CM1-HS02E-24
I/O	points		1	6	
Number	of channels		2 Cha	annels	
	Phase		1 phase input /	2 phase input	
Count Input	Level (фА,фВ)	5/12/24 V	DC 2~5mA	RS-422A Line Drive (5V)	Line Drive (24V)
Signal	Types	PNP Encoder (–Common)	NPN Encoder (+Common)	Line Drive	e Encoder
	Count Speed	200	kPPS	250	kPPS
	Count Range	32bit signe	ed binary values	(-2147483648~2147483647)	
	Mode	U	o/Down Preset C	Count + Ring Cou	int
Count	Min, Count Pulse Period (uS) (Duty ratio 50%)	2.5 2.5			*
	Compared Range	32bit signed binary values			
Compared Output	Comparison	Compared value < Present value Compared value = Present value Compared value > Present value		e	
External	Preset				
Input	Enable Count		5/12/24 V	DC 2~5mA	
External Output	Compared Output		TR (SINK Type)	Output, 12 ~ 24V	



Data Logger

ltem		CM1-LG02G
Processing	g System	Multi-task (High-speed, multiprocessing)
(*) Memory	Capacity	4GB (2GB for logging data)
Function	Setting	Using CICON software (PLC Loader Program)
	Connection Method	Connection with RS–232C port or USB at CPU module Passthru connection through communication module (EC Series)
M1-CPU	Configuration	Network setting, logging type, logging cycle, data list, Log file ID (*)
	Monitoring	The number of clients, communication status, logged data transmission status, progress of data logging, CPU status, memory consumption(%), memory overflow (Automatic dump, deletion) status, error information
	Comm. Standard	Ethernet 10/100Mbps or 1Gbps
munication Function	Protocol	TCP, CIMON HMI Ethernet Protocol
unction	Access Limitation	Simultaneous connections of up to 5 clients (Up to 3 clients can simultaneously access when using FTP feature)
Comm.	Cable	Over CAT.5 STP(Shielded Twisted pair) cable
Max. Distance		Maximum 100m for preliminary physical connection with the network device(host system, hub, router, etc.)
	Logging Type	Event Sampling, Trigger Monitoring (*)
	Range of Cycle	1 ~ 327,67 (x L ms) L(*) = Time interval scale (1, 10, 100), The value is fixed at L = 10 in under V2.0
ogging	Range of Deadband	0 ~ 65535(*) The value is fixed at '0' in under V2.0.
	Logging Device Type	X, Y, M, L, K, F, T, TC, TS, C, CC, CS, S, D, Z, R Device in PLC CPU
	Data Type	Bit, Byte, Word, DWord, DDWord
Data St	orage	Non-volatile memory (ROM) storage (Does not require a battery)
Data Ca	pacity	24Byte for saving in the device type
	Storage Method	Event sampling: Saving data by date/hour Trigger monitoring (*): Saving data by file ID (Including time information)
a Managing	Delete Method	Automatic delete: The oldest data is deleted when memory is at capacity (Overflown) Manual delete: All logged data, (*) event sampling log data, (*) trigger monitoring log data
ompatible Host System		SCADA V3.90 and above version including 'Historian' feature Recommended system requirements: 64–bit version of Windows, 8GB RAM
ge of Time Synchronization Frequency		1~32767 (x10 sec)
Error D	isplay	LED, Display error code (LG02G configuration/monitoring window in CICON)
Comm. Stat	us Display	LED, Display error code (LG02G configuration/monitoring window in CICON)
Number of		16 points (Input 16 points/output 16 points)
Current Cor	nsumption	136mA
Weigh	t (g)	113.5



lter	m	CM1-LG02G
Processing	g System	Multi-task (High-speed, multiprocessing)
(*) Memory Capacity		4GB (2GB for logging data)
Function	Setting	Using CICON software (PLC Loader Program)
	Connection Method	Connection with RS-232C port or USB at CPU module Passthru connection through communication module (EC Series
CM1-CPU	Configuration	Network setting, logging type, logging cycle, data list, Log file ID (
	Monitoring	The number of clients, communication status, logged data transmissio status, progress of data logging, CPU status, memory consumption(% memory overflow (Automatic dump, deletion) status, error information
Communication	Comm. Standard	Ethernet 10/100Mbps or 1Gbps
Function	Protocol	TCP, CIMON HMI Ethernet Protocol
	Access Limitation	Simultaneous connections of up to 5 clients (Up to 3 clients can simultaneously access when using FTP feature
Comm.	Cable	Over CAT.5 STP(Shielded Twisted pair) cable
Max. Dis	stance	Maximum 100m for preliminary physical connection with the network device(host system, hub, router, etc.)
	Logging Type	Event Sampling, Trigger Monitoring (*)
Laurian	Range of Cycle	1 ~ 327,67 (x L ms) L(*) = Time interval scale (1, 10, 100), The value is fixed at = 10 in under V2.0
Logging Function	Range of Deadband	0 ~ 65535(*) The value is fixed at '0' in under V2.0.
	Logging Device Type	X, Y, M, L, K, F, T, TC, TS, C, CC, CS, S, D, Z, R Device in PLC CPU
	Data Type	Bit, Byte, Word, DWord, DDWord
Data Ste	orage	Non-volatile memory (ROM) storage (Does not require a batter
Data Ca	pacity	24Byte for saving in the device type
	Storage Method	Event sampling: Saving data by date/hour Trigger monitoring (*): Saving data by file ID (Including time informatio
Data Managing	Delete Method	Automatic delete: The oldest data is deleted when memory at capacity (Overflown) Manual delete: All logged data, (*) event sampling log data (*) trigger monitoring log data
Compatible H		SCADA V3.90 and above version including 'Historian' featur Recommended system requirements: 64-bit version of Windows, 8GB RAM
Range of Time S Freque		1~32767 (x10 sec)
Error Di	isplay	LED, Display error code (LG02G configuration/monitoring window in CICO
Comm. Stat	us Display	LED, Display error code (LG02G configuration/monitoring window in CICO
Number of	I/O points	16 points (Input 16 points/output 16 points)
Current Cor	sumption	136mA
Weight (g)		113.5

reliability of data.

- CIMON-HMI Ethernet Protocol
- Memory monitoring

· High-Speed Counter module can count a wide range of high-speed pulses (-2147483648~2147483647). The counted value is saved in the buffer memory as signed 32-bit binary value.

- The type of pulse input may be selected.
- -1 Phase Input 1 Multiplication (Increasing/decreasing count by software setting)
- -1 Phase Input 2 Multiplication (Increasing/decreasing count by software setting
- CW (Clockwise) / CCW (Counter Clockwise)
- 2 Phase Input 1 Multiplication
- 2 Phase Input 2 Multiplication
- 2 Phase Input 4 Multiplication
- · Count type may also be selected.
- Linear Count: Ranges from -2,147,483,648 to 2,147,483,647. The count out of range causes the overflow.
- Ring Count: Counts repeatedly between minimum and maximum value.
- · 'Compared Output' function (2 outputs in each channel)
- This function is used to compare present count value with compared value. The compared output may switch between ON and OFF according to the condition.

The module provides 'Count' Functions as listed below:

- Count Latch Sampling Count Periodic Pulse Count Count Disable
- · 'Preset' and 'Enable Count' function can be operated by giving external signals to each terminal.

The Data Logger module is the best solution for the field which requires continuity and

• The module is fully applicable to the measuring system.

 \cdot The Data Logger module supports the following features :

- Logging types of Event Sampling and Trigger Monitoring

- 10/100Mbps, 1Gbps Ethernet communication

- Transferring the real-time / logged data to the host system



Load Cell

ltem	CM1-WG02C	CM1-WG02D	CM1-WG02E	
Channel	2 Channel	2 Channel	2 Channel	
Load Call		Strain Gauge Method		
Insulation Method		Photo-Coupler		
Power		DC24V		
Load Cell Approval Voltage	Max. 350Ω cell of 4 parallel connection is available for each channel (DC5V ±5%)			
A/D Conversion Method	Sigma Delta			
Max. Output of Load Cell	2mV/V	2mV/V	3.6mV/V	
Max. Resolving Power	1/40,000	1/40,000	1/40,000	
A/D Conversion Speed (Each Channel)	1,000 times/sec (Standard)	1,000 times/sec (Dynamic measurement)	1,000 times/sec (Wide Range)	

Maximum Resolution (Expected Result)

Load Cell Output	CM1-WG02C	CM1-WG02D	CM1-WG02E
1mV/V	1/20000	1/20000	1/11111
2mV/V	1/40000	1/40000	1/22222
3mV/V	Out of measurement range	Out of measurement range	1/33333
3.6mV/V	Out of measurement range	Out of measurement range	1/40000

WG02C for accurate measurements

- The exceeded section is not measurable when output of load cell is over 2mV/V
- WG02D for rapid and continuous/dynamic measurements with high accuracy
- Continuous measurements for an interval of up to 0.2 seconds according to the system
- Dynamic measurements by getting external 24 DC input
- WG02E is designed to measure the output of load cell up to 3.6mV/V.
- · A single module can receive 2 or 4 channels of load cell input.
- Compatible with various fields such as Unload Scale, Bin Scale, Mixing Scale, Filling Scale (Packaging), etc.
- \cdot 24-bit sigma-delta AD conversion provides high-resolution digital values
- Supports built-in programs such as input and discharge measurements







(*) Supported in App V2.0 and above version

Direct connection with the servo driver via EtherCAT

	-		_	
	tem	CM1-PS08N		
Number of Controlled axes		8		
Cont	rol Type	Position, Velocity, Velocity /Position, Position/Velocity, Position / Torque (*), Fee	d	
Cont	rol Units	pulse, mm, inch, degree		
Positioning	g data setting	Using CICON software (PLC Loader Program)		
C) //	Connection Method	Connection with RS–232C port or USB at CPU module Passthru connection through communication module (EC Series))	
CM1 CPU	Configuration	Common, Basic, Expansion, Manual operation, Servo parameter, Operation data, Cam data, Command data (*)		
	Monitoring	Operation data, Trace, Input terminal data, Axis/Driver error data		
Data	Storage	Parameter, Operation data saved in flash memory (Does not require a batter	y)	
	Positioning Type	Absolute Positioning / Incremental Positioning / Index Degree Positioning		
		Absolute Movements Incremental Interpolation Movements Movements		
	Position	-2,147,483,648 ~ 2,147,483,647 (mm)		
	Command	-2,147,483,648 ~ 2,147,483,647 (inch)		
	Values	Multi rotary coordinate system : -2,147,483,648 ~ 2,147,483,647 (degree Single(1) rotary coordinate system (ABS) : 0 ~ 359.9999 (degree)	e)	
Positioning		-2,147,483,648 ~ 2,147,483,647 (pulse)		
		1 ~ 2,147,483,647 (mm/min)		
	Speed	1~2,147,483,647 (inch/min)		
	Command	1 ~ 2,147,483,647 (degree/ min)		
	Values	1 ~ 2,147,483,647 (pulse/sec)		
		1~2,147,483,647 (RPM)		
	ACC/DEC Type	Trapezoidal type, S–shaped type		
	ACC/DEC Time	1 ~ 65,535ms, ACC pattern 4 types / DEC pattern 4 types (Select)		
Manual	Operation	Jogging / Inching		
Homi	ng Types	Total 15 types supported by CiA402 Profile		
Inter	polation	2~8 axes linear interpolation, 2 axes circular interpolation (*), 3 axe Helical interpolation	es	
Velo	city Unit	Value / Percent (%) (*)		
Torq	jue Unit	Percent (%)		
Absolute P	osition System	Available (When using the absolute encoder/second battery type servo driver)		
Comm. Period		1 ~ 65,535ms		
Max. Distance		100m between module and servo driver		
Comm. Cable		Over CAT.5 STP(Shielded Twisted pair) cable		
Error	r Display	LED on the module		
	tatus Display	LED on the module		
	of I/O points	16 points (Input 16 points/output 16 points)		
Current C	Consumption	136mA		
(*) Suppor	ted in App V2	0 and above version		

Positioning control of single axes: Position control, Velocity control, Feed control

· Switching control is easily done during the operation.

- Position / Velocity, Velocity / Position control switch)

 \cdot PS08N saves the parameters and operation data into the memory. (No battery is required) The absolute positioning system is available with absolute encoder-type servo driver.

Positioning



	ltem	CM1-PS02A
Number	of Controlled axes	2
Interpolation		2-axes linear interpolation / 2-axes circular interpolation
C	Control Type	Position, Locus, Velocity, Velocity/Position, Position/ Velocity
C	Control Units	Pulse, mm, inch, degree
Pos	itioning Data	600 / axis
Posit	ioning Method	Absolute or Relative method
	Backup	Flash Rom Backup (Parameter, Positioning data, Block data, Condition data)
		Position control- Absolute / Relative coordinate method
	Positioning Method	Position / Velocity switching control- Relative coordinate method Velocity / Position switching control - Absolute / Relative
		coordinate method Locus control – Absolute / Relative coordinate method
		-214748364.8 ~ 214748364.7 µm
	Absolute	-21474.83648 ~ 21474.83647 inch
	Coordinate Method	0 ~ 359.9999 degree
	nethou	-2147483648 ~ 2147483647 pulse
		-214748364.8 ~ 214748364.7 µm
	Relative	-21474.83648 ~ 21474.83647 inch
	Coordinate Method	-21474.83648 ~ 21474.83647 degree
		-2147483648 ~ 2147483647 pulse
Positioning		0 ~ 214748364.7 µm
	Velocity / Position switching	0 ~ 21474.83647 inch
	control (Relative	0 ~ 21474.83647 degree
	Coordinate)	0 ~ 2147483647 pulse
	Velocity / Position switching control (Absolute Coordinate)	0 ~ 359.9999 degree
		0.01 ~ 20,000,000.00 (mm/min)
	Control Speed	0.001 ~ 2,000,000.000 (inch/min)
	control speed	0.001 ~ 2,000,000.000 (degree/min)
		1~1,000,000 (pulse/ sec)
	ACC/DEC Type	Trapezoidal type, S-shaped type
	ACC/DEC Time	125 ~ 1X106 PPS/sec
Exter	nal Connection	40 Pin Connector
Conne	ector for External	40 Pin Male
Max	. Output Pulse	1 MPPS (Line Driver Pulse output)
M	ax. Distance	10 m
Numb	er of Flash Rom	25 times after power ON

synchronous operation

 \cdot Functions for returning origin point

completion position.

- The user can set up to 600 positioning data
- Features for position control and speed control available
- \cdot Positioning control of a single axis: linear interpolation, separated/synchronous operation
- Positioning control of two axes: speed control, circular/linear interpolation, separated/
- Searching origin point after near zero point is off
- Searching origin point after reducing speed when near zero point is on
- Searching origin point by detecting the origin point and upper/lower limit
- Searching origin point by detecting approximate origin point
- Provides 'Floating Origin Setting function' for positioning from current position to origin

COMMUNICATION

Specification



	ltem	CM1-EC01A	CM1-EC10A	CM1-EC10B	
Standard		10BASE-T 100BASE-TX		100BASE-FX	
Tra	ansmission Speed	10Mbps	10/100Mbps	10/100Mbps	
Trai	nsmission Distance	100m	100m	2km	
c	Consister	UDP 9 Services	UDP 16 Se	rvices	
2	Service Capacity	TCP 9 Services	TCP 9 Services TCP 16 Services		
Transmission Media		UTP/STP Category5	UTP/STP Category5 Auto MDIX	SC, Multi–Mode (1310mm)	
	Loader	Yes(UDP)			
	HMI Protocol	Yes(TCP,UDP)			
	MODBUS TCP SI.	Yes			
65D	MODBUS TCP Ms.	No	Yes	Yes	
SER- VICE	PLC Link(Private Net)	Yes	No	No	
VICE	PLC Link(Public Net)	Yes	Yes	Yes	
	고속 PLC Link	No	Yes	Yes	
	DHCP	No	No	No	
	DNP3.0	No	No	No	

* CM1-EC01A will be serviced until 08. 2018.

ltem		CM1-EC10C	CM1-EC01DNP/EC04DNP
Standard		10BASE-T 100BASE-TX	10BASE-T
Tra	nsmission Speed	10/100Mbps	10Mbps
Trar	nsmission Distance	100m	100m
6	en ice Conseit :	UDP 16 Services	EC01DNP : Single Host
2	ervice Capacity	TCP 16 Services	EC04DNP: 4 Hosts
Transmission Media		UTP/STP UTP/STP Category5 Category5 Auto MDIX	
	Loader	Yes(UDP)	
	HMI Protocol	Yes(TCP,UDP)	
	MODBUS TCP SI.	Yes	
	MODBUS TCP Ms.	No	
SER- VICE	PLC Link(Private Net)	No	No
VICE	PLC Link(Public Net)	No	
	High-speed PLC Link	No	
	DHCP	Yes	
	DNP3.0	No	Yes

Follows IEEE 802.3

• ARP, ICMP, IP, TCP, UDP protocols supported

High-speed linkage to the CIMON PLCS to simultaneously communicate with up to 64 stations

· DNP 3.0 protocol (CM1-EC01DNP, CM1-EC04DNP) supported

PWR RUN ERR SPC UA IN THE COLORED

OPC UA Server

ltem		CM1-EC10OPC	
	Standard	10BASE-T, 100BASE-TX	
Ti	ransmission Speed	10/100M	
Tra	ansmission Distance	100m	
Number of Nodes		1,200	
Max. Number of Monitoring Nodes		200	
	Module Setting	CICON software	
	Protocol	UA TCP (opc.tcp)	
	Max. Client	12	
SER- VICE	Max. Session	5	
	Max. Security Channel	11	
	Max. Message Size	65535	

Item
Conductor
Resistance(Max)
Insulation Resistance (Min)
Inner Voltage Characteristic Impedance
Attenuation

Near-end Crosstalk Attenuation

Ethernet Cable Standard- Twisted Pair (UTP)

U	Value		
Ω/	km	93.5	
MΩ	· km	2500	
V/r	V/min		
<u>Ω(1~10</u>	100±15		
	10	6.5	
dB / 100m	16	8.2	
	20	9.3	
	10	47	
dB / 100m	16	44	
	20	42	

 \ast Since the cable type differs depending on the system configuration and environment, please contact an expert for establishing a connection.



Serial

ltem		CM1-SC01A	CM1-SC01B	CM1-SC02A	
Interface		Ch1: RS232C N/A		Ch1: RS232C	
		N/A	Ch2: RS422/485	Ch2: RS422/485	
	HMI		CIMON Protocol (1:n)		
	Loader		CICON Communication		
Communication	MODBUS	MODB	MODBUS RTU Mode (Slave / Master)		
Mode	PLC link	Communication between CIMON PLCs			
	User- definition	Protocol Program			
	Data Bit	7 or 8–Bit			
Data Type	Stop Bit	1 or 2–Bit			
	Parity		Even / Odd / None		
Synchronization		Asynchronous			
Transmission Speed		300 / 600 / 1200 /	300 / 600 / 1200 / 2400 / 4800 / 9600 / 19200 / 38400 / 76800		
Modem		Long distance	ce communication by external modem		

Item		CM1-SC02C	CM1-SC01DNP	
Interface		Ch1: RS232C	Ch1: RS232C	
Intena	Le	Ch2: RS232C	N/A	
	HMI	CIMON Protocol (1:n)	N/A	
	Loader	CICON Communication	N/A	
Communication	MODBUS	MODBUS RTU Mode (Slave / Master)	N/A	
Communication Mode	PLC link	Communication between CIMON PLCs	N/A	
	DNP	N/A	DNP 3.0	
	User- definition	Protocol Program	N/A	
	Data Bit	7 or 8–Bit		
Data Type	Stop Bit	1 or 2–Bit		
	Parity	Even / Odd / None		
Synchronization		Asynchronous		
Transmissio	n Speed	300 / 600 / 1200 / 2400 / 4800 / 9600 / 19200 / 38400 / 76800		
Modem		Long distance communication by external modem		

 Independent operation by channel with 3rd party protocol RS-232C and RS422/ 485 channels available.

- Reading and writing data through HMI protocol
- Maximum 32 units for HMI communication (RS422/485)
- Modem built in some serial modules to control for PLC in remote field (RS232C)
- A wide range of communication speed (300bps~76800bps)
- \cdot RS232C and RS422/485 communication port can be used as independent channel or linked channel.
- 1:1 / 1:N / N:M (in case of RS422/485) communication
- \cdot RS422 supporting Full–Duplex, and RS485 supporting Half–Duplex (RS485)
- Default parameter setting for RS485 stands the multi-drop communication channel.
- Built-in MODBUS RTU MASTER helps data acquisition from 3rd party device (MODBUS Slave)
- RS422/485 channels are insulated to prevent noise.

CDMA

ltem		CM1-SC02CDMA
Interfa	ce	CH : RS232C / CH2 : RS422/485
	HMI	CIMON Protocol (1:n)
Communication	Loader	CICON Communication
Mode	MODBUS	MODBUS/RTU Mode (Slave / Master)
	User- definition	Dissimilar communication
	Data Bit	7 or 8–Bit
Data Type	Stop Bit	1 or 2–Bit
	Parity	Even / Odd / None
Synchronization		Asynchronous
Transmission Speed		300~76800 bps

Supported CDMA Models / Specifications

Communications Network	Model	Manufacturer	Connection Method	Note
2G	BSM-856	Bellwave	Circuit or Packet	Recommended
(CDMA)	RCU-800	Woojin	Circuit or Packet	
3G(WCDMA)	NTWE-300	NTmore	Packet	Recommended

Easy parameter setting through a dialog box

CIMON - PLC

· CIMON-SCADA fully supports the CDMA (WCDMA) communication.

Packet connection method is only compatible with the CICON loader protocol.

- (Other protocols do not support the packet method.)
- Communication with CDMA Packet / Circuit
- User-selectable CDMA communication network
- Utilizing user program for connection establishment and termination
- Reading and writing data through HMI protocol
- Maximum 32 units for Multi-drop communication
- A wide range of communication speed (300bps~76800bps)
- 1:1 / 1:N / N:M (in case of RS422) communication
- Feature-rich to diagnose errors (Self-diagnosis / Loop-back diagnosis)



CIMON-Net

ltem	CM1-CN01M(Master)	CM1-CN01S(Slave)	
Network Type	CIMON-NET		
Interface	CAN	lbus	
Standard	ISO11898		
Comm. Method	Bus		
Media Access	POLL		
Max. Number of Slave per Segment	63 stations		
Max. I/O Data	2800Byte 512 Byte		
Parameter Setting	CICON (Load	ler program)	

Transmission Distance and Speed					
			- op oo -		
BUS length(m)	0~40	40~300	300~600	600~1000	
Cross section(mm2)	0.25~0.34	0.34~0.6	0.5~0.6	0.75~0.8	
Bit rate(kbps/s)	1000kbps/40m	500kbps/200m	100kbps/500m	10kbps/1km	

Cable Standard

Characteristic of Cable	Cable #1	Cable #2
Impedance	108~132Ω (f=3 to 20MHz)	68~102Ω (f>800KHz)
Electrostatic Capacity	< 30nF/Km2	< 70nF/Km2
Conductor Cross Section	≥0.34mm²(22AWG)	≥0.34mm²(22AWG)

Transmission Distance per Speed

Baud (kbps)	50	125	250	500	1000
Cable #1(m)	1000	500	250	100	40
Cable #2(m)	500	250	100	40	-

· CIMON-NET exchanges real-time data with Remote through the CANbus hardware.

Maximum 63 slave stations available

Maximum 1400 Bytes for each I/O data

Maximum 16 I/O communication blocks

- Flexible communication speed (10K/20K/50K/100K/125K/250K/500K/1000Kbps)
- Auto Scan function for easy to find slave modules
- \cdot Built-in LED to easily monitor network conditions
- Utilizing the scan program to conveniently monitor network conditions
- \cdot Controlling communication flow (Start/Stop) within the scan program
- \cdot Communication configuration integrated into CICON software

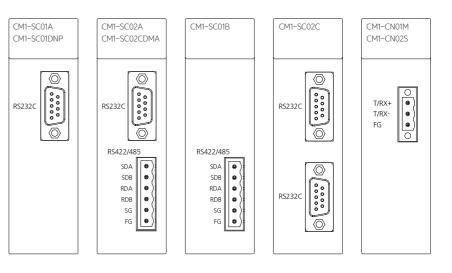


BACnet

ltem	CM1-BN01A	
Protocol Standard	ANSI / ASHRAE 135-1995 (KS X 6909)	
Protocol Stack	UDP / IP	
Standard of Physical Layer	ISO / IEC8802-3 (IEEE 802.3, CSMA / CD, 10Base-T)	
Transmission Speed	10Mbps	
Comm. Method	Base Band	
Max. Length of Segment	100m	
Max. I/O Data Slave	244Byte	
Supporting Service	Loader, BACnet/IP, PLC Link(public Net)	

Functionality of BACnet class 3 servers

• Appearance



CIMON PRODUCT CATALOGUE
CIMON - PLC

- BACnet stands for Building Automation and Control Network.
- BACnet is applicable to various building utilities such as HVAC control system, lighting control system, security system, elevator control system, etc.
- Supports BACnet which is the standard for building automation system (KS X 6909)
- Uses Ethernet for physical communication layer (BACnet IP)

EXPANSION

Specification



• Features

Expansion

ltem	CM1-EP02F	
Number of Expansion Port	2	
Standard	10/100 BASE-T/TX	
Transmission Speed	10/100 Mbps	
Comm. Method	Half Duplex	
Max. Distance (Node – Node)	100m	
Max. Base Expansion	31 (Depending on the specifications of CPU)	
Reset Button	O (Push button)	
Loader Port	O (Mini-B USB)	

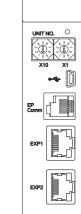
Item	CM1-EP01A	CM1-EP02A	CM1-EP03A
Number of Expansion Port	1	2	3
Standard	10 BASE-T		
Transmission Speed	10 Mbps		
Comm. Method	Half Duplex		
Max. Distance (Node – Node)	100m		
Max. Base Expansion	16		
Reset Button	Х		
Loader Port	Х		

 \cdot It is not recommended to mount the communication module on the base. If done so, the performance of the system or the network can be slowed due to communication delays. · EP02F is suitable to build the redundancy system or install the communication / special

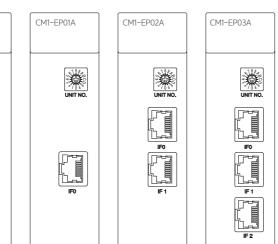
module on the base. · Some special modules such as positioning module (CM1-PS02A) cannot mounted on the base.

- Expansion rank of each base can be differentiated by rotary switches.
- Depending on the specifications of the CPU, CIMON PLC can be expanded up to 16 bases.
- \cdot Follows 10/100 Base-T/TX standard with high-speed communication (10/100Mbps)
- Maximum distance between the expanded segments is 100m

• Appearance

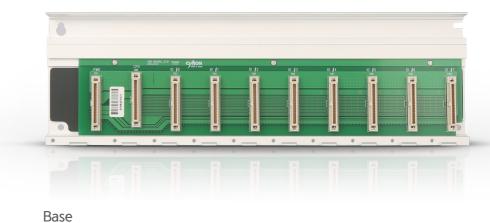


CM1-EP02F





Specification



Model
CM1-BS03A
CM1-BS04A
CM1-BS05A
CM1-BS08A
CM1-BS10A
CM1-BS12A

Base for Redundancy

Model	I/O Slot	Dimension(mm)
CM1-BS05S	5 slot	330 X 109
CM1-BS08S	8 slot	426 X109
CM1-BS10S	10 slot	491 X 109

I/O Slot	Dimension(mm)	Weight(g)
3 slot	183 x 109	240g
4 slot	215 x 109	290g
5 slot	248 x 109	330g
8 slot	344 x 109	465g
10 slot	409 x 109	545g
12 slot	473 x 109	615g

* Please do not mount the Redundancy Power module (CM1-SPR) on the base. It can cause damage or malfunction in the system.

* On the redundancy base, a Redundancy Power module (CM1–SPR) must be installed. The installation of a general power module may cause a malfunction in the system.

54

CIMON - PLC

CIMON NET

Specification



Input Output Relay DC(Sink/Source) Model RC-XD32A RC-XD16A RC-YR16A 32 16 Number of Points 16 Power DC24V DC24V / 2A I/O Voltage / Current DC24V / 7mA AC220 / 2A Off→On 3ms and below 10ms and below Response Time On→Off 3ms and below 5ms and below Common Method 16 points / COM Current Consumption 300mA 500mA External Connection Terminal Connector LED ON when input ON LED ON when output ON Status Display Between Comm. and inner circuit: Photo-Coupler Communication Insulation 1/0 Between I/O and inner circuit: Photo-Coupler Sink/Source Inner Circuit

ltem		Mixed Module		
		DC(Sink/Source)	Transistor(Sink)	
M	lodel	RC-XY32DT		
Numbe	r of Points	1	6	
P	ower	DC	24V	
I/O Volta	ige / Current DC24V / 7mA DC24V / 0.5A			
Response	Off→On	3ms and below	2ms and below	
Time	On→Off	3ms and below	2ms and below	
Commo	on Method	32 points / COM		
Current C	Consumption	nsumption 400mA		
External Connection Terminal Connect		Connector		
Status Display		LED ON when input ON	LED ON when output ON	
Insulation	Communication	Between Comm. and inner circuit: Photo-Coupler		
IIISUIdliON	I/O	Between I/O and inner	circuit: Photo-Coupler	
Inne	Inner Circuit Sink/Source Sink		Sink	

Features

Communication Standard

ltem	Specification	
Standard	ISO11898	
Interface	CAN BUS	
Media Access	POLL	
Comm. Method	Bus	
Cable	Twisted Pair Shielded Cable	
	1000 m (10 kbps)	
	500m (125 kbps)	
Transmission Distance	100m (500 kbps)	
	40m (1000kbps)	
Max. Number of Nodes	63 stations	
Max.I/O Data	8 byte	

- Real-time control of diffused I/O
- Available to build up to 64 stations
- Cost-effective for installation and maintenance
- · Easy system set-up with repair and maintenance
- Simple communication programming - Special program through dialog form
- a convenient all-in-one solution

- Supports numerous I/O of 16-point and 32-point units
- -Auto-scan function offered by CICON software (Auto-searching slaves in the network)
- Combination of CPU, power, I/O, communication function in one module provides
- Simple monitoring for communication condition of remote device
- Auto Baud Rate function reduces extra settings for communication speed
- Supports various communication speed (10K/20K/50K/80K/100K/125K/250K/500K/1000Kbps)
- Prevents noise from the line by communication insulation
- LED for diagnostic functions (Power, Module, Line condition)

Total Solution for Industrial Automation 57

Accessory CM0-DM CM0-TB32M CM1-FM512 Dummy module for empty slot 32-point terminal block Base cap CM0-BAT CM0-CBL15/30 CM0-CBHE05/10/15 Loader cable Expansion cable for XP/CP series CPU battery for data backup CM0-SCB15M CM0-SCB15E CM0-SCB15I Cable for PLC-S I/O 16/16-point module Cable for PLC-S I/O 32-point module Cable for PLC-CM1I/O 32-point module

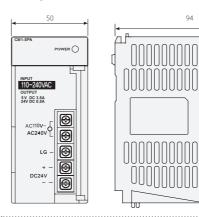
* Terminal blocks and cables provided by CIMON are compatible with those provided by I/O LINK. (CM0-TB32M and CM0-SCB15I can be each connected with cable and terminal block of I/O LINK.) *Please refer to the connection diagram for connection number.

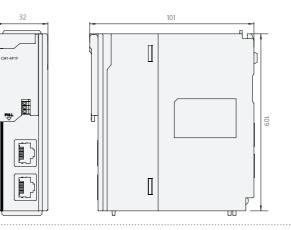
Compatible Cable

Cable Model	PLC Model	Terminal Block
	CM3-SP32MDT	
CM0-SCB15M	CM3-SP32EDT	
	CM3-SP32EDO	CM0-TB32M
CM0-SCB15E	CM3-SP32EOT	
CM0-SCB15I	CM1-YT32B	
	CM1-HS02C/F	
	CM1-HS02E	

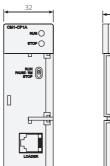
DIMENSIONS

•XP/CP





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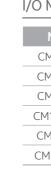


32

/1-YR16A

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Power Module

Unit: mm

Model	Weight
CM1-SP*	278g
CM1-SP2B	270g

CPU Module	Unit: mm

Model	Weight
CM1-XPnF/1S	150g

CPU Module Unit: mm

Model	Weight	Model	Weight
Model	weight	Model	weight
CM1-XP*E	138g	CM1-XP*A/1R	157g
CM1-CP3E	138g	CM1-CP4E	127g
CM1-CP4F	137g	CM1-CP3A/B	135g
CM1-CP3U	153g	CM1-CP3P	139g
11-CP4A/B/C	130g	CM1-CP4D	133g
CM1-CP4U	137g		

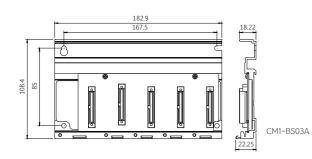
I/O Module

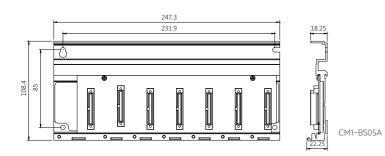
Unit: mm

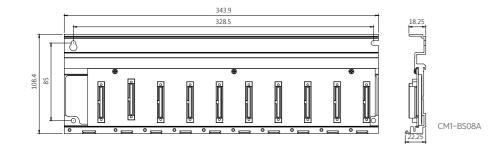
Model	Weight	Model	Weight
CM1-YT16*	159g	CM1-DA08I	219g
CM1-YT32*	122g	CM1-DA08V	197g
CM1-EC01*	111g	CM1-RD04A	194g
M1-AD04VI	193g	CM1-TC04A	200g
M1-AD08I	195g	CM1-SC***	118g
M1-AD08V	194g		

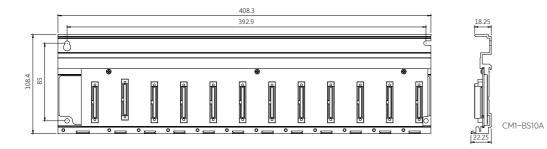
Comm. Model and other model's weight is same as IO model

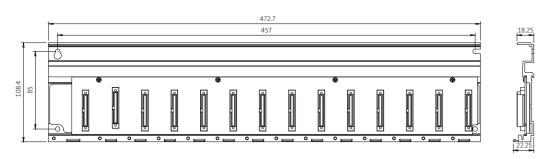
• XP/CP Series Base













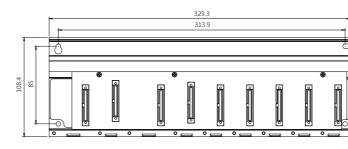
CM1-BS04A

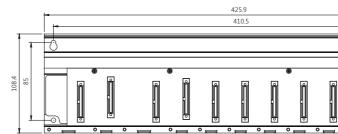
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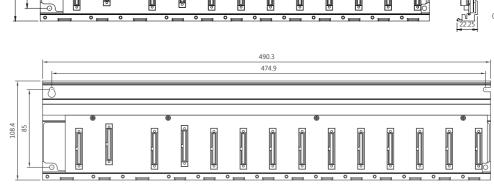
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CM1-BS12A

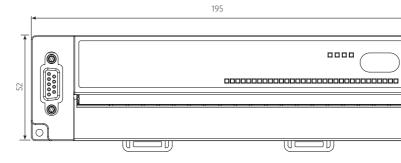
215.1 199.7 Redundancy Base

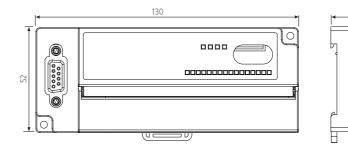


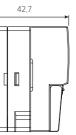


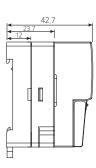


CIMON NET













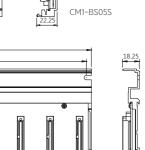
CM1-BS008S

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f

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18.25 CM1-BS05S Unit: mm

CIMON PRODUCT CATALOGUE

60

PLC GENERAL SPECIFICATION

ltem		Specif	ication		Standard
Operating Temperature	-10°C ~ 65°C		-		
Preserving Temperature		-25℃	~ 80°C		-
Operating Humidity		Relative Humidity 5 ~ 9	5%, Avoid condensation	1	-
Preserving Humidity		Relative Humidity 5 ~ 9	5%, Avoid condensation		-
		Intermitter	nt Vibration		IEC 61131-2
	Frequency (Hz)	Acceleration (s)	Amplitude (mm)	Number	
	5≤f<9Hz	-	1.75mm	10 times for each direction	
Inner Vibration	9≤f≤150Hz	9.8m/s ² {1G}	-	X, Y, Z	
		Continual	Vibration		IEC 61131-2
	Frequency (Hz)	Acceleration (s)	Amplitude (mm)	Number	
	5≤f <9Hz	-	3.5mm	10 times for each direction	
	9≤f≤150Hz	4.9m/s ² {0.5G}	_	X, Y, Z	
Inner Impact	Pulse wave:	Maximum impact acceleration: 147m/s2{15G} Impression time: 11ms e: a sine half–wave pulse (3 times for each direction ±X, ±Y, ±Z)		IEC 61131-2	
	Square Wave Impulse Noise	±2kV		CIMON Internal Test Standard	
	Electromagnetism Discharge	Voltage: ±4kV(0	Voltage: ±4kV(Contact Discharge), ±8kV(Air Discharge)		IEC 61131-2 IEC 61000-4-2
Inner Noise	Radiation EMF Noise		80~1,000 MHz, 10V/m		IEC 61131-2 IEC 61000-4-3
		Power	r, CPU	3kV	
	FAST Transient Burst	Digital/Analog I	/O module (AC)	2kV	IEC 61131-2
	Noise	Digital/Analog I/O module (DC)		IEC 61000-4-4	
		Communica	tion module	- 1kV	
Ambient Conditions	No corrosive gas and no dust				
Operating Altitude			2,000m or less		
Pollution Level	2 or less				
Cooling System	Natural Air Cooling				

CIMON PLC LINE-UP

lt	em	Model	
		CM1-XP1R	128K step / 8192 pts / RTC / USB Pol
	CPU	CM1-XP1S	128K step / 8192 pts / RTC / USB Port F/W Upgrade / Ring e
	Redundancy	CM1-RC01A	10 Mb
	Communication	CM1-RC10A	100 MI
	Redundancy MMI	CM1-RM01B	Redundancy Settin
Redundancy	Expansion	CM1-EP03A	10 Mbps CPU Redu
		CM1-BS05S	5 slo
	Redundancy Base	CM1-BS08S	8 SI
	Dusc	CM1-BS10S	10 sl
	Redundancy	CM1-SPR	Rei 5V 3A / +15V 0.5A
	Power	CM1-RPW	Redundancy
		CM1-XP1A	128K step / 75 ns / 8192 pts / RT
		CM1-XP2A	64K step / 75 ns / 4096 pts / RTG
		CM1-XP3A	64K step / 75 ns / 2048 pts / RTG
		CM1-XP1E	128K step / 8192 pts / RTC / USB Port / Floa
	High	CM1-XP2E	128K step / 4096 pts / RTC / USB Port / Floa
	Functional	CM1-XP3E	128K step / 2048 pts / RTC / USB Port / Floa
	CPU	CM1-XP1F	128K step / 8192 pts / RTC / USB Port F/W Upgrade / Ring exp
		CM1-XP2F	128K step / 4096 pts / RTC / USB Port F/W Upgrade / Ring exp
		CM1-XP3F	128K step / 2048 pts / RTC / USB Port F/W Upgrade / Ring exp
CPU		CM1-CP3E	64K step / 1,536 pts / RTC / USB Port F
		CM1-CP3A	32K st
		CM1-CP3B	32K step
		CM1-CP3P	32K step / 1024
		CM1-CP3U	32K step / 1024
		CM1-CP4E	16K step / 384 pts / RTC / US
	CPU	CM1-CP4F	16K step / 384 pts / RTC / USB Port
		CM1-CP4A	16K step
		CM1-CP4B	16K step /
		CM1-CP4C	16K step / 384
		CM1-CP4D	16K step / 384
		CM1-CP4U	Maximum in
			Pulse wave: a sine half-wa



Specification
ort / Floating point arithmetic / Expandable / Redundancy

USB Port / Floating point arithmetic / Expandable/ SFC Language / e / Ring expansion(Electricity) / RS232 / Redundancy 10 Mbps Redundancy Data Sync 100 Mbps Redundancy Data Sync ncy Setting MMI (Primary/Secondary, test button) CPU Redundancy expansion, Built-in 3Ports Hub 5 slot power expansion base 8 Slot power expansion base 10 slot power expansion base Redundancy power supply +15V 0.5A / -15V 0.2A / 24V 0.2A AC100V~240V lundancy power supply monitoring module 2 pts / RTC / USB Port / Floating point arithmetic / Expandable pts / RTC / USB Port / Floating point arithmetic / Expandable B pts / RTC / USB Port / Floating point arithmetic / Expandable Port / Floating point arithmetic / Expandable/ SFC Language / F/W Upgrade Port / Floating point arithmetic / Expandable/ SFC Language / F/W Upgrade Port / Floating point arithmetic / Expandable / SFC Language / F/W Upgrade USB Port / Floating point arithmetic / Expandable/ SFC Language / ['] Ring expansion(Electricity) / RS232 / Built-in Ethernet USB Port / Floating point arithmetic / Expandable/ SFC Language / Ring expansion(Electricity) / RS232 / Built-in Ethernet USB Port / Floating point arithmetic / Expandable / SFC Language / Ring expansion(Electricity) / RS232 / Built-in Ethernet USB Port / Floating point arithmetic / Expandable/ SFC Language / F/W Upgrade / RS232 32K step / 1024 pts / Expandable 32K step / 1024 pts / RTC / Expandable tep / 1024점 / RTC / Expandable / ROM PACK tep / 1024 pts / RTC / USB Port / Expandable RTC / USB Port / SFC Language / RS232 / Not expandable JSB Port / SFC Language / RS232 / RS422(485) / Not expandable 16K step / 384 pts / Not expandable 6K step / 384 pts / RTC / Not expandable ep / 384 pts / RTC / RS485 / Not expandable ep / 384 pts / RTC / RS485 / Not expandable ximum impact acceleration: 147m/s2{15G}

Impression time: 11ms

e half-wave pulse (3 times for each direction $\pm X$, $\pm Y$, $\pm Z$)

lter	n	Model	Specification
		CM1-SPA	Input: AC 100–240VAC / 40W / Output: 5V 3.5A, 24V 0.3A
5	Power	CM1-SPC	Input: AC 100-240VAC / 60W / Output: 5V 3.5A, +15V 0.5A, -15V 0.3A, 24V 0.3A
Power	Supply	CM1-SP2B	Input: DC 19–28VDC/ 50W / Output : 5V 3.5A, +15V 0.5A, –15V 0.3A
		CM1-SPW	Input: DC 70-110VDC/ 60W / Output : 5V 3.5A, +15V 0.5A, -15V 0.3A, 24V 0.3A
		CM1-EP02F	100Mbps, Ring Expansion, Electricity 2 Port
Expanded		CM1-EP01A	10Mbps, Electricity 1 Port
ommunication	Expansion	CM1-EP02A	10Mbps, Electricity 2 Port
		CM1-EP03A	10Mbps, Electricity 3Port, CPU for Redundancy
		CM1-BS03A	3 slot Base
		CM1-BS04A	4 slot Base
-	-	CM1-BS05A	5 slot Base
Base	Base	CM1-BS08A	8 slot Base
		CM1-BS10A	10 slot Base
		CM1-BS12A	12 slot Base
	070	CM1-RD04A	Pt100, JPt100, 4 Ch
-	RTD	CM1-RD04B	Pt1000, Ni1000, 4 Ch
Thermometer	TC	CM1-TC04A	Thermocouple (K, J, E, T, B, R, S, N), 4 Ch
	Thermistor	CM1-TH08A	NTC type Thermistor, 8 Ch
		CM1-XD16E	DC 24V Input / 16 pts / Sink & Source / ON Voltage 19V / OFF Voltage 11V
		CM1-XD16B	DC 24V Input / 16 pts / Sink & Source / ON Voltage 15V / OFF Voltage 12V
		CM1-XD32B	DC 24V Input / 32 pts / Sink & Source / ON Voltage 15V / OFF Voltage 12V
	Input	CM1-XD32E	DC 24V Input / 32 pts / Sink & Source / ON Voltage 19V / OFF Voltage 11V
		CM1-XD64C	DC 24V Input / 64 pts / Sink & Source / ON Voltage 19V / OFF Voltage 11V
		CM1-XD64E	DC 24V Input / 64 pts / Sink & Source / ON Voltage 19V / OFF Voltage 11V
		CM1-YR16E	Relay Output / 16 pts / 2A
Digital I/O		CM1-YT16E	TR Output / 16 pts / 0.5A SINK
		CM1-YT16F	TR Output / 16 pts / 0.5A SOURCE
	Output	CM1-YT32E	TR Output / 32 pts / 0.2A SINK
		CM1-YT32F	TR Output / 32 pts / 0.2A SOURCE
		CM1-YT64A	TR Output / 64 pts / 0.2A SINK
		CM1-YT64E	TR Output / 64 pts / 0.2A SINK
	I/O	CM1-XY16E	DC 24V Input 8 pts / Relay Output 8 pts 2A
		CM1-AD08V	AD 14 bit / 8 ch / Voltage Input
		CM1-AD08I	AD 16 bit / 8 ch / Current Input
Analog I/O	AI	CM1-AD16VI	AD 14 bit / 16 ch / Voltage, Current Input for common use
-		CM1-AD04VI	AD 14 bit / 4 ch / Voltage, Current Input for common use
		CM1-AD04W	AD 16 bit / 4 ch / Voltage, Current Input for common use, Insulation between channels
		CM1-DA04V	DA 14 bit / 4 ch / Voltage output (-10~+10V)
		CM1-DA04VA	DA 14 bit / 4 ch / Voltage output (0~+10V)
		CM1-DA08V	DA 14 bit / 8 ch / Voltage output (-10~+10V)
Special	AO	CM1-DA08VA	DA 14 bit / 8 ch / Voltage output (0~+10V)
		CM1-DA04I	DA 14 bit / 4 ch / Current output (4~20mA)
		CM1-DA08I	DA 14 bit / 8 ch / Current output (4~20mA)

lte	m	Model	Specification
		CM1-HS02C	2 ch, 200kpps, Encoder PNP Open Collector (-Common)
	High-speed Counter	CM1-HS02E	2 ch, 250kpps, Line Drive Encoder
	counter	CM1-HS02F	2 ch, 200kpps, Encoder NPN Open Collector (+Common)
		CM1-WG02C	2 ch, Strain gauge Type, Resolution 1/40000, 2mV/V Input (Standard Type)
Special	Loadcell	CM1-WG02D	2 ch, Strain gauge Type, Resolution 1/40000, 2mV/V Input (Dynamic Type)
		CM1-WG02E	2 ch, Strain gauge Type, Resolution 1/40000, 3.6mV/V Input (Wide Range)
	Data Logger	CM1-LG02G	10/100/1000BaseT(Mbps), TCP/IP CIMON HMI Protocol
	Desitioning	CM1-PS02A	2 axes, Linear/Circular Interpolation, 1Mpps, Line Driver Output
	Positioning	CM1-PS08N	EtherCAT, 8-axes positioning
		CM1-SC02A	Port 1 : RS232C / Port 2 : RS422/485
	Serial (RS232C /	CM1-SC01A	Port 1 : RS232C / Port 2 : None
	(RSZSZC / 422/485)	CM1-SC01B	Port 1 : None / Port 2 : RS422/485
		CM1-SC02C	Port 1 : RS232C / Port 2 : RS232C (Null Modem)
		CM1-EC01A	10Base T(10Mbps), UDP/IP 9 Service, TCP/IP 9 Service
	Ethernet	CM1-EC10A	100Base TX (100Mbps), UDP/IP 16 Service, TCP/IP 16 Service
	Ethernet	CM1-EC10B	100BASE FX(100Mbps, Optical communication), UDP/IP 16 Service, TCP/IP 16 Service
		CM1-EC10C	100Base TX (100Mbps), UDP/IP 16 Service, TCP/IP 16 Service, DHCP (Dynamic IP)
Communication	OPC UA	CM1-EC100PC	OPCUA server, 10/100Mbps, UA TCP(opc,tcp)
		CM1-SC01DNP	DNP3.0 Protocol, Level 2 Slave, RS232C 1 Port
	DNP3.0	CM1-EC01DNP	DNP3.0 Protocol, Level 2 Slave, 10BaseT (10Mbps),TCP/IP, UDP/IP
		CM1-EC04DNP	DNP3.0 Protocol, 4Hosts, 10BaseT (10Mbps),TCP/IP, UDP/IP
	BACnet	CM1-BN01A	BACnet / IP, Class 3 Slave, 10BaseT (10Mbps)
	CDMA	CM1- SC02CDMA	CDMA(Packet or Circuit Mode), WCDMA (3G, Packet Mode) Modem communication, RS232C RS422/485 Wire-Wireless
		CM1-CN01M	CIMON-Net Master, CANbus, I/O Capacity: 1,400Byte
	CIMON-NET	CM1-CN01S	CIMON-Net Slave, CANbus, I/O Capacity: 255 Byte

CIMON-NET

Item		Model	
	I/O	RC-XY32DT	Input/Output, DC2
CIMON-	loout	RC-XD16A	
NET	Input	RC-XD32A	
	Output	RC-YR16A	

Accessory

	Model	Item
Dummy mo	CM0-DM	Dummy
Flash r	CM1-FM512	MEMORY
Programming cabl	CM0-CBL15/30	Loader Cable
Screw Type, 3	CM0-TB32M	Terminal Block
Used with CM0-TB3	CM0-SCB15I	Wiring Cable
Dust-proof cover for e	CM0-BSCVR	Dust-proof Cover
Battery Ass'y	CM0-BAT	Battery

~		C 1		
S m	eci		- T T	
	1-1-1-1			U. I.

C24V 16 pts(Sink/Source), 0.5Amp, TR Sink 16 Pts, 0.5Amp

Input, DC24V 16 pts (Sink/Source)

Input, DC24V 32 pts (Sink/Source)

Output, RELAY 16 pts, AC220V 2Amp

Specification

odule (Replacement for empty slot of the base)

n memory pack for CM1–CP3P (512 kbytes)

ble (CICON software, RJ11 ↔ DB9 Connector 1.5/3.0 m)

, 32 pts, Terminal block (Used with CM0–SCB15x)

332M / CM1-YT32B, HS02C, HS02E module wiring cable

empty slot of XP/CP Series Base (Prevents dust or debris)

'y for XP/CP Series CPU (3V Lithium, CR 1/2 AA)

CICON PERFORMANCE

Variety of PLC connection

RS232/422/485, USB cable, and Ethernet

Supports multiple connection interfaces such as

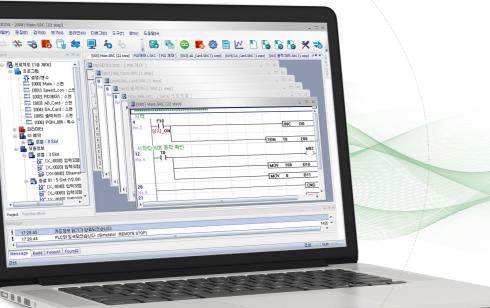
CICON is a PLC program editor/compiler that loads user-created programs directly to the PLC. The software comes with a rich set of features and provides an easy, intuitive interface to save time on development and maximize system performance.



Easy PID control

Convenient functions such as managing historical data, trends, screen shots, etc.

0-



Function Block (FB) Language

The FB language can be used with all CIMON PLC/CPU models. Features included are "FB Extension" mode for advanced programming, "System Library" for controlling special cards, "Backup/Recovery" for safe programming and a user manual which includes examples and instructions to ease the programming experience. (Supported in CICON software V6.00 or above)

HMI Protocol

With the HMI protocol, communication can be established between CICON, PLC Simulator, and SCADA or CICON and Xpanel. Test program performance by simply configuring communication settings without worrying about converting CIMON SCADA or CIMON Xpanel projects.



FB

Providing wide assortment of PLC languages

Programs can be designed with PLC languages such as IL, LD, SFC, or FB. (The SFC language cannot be used in XPnA and CPnA model.)

PLC permission mode

Provides security function to protect programs from unauthorized users (Supported in CICON software V7.00 or above)



PLC simulator

Virtually run scan programs and special card settings without having to connect the PLC to the Software



Interactive dialog

Provides interactive dialogs for various functionalities such as configuring communication settings, positioning, PID control, Special card settings, etc.



0



Backup and recovering PLC information

CICON software lets the user manage the PLC programs safely and easily with auto-backup and cloning functionality. With Upload/Download project, Upload/ Download SD card, and Upload/ Download Special Card Initialization Program features, the user will be able to backup or restore the PLC information.



Variety of themes

There are at least 100 themes for the software.



Quick and easy programming

CICON software provides functions to help save program development time. Contacts can be increased automatically by clicking and dragging on the ladder. In the variable editor, the device address can quickly be edited in the additional edit menu.

CICON

• Creating a project



Communication Setup

Serial / Dial-up Modem / Leased Line / Ethernet / USB cable / simulator connection

Communication Se	etup			×
С Туре ————			1	
Ethernet(E)	USB(U)	Serial(S)	Device	Manager(M)
Leased Line(L)	Dial-Up(D)	Simulator(T)	Scann	ing PLC(P)
	< U	SB (<u>A</u>)>	J	
Timeout:	5	\$ sec		
Retry:	2	times		
Default(I)			OK(0)	Cancel(C)

PLC Parameter

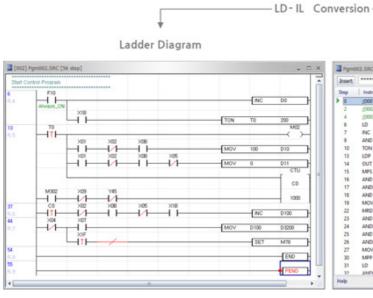
Basic operation / Latch Area Setup / CPU error manipulation / communication port setup

Action	Timer
Override the instruction error.	100mSec. 0000 . 127 .
Allow DO while debugging.	10mSec. 128 - 511
Communication	Watch Dog Timer
Permit data writing from remote.	Enable Period: 50 🌲 mSe
Permit CPU mode change from remote. Hot Restart	Upload Prohibit Program Upload (Replace with Permission mode)
	0 hour 0 n min 2 sec
Expansion	
Enable Number of expans	ion bases

PLC program

- Scan program: Ladder Diagram program
- Communication program: Interactive dialog formed program for communication
- Special program: Interactive dialog formed program for Special card control
- SFC program: Sequential Function Chart program

gm000	ID: 0	ConlineEdit Buffer : 0				
D Program		Communication Configuration				
	zation	Serial Protocol DNP3.0 PLC Link(Public IP) Setting Fieldbus MODBUS/RTU Master Ethernet Protocol HighSpeed Link(E) MODBUS/TCP Master				
pecial Configuration	on —	CIMON-NET Master				
Beto Start initialization Periodic Interrupts Special Configuration Special Card init. PID Control Thermistor Loadcel BP32A BP32B BP32B BY32B Sector PLC-S Positioning for PLC-S JO Input Filter	CIMON-NET Slave					
10 Input Fiter		SFC Program				
		E SFC Program				
escription						



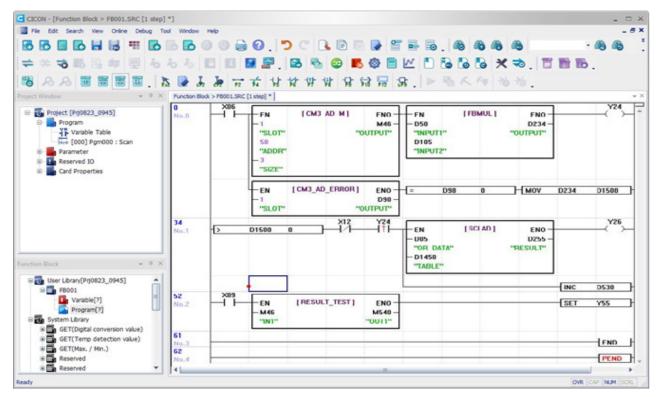
CIMON - CICON

Input In	1)
anyou an	structi	on —					2	
Instruct	ion: Ff	ROM HO	004	11 D5	4	Ŧ	Search	Help
All Contact Output Master C Termina Program Structur	Control tion Branch e Crea	h tion			ABRST ACOS ACOSP ADD ADDP < <=			Î
Control	Intarn.	*			**			-
Information Format: FROM (n1) (n2) (D) (n3) Desc: Reads n3 Pieces Of Word Data In User Program Memory n2 Of Optional Card n1(SLot Number) And Stores The Result In D.								
		FROM	_	H0004	11	D5	4	
Result:			_				-	-
			_					-
Result: Operand	<u>ا</u>		¥	H0004	,			-
	j	Const	9 9	H0004	•			-
	j	Const Const	9 9 9		•			-
	(n1) (n2) (D)	Const Const	9 9 9	11				-

Instruction List

Inset				*** * Format				
Step	Instruction	091	OP2	OP3	OP4	OP5	Current State	Ŀ
• 0	;[0001:]			•				
2	;[00021]Start C	ontrol Program	-					
4	;[0003:]*****			-				
6	LD	F10						
7	INC	D0						
9	AND	X18						1
10	TON	TD	200					
13	LOP	TD						
14	OUT	M02						
15	MPS							
16	AND	X01						
17	AND	302						
18	AND	X08						
19	MOV	100	D10					
22	MRD							
23	AND	301						
24	ANDI	3002						
25	AND	X08						
26	AND	305						
27	MOV	0	D11					
30	MPP .							
31	LD	M302						
32	ANITY	109						

• FB (Function Block) program



Full System Library

Comes with a collection of 200 system libraries. Additional system libraries may be downloaded from the Cimon website.

Supports All CPU types

Function Blocks are supported for the full range of CIMON PLCs. (Please refer to the corresponding manual for Extension mode.)

Extensive Options

Provides various string configurations as well as color configurations for Function Blocks.

• Easy to Program

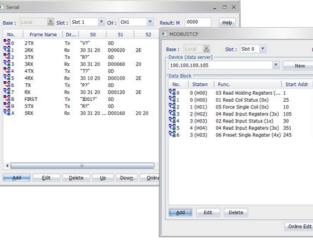
Simply add Function Blocks with preconfigured settings.

PLC Download/Upload

Function Blocks can be downloaded to the PLC and uploaded to the CICON software.

Communication / Special program (Interactive Dialog)

· User protocol (Serial) program / Modbus TCP Master program / Fieldbus Program



· High-speed Counter program / Load Cell program / Thermistor Program

Pgm005			- = ×									
0 - 1100	Channel V	Current Count Input Puls	ve/ Unit Time Monitor									
Channel Configuration — Enable Count	Enable Cmp.	Output(Y) Latch Count	Enable Ext. Preset	L		Pgm002						- 0
ltem	Device	SV(Download when changed)	PV(No Edit allowed									
Count Mode	D1100	Linear Counter				Base : I	local	Slot : Slot	t0 💌			Help
Input Pulse Type	D1101	2 Phase, 2 Multiplication	-									
Compare Mode	D1102	Current Count < Cmp.Value	Pgm001			Setting	Table					
Int. Preset Val	D1103	0										
Ext. Preset Val	D1105	0	Base : Local 💌	Slot: Slot 2	 OH : CH1 							
Ring Counter Max	D1107	0					Status	Digital Range	Digital Filter	Average OP	Device	
Max. Compare Value	D1109	0	Channel configuration			🕷 Ch 1	Enable	-192~16192	Don't use	Don't use	K0050	
Min. Compare Value	D1111	0				Ch 2	Enable	0~16000	20	5	M0020	
Compare Output	D1113	Y0010	Weighing Mode	Indicator mode		💼 Ch 3	Enable	-8192~8191	15	Don't use	M0030	
Unit Time (mSec)	D1114	1				🛋 Ch 4	Enable	0~16000	20	55	M0040	
Pulse per 1 Cycle	D1115	1	Max. Weight	1000000	Stable Range	Ch 5	Enable	-8192~8191	15	15	M0050	
RPM (1) /PPS (0)	D1117	0				🛋 Ch 6	Enable	0~16000	20	55	M0060	
			Min. Scale	1	Stable Time(x100ms)	🛋 Ch 7	Enable	0~16000	20	55	M0070	
			and a state of the second			Ch 8	Enable	-8192~8191	Don't use	Don't use	M0080	
4			Near Zero Range	10	Auto Zero Range							
			Digital Filter Constant	50	Auto Zero Time(x100ms)							
tatus Flags			(0 - 90%)									
Enable Count	Internal	Preset Req. Enable Ext. P	Avr. Window Size (3 - 15 Samples)	10	Hysterisis Range							
Enable Cmp. Out	ON : RP	M / OFF : PPS Latch Count		10	Hysterisis Time(x100ms)	Edit		Status		Online Edit	Save	Close
Carry	Borrow	Cmp. Output										
Save Or	line Modify		-			-						
			Status 0	Online Edit	Write Read	Close	_					

• PLC Link (PLC parameter): Enables communication between CIMON PLCs / Data Logger Module



ogger Module ase: Local Network Lo Log Type: Sample: (No 80 1 2 3 4 5 6 7 8 9 10 11 2 3

li	tem	User Library	User System Library	System Library
A	uthor	Us	ser	Built-in
Save	ed Path	Project	CICON s	oftware
FB Edit	Variable	Available	Not Available	(Readable)
FB EUIL	Program	Available	Not Available (Not readable)
Reuse (Bet	ween Projects)	Available after export	Alw	ays
Max. Ca	pacity of FB	128	102	24

* The system library may be updated by adding additional files in the system library folder without having to reinstall the CICON software.

* The latest system library files may be downloaded from the CIMON website.

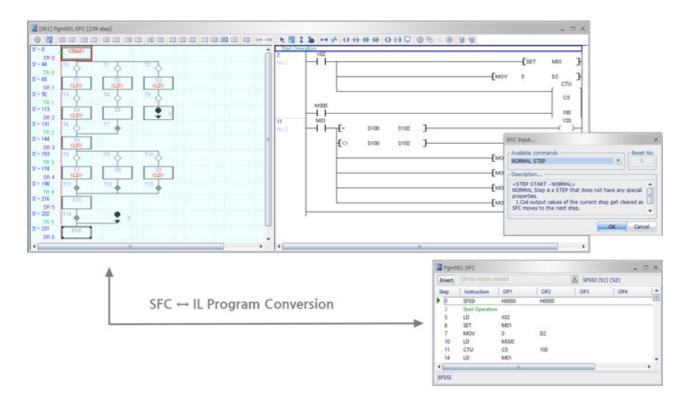
MON RODUCT CATALOGUE CIMON - CICON

No Device V0 Device V2 X0000 V2 M0000 V2 M0000 </th <th></th> <th></th> <th>FieldBu</th> <th>s Mo</th> <th>dule :</th> <th>Statu</th> <th>5</th> <th></th> <th></th> <th></th> <th></th> <th></th>			FieldBu	s Mo	dule :	Statu	5					
			Varsio				0.00					
	Word											
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2 M0000 1 2 3 L0000 1 2 4 K0010 5 2 5 D00100 5	10											
€23 L0000 €24 K0010 €25 D00100			Start/	Stop:		Sto	p			-	ink/S	to
			1			-	100				-	-
0100	30		LINK S	Calue	LINK -		7 50	8 ·	-	Enor	_	10
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			10	-24	222	20	24	10	10	-12	20	ľ
			20	21	22	23	24	20	20	27	20	
						43		-30	10	37		
					44	43		40	40			
			00	64	62	62	100	45		67		
			20	71	72	73	74	7%	76	27		
					82	83	84	85	86	87	88	
				91	92	91	98	95	96	57	90	ì
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Online Ex	4 1 4	Write										
	Device 0000 00000 0000 0010 00100	Device Word 0000 1 00000 10 0000 100 0010 50 00100 50 0000 000	Verke Word 0000 1 00000 10 0000 10 0010 50 00100 50 Delete Edc	LL Version Device Word Version 0000 1 Status 0000 100 Status 0000 100 Status 0010 50 Lik 5 0010 50 Lik 5 0010 50 00 0010 50 00 0010 50 00 0010 50 00 0010 50 00	Let. Version: Version: Version: Version: Version: Version: Version: Version: Version: Version: Version: Start/Stop: 0000 10 Start/Stop: 0010 50 0010 50 Version: Start/Stop: 0010 10 Start/Stop: 0010 10 0010 10 Start/Stop: 0010 10 Start/Stop	LL Version: Ver	Li Version: 0.0 0000 1 Status Code: 94 0000 10 Start/Stop: Start/Stop: Start/Stop: 0010 50 100 Start/Stop: Start/Stop: Start/Stop: 0010 50 10 Start/Stop: Start/Stop: Start/Stop: 0010 50 10	Version: 0.00 1 Status Code: 94151 () 00000 10 Status Code: 94151 () 00001 100 Status Code: 94151 () 00001 100 Status Code: 94151 () 00001 100 Status Code: 94151 () 000100 50 Status Code: 94151 () 00110 50 Status Code: 94151 () 001110 50 Status Code: 94151 () 0011110 50 Status Code: 94161 () 001110 50 Status Code: 94161 () 001110 50 Status Code: 94161 ()	Li Version: 0.0 Device Word Status Code: 34151 (6567) 0000 10 Status Code: 34151 (6567) 0000 100 Status Code: 34151 (6567) 0001 50 Status Code: 500 0010 50 Status Code: 500 0011 2013 34 500 0011 2013 34 500 0011 2013 34 500 0011 2013 34 500 0011 2013 34 500 0011 2014 45 500 0011 2014 40 65 00111 2014 40	Li Version: 0.00 0000 1 Status Code: 94152 (6567H) 0000 10 Status Code: 94152 (6567H) 0000 100 Status Code: 94152 (6567H) 0010 50 Status Code: 515 0010 50 Status Code: 516 0010 50 Status Code: 516 0010 30 4 516 0010 50 Status Code: 516 0010 30 31 36 516 0010 50 Status Code: 516 516 0010 50 Status Code: 516 516 0010 50 Status Code: 516 516 0010 510 Status Code: 516 516 0010 512 Status Code: 516 516 0010 512 Status Code: 516 516 0010 512 Status Code: 516 516<	Li Version: 0.00 0000 1 Status Code: 94151 (8567H) 0000 10 Status Code: 7500 0010 50 Status Code: 700 0010	Li Version: 0.00 0000 10 Stahus Code: 41351 (SS67N) Eese 0000 10 Stahus Code: 41351 (SS67N) Eese 0000 10 Stahus Code: 4135 (SS67N) Eese 0010 50 10 100 100 Eese 0100 20 <t< td=""></t<>

etup		Status		×
 Slot: 	Slot0	Version:	[OS: 1.00] [App	o : 0.94]
		Error Code:	0 (0000)	Reset
ampling •	Time synchronization cycle(1	Module Status:	Logging	Logging Stop/Start
1000 🛟	msec	Comm Status:	On-Line	
Device	Type	Client Num:	1	
X0010 Y0010	Bit Bit	Log Data:	OFF	Trigger to Log
M0050 M0500	Bit.	CPU Invalid Con	v. Time: 2000/00	/00 00:00:00
M0200 M0221	Bit. Bit.	CPU Valid Conv.	Time: 2018/08	/13 11:56:42
M0222	Bt	Memory Usage :	(0)	rerflow]99%
M0223	Bit			
40224	Bit			
M0225	Bit			
L0010	BIC			
F0010	BR			
*****	1974.00 M	Delete Al Log	oed Data	Close

• SFC (Sequential Function Chart) program

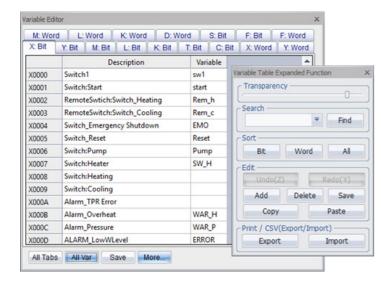
• (Supported CPU type: XPnB, PLC-S)



Variable Editor

Variable file backup, CSV Export / Import, Print, Paste on the excel

* Not supported on CP3A/B/P/U, CP4A/B/C/D/U, XP1A/2A/3A/1R CPU type



Firmware Upgrade

(Supported CPU type: XPnB, MP, PLC-S)

* Not supported on CP3A/B/P/U, CP4A/B/C/D/U, XP1A/2A/3A/1R CPU type



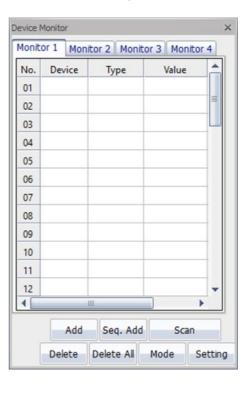
PID Auto-tuning

• Provides importing and exporting CSV files, saving history settings, and saving screens features.

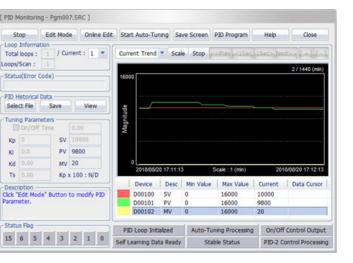
Current Value -> Set Value Current Loop Entre Loops LD Con	vert	Trend	Description
No. of Loop	t Data of Pl	D Control	
Total 1 V Loops/Scan 1 V PID	NIT D	0 PIE	CAL D 100
Index	Device	Set Value	Current Value
Path Calc(Forward(0) Reverse(1))	D00002	Forward	0
Sampling Time(0.01 - 60 sec)	D00003	10.00	10.00
Kp(1 - 65535)	D00004	8000	8000
Ki(0.0 - 3000 sec)	D00005	200.0	2000.0
Kd(0.00 - 300 sec)	D00006	0.00	0.00
Filter(0 - 0.99)	D00007	0.20	0.20
MV Low Limit(0 - 16000)	D00008	0	0
MV High Limit(0 - 16000)	D00009	16000	16000
MV Change Rate Limit(1 - 16000)	D00010	16000	16000
MV Auto-Apply(Disabled(0) Enabled(1))	D00011	Disable	0
SV Ramp(0 - 1000 0:Disabled)	D00012	0	0
On/Off Time(0.00 - 60.00)	D00014	0.00	0.00
SV(Set Value : 0 - 16000)	D00100	0	0
PV(Process Value : 0 - 16000)	D00101		498
MV(Manipulation Value : 0 - 16000)	D00102		75
PVnt(After Filter)	D00103		0
MV Manual(0 - 16000)	D00104	0	0
(0:Auto 1:Manual)	D00105	Auto	0
Self Learning(Disable(0) Enable(1))	D00105	Disable	0
Kp x 100 (1)	D00105	-	0
Auto Tuning initial stabilization ratios (0.00 ~ 10.00%).	D00011	0.00	0
Auto Tuning initial stabilization time (0-10 minutes)	D00011	0	0
PID Error Code	D00015	0	0
PID Status Code	D00016		1



Monitors device memory in real-time







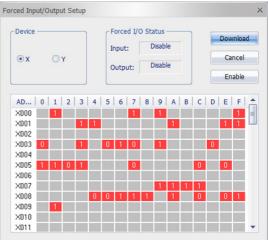
Memory Monitor

View all CPU device memory addresses

X Dev		1	• 1	NT			₹	As	cend	ling I	Bit	Ŧ							
CARD	0	1	2	3	4	5	6	7	8	9	A	В	C	D	E	F	DEC	HEX	-
X000	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5	H0005	
X001	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1025	H0401	
X002	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	-16382	HC002	
X003	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	-32766	H8002	
X004	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	H0000	
X005	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	H0000	
X006	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	H0000	
X007	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	H0000	
X008	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	H0000	
۰																		•	

Forced Input / Output Setup

Supports forcing input and output signals



PLC diagnosis

· Monitors errors that occur in the CPU or other special modules and provides possible solutions. (Requires CICON V7.00 and above)

Type :	CM1-X	P3E	Mode :	REMOTE RUI	Sci	n Time :	1msec	Change Model	H) Error Reset(E)
yw :	V6.13		Error Code :	0x0000	No	Errors			
LC Sta									
84	ae I	location	Infor	mation	Version	Error C	ode	Error information	n
Lo	cal	Slot6	CM1-AD 1	6Ch (Curr	V1.04	0x01	06	(1배남) 단선에려	
Chab	s File Sa	ma(s) (Card Error Re	uet(E) In	date STOP(ui -			Show Al Card(A)

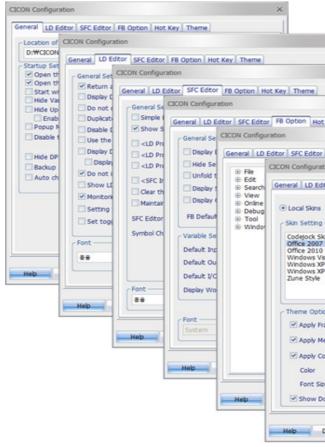
Show all module state

• View module configurations and currently installed H/W or S/W. Also allows the export of buffer memory in CSV format.

		Capture(P)					Card Backup(B) Card Restore(R) Previous(G) Close(C								
Type		E Mod	je: R	EMOTE RUN	Scan Tin	ne :	1	msec		Change Mode	e(M) End	Reset(F)			
F/W	V6.13	Erro	r Code	0x0000				N	o Errors						
	Slot 0	Slot 1	Slot 2	Slot 3	Slot 4	Slot 5	Slot 6	Slot 7	Slot 8	Slot 9	Slot 10	Slot 11			
	Data Log	Ethernet	RS232C/4	Empty	High Spe	Empty	AD 16Ch	AD 8Ch (Empty	Output_1	Input_32	Empty			
Local	V0.94	V1.27	V1.60		V3.03		V1.04	V1.15							
	Clean	Clean	Clean		Clean		0x0106	Clean		Clean	Clean				

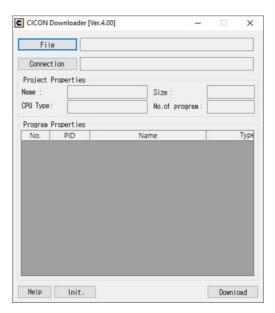
CICON Setup

Highly configurable options, including themes, for the CICON software



CICON Downloader

Downloads programs to the PLC without having to open the project



CIMON - CICON

Key Theme X FB Option Hot Key Theme A on or SFC Editor FB Option Hot Key Theme O Windows System O Default Skin Chyle Control Co	
KFB Option Hot Key Theme SFC Editor FB Option Hot Key Theme Windows System O Default Skin Windows System O Office 2007 Style Una Style Una Style Ituna Style Ituna Style Ituna Style Ituna	
n x SFC Editor FB Option Hot Key Theme Windows System O Default Skin tyle	
n K SFC Editor FB Option Hot Key Theme Windows System O Default Skin Vie Vie Vie Syle una Style una Style Ituna Royale V Itunes	
Windows System Default Skin byłe © Office 2007 byłe byłe © Office 2007 © Luna styłe © Luna toyałe V © ITunes	
Windows System Default Skin Vve tyle is Style una Style una Style Image: Constraint of the style internet of the style	
tyte Styte una Style Luna Royale V iTunes	
a Style una Style toyale Style iTunes	
	Ista
Command Bar Theme	
ne Skin Office2000	
rics OfficeXP	
Blue Olive1 Olive2 I	Metalic
Aqua	
NormalSize Panel Theme	
king Sticker Windows Native	

· Upload / Download device memory Backup and restore the memory of PLC CPU

File D:/CICON/P	rj0817_	1722\Prj0817_1	722.PDM			Path	ave		
Device									
IA 🗌		To get a	max Addr.,	input s	ame value	into Start and End	Addr.		
[X]	0	Download dev	vice memo	ry(File-	>CPU)				
☑[M]	0	D:\CICON\P	rj0817_17:	22\Prj08	817_1722.6	PDM		Path	Save
[K]	0	Device							
(T)	0	IIA 💟		То	get a max	Addr., input same	value into	Start an	d End Add
✓[S]	0	[X]		-		[Y]		-	
[Z]	0	₩[M]	0	-	512	✓[L]	0	-	256
TC]	0	□[К]		-		[F]	0		
V [CC]	0	 [T]		-		[] [C]		-	0
Default	Clear	[[S]				✓[D]	0	-	10000
Derault	Clear	[[Z]				[R]			0
		[TC]	0	-	512	[TS]			
		✓[CC]	0	1	512	[CS]		٦.	0

• Simulator

Features

Quickly debug functions and programs without having to physically connect to a PLC

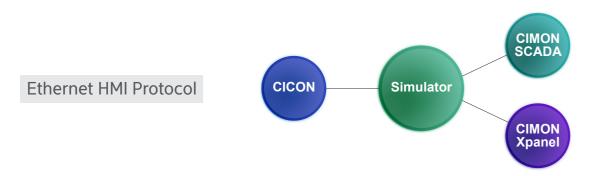
- Operates a scan program in the same environment as a physical PLC (Program download/upload)

- On-line (PLC-CICON connection) mode features supported
- The simulator is compatible with all PLC CPU types.
- Virtually conduct a performance test of special equipment through the simulator

CICON SIMULATOR									-		
ile View PLC Power Tool Window About											
dule + # ×	Eve it i	Slot 2 : AD	OCh A/oltan	-							
	_ exp/	SIDLE . AD	och (voliag	e) [_	_					
B CICON - Simulator : CM1 - XP1	C Exp. :1	/ Slot 2 : A0	0 8Ch (Volt	age)						• •	
E Local : 3 Slot		C Exp. :1 / Slot 2 : AD 8Ch (Voltage)									
DI (0000) Input_32P(DC24V): A		AD 8Ch	(Voltage) :	170			AD 8Ch (Voltag	e) : Buffer I	Memory		
-DI [0020] Input_32P(DC24V): B	No.	Device	1/0	Value	^	No.	Device	1/0	Value	^	
[0040] DNP3 (Ethernet)	1	X0070	Input	OFF		1	Memory 000		0		
- 🕞 Exp. 01 : 3 Slot	2	X0071	Input	OFF		2	Memory 001		0		
DI [0050] Input_32P(DC24V): A	3	X0072	Input	OFF		3	Memory 002		0		
	4	X0073	Input	OFF		4	Memory 003		0		
- 5 [0070] AD 8Ch (Voltage)	5	X0074	Input	OFF		5	Memory 004		0		
SP [0080] AD 8Ch (Current)	6	X0075	Input	OFF		6	Memory 005		0		
⊟ Exp, 02 : 3 Slot	7	X0076	Input	OFF		7	Memory 006		0		
- 00 [0090] Output_32P(TR Sink): A	8	X0077	Input	OFF		8	Memory 007		0		
- 00 [0110] Output_32P(TR Sink): A	9	X0078	Input	OFF		9	Memory 008		0		
60 [0130] Output_32P(TR Sink): B	10	X0079	Input	OFF		10	Memory 009		0		
	11	X007A	Input	OFF		11	Memory 010		0		
	12	X007B	Input	OFF		12	Memory 011		0		
	13	X007C	Input	OFF		13	Memory 012		0		
	14	X007D	Input	OFF		14	Memory 013		0		
	15	X007E	Input	OFF		15	Memory 014		0		
	16	X007F	Input	OFF	¥	16	Memory 015		0	~	
	1.00				_	_				_	

Simulator with HMI Protocol communication (Supported in CICON V5.02 and above)
The HMI protocol allows an operator to connect the CICON simulator with CIMON SCADA or
CIMON Xpanel without having to convert projects.

*Sample projects may be downloaded from the Cimon website.







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