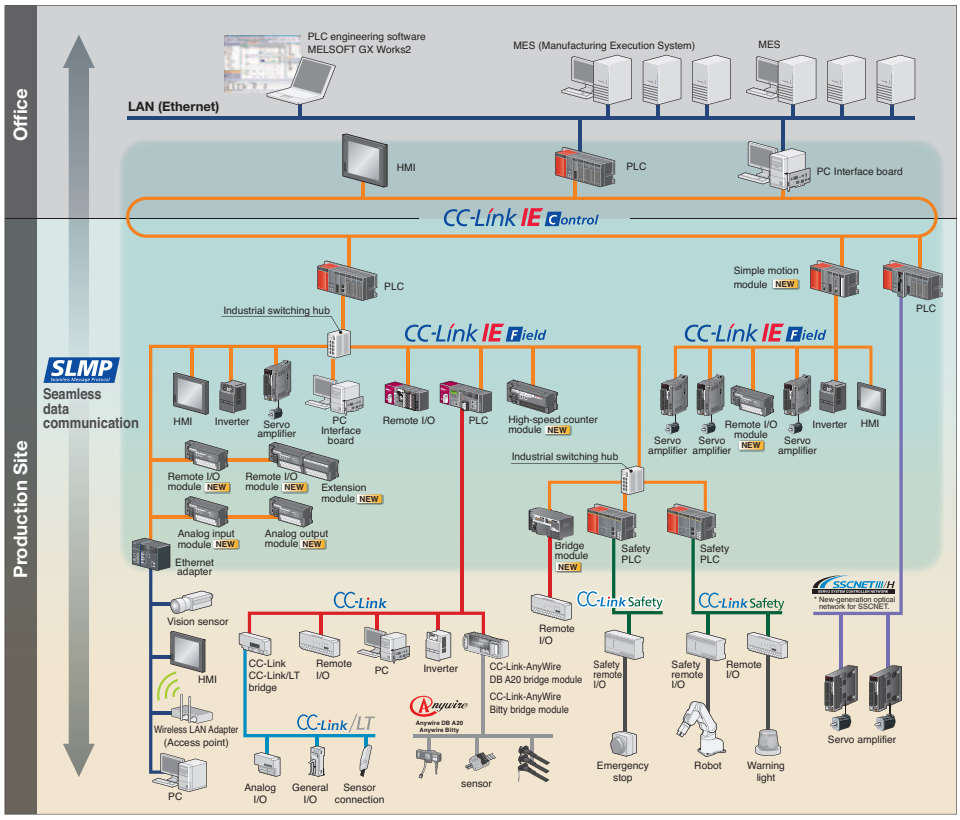
CC-Link IE


Office
Production Site
PLC engineering software
MELSOFT GX Works2
MES (Manufacturing Execution System)
MES
LAN (Ethernet)
HMI
PLC
PC Interface board
CC-Link IE Control
PLC
Simple motion module NEW
PLC
Industrial switching hub
CC-Link IE Field
CC-Link IE Field
SLMP
Seamless data communication
HMI
Inverter
Servo amplifier
PC Interface board
Remote I/O
PLC
High-speed counter module NEW
Servo amplifier
Servo amplifier
Remote I/O module NEW
Inverter
HMI
Remote I/O module NEW
Remote I/O module NEW
Extension module NEW
Industrial switching hub
Analog input module NEW
Analog output module NEW
Ethernet adapter
Bridge module NEW
Safety PLC
Safety PLC
SSCNETIII/H
* New-generation optical network for SSCNET.
CC-Link
CC-Link Safety
CC-Link Safety
Vision sensor
Remote I/O
HMI
CC-Link CC-Link/LT bridge
Remote I/O
PC
Inverter
CC-Link-AnyWire DB A20 bridge module
CC-Link-AnyWire Bitty bridge module
Safety remote I/O
Safety remote I/O
Remote I/O
Servo amplifier
Wireless LAN Adapter (Access point)
CC-Link/LT
Anywire DB A20 Anywire Bitty
sensor
Emergency stop
Robot
Warning light
PC
Analog I/O
General I/O
Sensor connection

CC-Link IE is an open 1Gbit Industrial Ethernet automation network consisting of ; CC-Link IE Control, CC-Link IE Field. CC-Link IE Control communicates over dual-loop fiber between PLCs, HMIs, and PCs with an extremely large cyclical data-sharing capacity. CC-Link IE Field has a smaller cyclical data-sharing capacity, but communicates with both PLCs and Remote I/O stations over shielded Cat5e cables with standard RJ45 connectors in a star, line, or combination topology. CC Link IE Field Basic realizes easier network integration, as its cyclic communications stack is software-based, without requiring a dedicated hardware and also utilizes RJ45 connectors. It is used for small-scale systems.

CC-Link IE Products

Product		Model Number	Description	Stocked Item
CC-Link IE Field/ Control/Basic	CPU	R04ENCPU, R08ENCPU, R16ENCPU, R32ENCPU, R120ENCPU	CPU	S
CC-Link IE Control	Master/Slave	RJ71GP21-SX	Interface for iQ-R Platform (R CPU)	S
		RJ71GP21S-SX	Interface for iQ-R Platform (R CPU), with redundant power	S
		QJ71GP21-SX	Interface for iQ Platform (QnU CPU)	S
		QJ71GP21S-SX	Interface for iQ Platform (QnU CPU), with redundant power	-
		Q80BD-J71GP21-SX	PCI interface card	-
		Q80BD-J71GP21S-SX	PCI interface card, with redundant power	-
	CC-Link IE Control Interface	GT15-J71GP23-SX	Interface for GOT1000 HMI (GT16/GT15)	S
	Fiber Optic Cordset (Cable with Connectors)	QG-_M-B-LL	Pre-made cordset. _ = 1m, 2m, 3m, 5m, 10m, 15m, 20m, 25m, 30m, 35m, 40m, 50m length	S
CC-Link IE Field	Master/Slave	RJ71GF11-T2	Interface for iQ-R Platform	S
		QJ71GF11-T2	Interface for iQ Platform (QnU CPU)	S
		LJ71GF11-T2	Interface for L Series	S
		QS0J71GF11-T2	Interface for QS Safety	-
	Slave Head Station	RJ72GF15-T2	Interface for iQ-R Platform	S
		LJ72GF15-T2	Remote I/O head station for L Series	S
	CC-Link IE Field Interface	GT15-J71GF13-T2	Interface for GOT1000 (GT16/GT15) and GOT2000 (GT27/GT25)	S
		FR-A7NCE	Interface for A700 Series Inverters	S
		MR-J3-T10	Interface for MR-J3 Servo Amplifiers	S
	Ethernet Adapter	NZ2GF-ETB	SLMP interface to standard TCP/IP products	-
	Ethernet Switch	NZ2EHG-T8N	Industrial Ethernet switch, 1Gbps	S
	CC-Link Bridge	NZ2GF-CCB	CC-Link IE Field to CC-Link bridge module	S
	CC-Link IE Managed Switch	NZ2MHG-T8F2	CC-Link IE managed switch, 8 Ethernet ports, 2 optical fiber ports	S

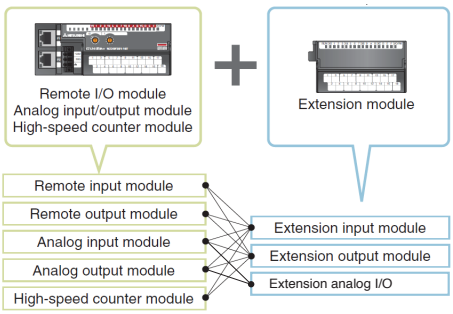
CC-Link IE Field Basic Remote I/O

Product Name	Model Name	Specification	Terminal Block	Number of Input Points	Number of Output Points	Input Type	Output Type	Rated Input/ Load Voltage	Input Response Time (*1)	Dimensions (mm)	Stkd Item	Wiring Method for Common
DC Input	NZ2MFB1-32D	32 Points, DC24V, Input Response Time 0~70ms, Plus Common/Minus Common Intercommunity, Single Wire System	Screw	32	-	Positive common/ negative common shared type	-	DC24V	0~70ms	200x50x68	S	32 points/ common (two points) (1-wire, screw terminal block type)
	NZ2MF2S1-32D		Spring clamp								S	
Transistor Output	NZ2MFB1-32T	32 Points, DC12V/24V (0.5A), Sink Type, Single Wire System	Screw	-	32	-	Sink	DC12V/ 24V(0.5A)	-		S	
	NZ2MF2S1-32T		Spring clamp								S	
Transistor Output	NZ2MFB1-32TE1	32 Points, DC12V/24V (0.1A), Source Type, Single Wire System	Screw	-	32	-	Source	DC12V/ 24V(0.1A)	-		S	
	NZ2MF2S1-32TE1		Spring clamp								S	
Input/ Output Mix	NZ2MFB1-32DT	Input: 16 Points, DC24V, Input Response Time 0~70ms, Plus Common, Single Wire System Output: 16 Points, 24V(0.5A), Sink Type, Single Wire System	Screw	16	16	Positive common type	Sink	Input: DC24V, Output: 24V(0.5A)	0~70ms		S	16 points/ common (1-wire, screw terminal block type)
	NZ2MF2S1-32DT		Spring clamp								S	
Input/ Output Mix	NZ2MFB1-32DTE1	Input: 16 Points, DC24V, Input Response Time 0~70ms, Minus Common, Single Wire System Output: 16 Points, 24V(0.1A), Source Type, Single Wire System	Screw	16	16	Negative common type	Source	Input: DC24V, Output: 24V(0.1A)	0~70ms		S	
	NZ2MF2S1-32DTE1		Spring clamp								S	
AC Input	NZ2MFB2-16A	16 Points, AC100~120V, Input Response Time 20ms, Double Wire System	Screw	16	-	-	-	AC100~120V	20ms		S	16 points/ common (2-wire, screw terminal block type)
Relay Output	NZ2MFB2-16R	16 Points, DC24V/AC240V (2A), Relay Output, Double Wire System	Screw	-	16	-	Relay	DC24V/ AC240V(2A)	-		S	

Note 1: If the input response time is set to "0ms", the actual input response time is 80µs at OFF – ON, and 160µs at ON – OFF.

CC-Link IE Field Remote I/O

- Directly connectable on a CC-Link IE Field network
- One extension module max. can be added to a Remote I/O, Analog, or High-Speed Counter Module
- Fast logic function performs logic locally in the module
- Certifications: UL, cUL, CE



Type	Model Number (*1)	Input Type	Output Type	No. of Input Points	Rated Input Voltage/ Current	Number of Output Points	Rated Load Voltage	Max. Load Current	External Connection Wire Type	Internal Current Consumption	Dimensions (mm)	Stock Item
Standard I/O Block	NZ2GF2B1N1-16D	DC Input; +/- common	-	16	24VDC/6mA	-	-	-/-	1-Wire, 16pt/common, screw terminal	120mA	133x50x68	S
	NZ2GF2S1-16D	DC Input; +/- common	-	16	24VDC/6mA	-	-	-/-	1-Wire, 16pt/common, spring clamp terminal	180 mA	133x50x68	S
	NZ2GFCE3-16D	DC Input; + common	-	16	24VDC/4mA	-	-	-/-	3-Wire, 16pt/common, e-CON	180mA	133x50x68	-
	NZ2GFCE3-16DE	DC Input; - common	-	16	24VDC/4mA	-	-	-/-	3-Wire, 16pt/common, e-CON	180mA	133x50x68	-
	NZ2GFCM1-16D	DC Input; + common	-	16	24VDC/4mA	-	-	-/-	1-Wire, 16pt/common, MIL	180mA	133x50x68	-
	NZ2GFCM1-16DE	DC Input; - common	-	16	24VDC/4mA	-	-	-/-	1-Wire, 16pt/common, MIL	180mA	133x50x68	-
	NZ2GF2S1-16T	-	Transistor Sink	-	-/-	16	12/24 VDC	.5A/pt 4A/common	1-Wire, 16pt/common, spring clamp terminal	190mA	133x50x68	S
	NZ2GF2S1-16TE	-	Transistor Source	-	-/-	16	12/24 VDC	.5A/pt 4A/common	1-Wire, 16pt/common, spring clamp terminal	190mA	133x50x68	S
	NZ2GF2B1N1-16T	-	Transistor Sink	-	-/-	16	12/24 VDC	.5A/pt 4A/common	1-Wire, 16pt/common, screw terminal	130mA	133x50x68	S
	NZ2GF2B1N1-16TE	-	Transistor Source	-	-/-	16	12/24 VDC	.5A/pt 4A/common	1-Wire, 16pt/common, screw terminal	130mA	133x50x68	S
	NZ2GFCE3-16T	-	Transistor Sink	-	-/-	16	12/24 VDC	.5A/pt 4A/common	3-Wire, 16pt/common, e-CON	190mA	133x50x68	-
	NZ2GFCE3-16TE	-	Transistor Source	-	-/-	16	12/24 VDC	.5A/pt 4A/common	3-Wire, 16pt/common, e-CON	190mA	133x50x68	-
	NZ2GFCE3N-32D	DC Input; + common	-	32	24VDC/4mA	-	-	-/-	3-Wire, 32pt/common, e-CON	100 mA	194x50x68	S
	NZ2GFCE3N-32T	-	Transistor Sink	-	-/-	32	12/24 VDC	.5A/pt 6A/common	3-Wire, 32pt/common, e-CON	120 mA	194x50x68	S
	NZ2GFCE3N-32DT	DC Input; + common	Transistor Sink	16	24VDC/4mA	16	12/24 VDC	.5A/pt 4A/common	3-Wire, 32pt/common, e-CON	110 mA	194x50x68	S
	NZ2GFCF1-32D	DC Input; + common	-	32	24VDC/4mA	-	-	-/-	1-Wire, 32pt/common, FCN	100 mA	163x50x68	S
	NZ2GFCF1-32T	-	Transistor Sink	-	-/-	32	12/24 VDC	0.1A/pt 3.2A/common	1-Wire, 32pt/common, FCN	110 mA	163x50x68	S
	NZ2GFCF1-32DT	DC Input; + common	Transistor Sink	16	24VDC/4mA	16	12/24 VDC	0.1A/pt 1.6A/common	1-Wire, 16pt/common, FCN	110 mA	163x50x68	S
	NZ2GFCM1-16T	-	Transistor Sink	-	-/-	16	12/24 VDC	.5A/pt 2A/common	1-Wire, 16pt/common, MIL	190mA	133x50x68	-
	NZ2GFCM1-16TE	-	Transistor Source	-	-/-	16	12/24 VDC	.5A/pt 2A/common	1-Wire, 16pt/common, MIL	190mA	133x50x68	-
Extension I/O Block	NZ2EX2B1N-16D	DC Input; +/- common	-	16	24VDC/6mA	-	-	-/-	1-Wire, 16pt/common, screw terminal	20mA	84.5x50x68	S
	NZ2EX2B1N-16T	-	Transistor Sink	-	-/-	16	12/24 VDC	.5A/pt 4A/common	1-Wire, 16pt/common, screw terminal	30mA	84.5x50x68	S
	NZ2EX2B1-16TE	-	Transistor Source	-	-/-	16	12/24 VDC	.5A/pt 4A/common	1-Wire, 16pt/common, screw terminal	30 mA	84.5x50x68	S
	NZ2EX2S1-16D	DC Input; +/- common	-	16	24VDC/6mA	-	-	-/-	1-Wire, 16pt/common, spring clamp terminal	20 mA	84.5x50x68	S
	NZ2EX2S1-16T	-	Transistor Sink	-	-/-	16	12/24 VDC	.5A/pt 4A/common	1-Wire, 16pt/common, spring clamp terminal	30 mA	84.5x50x68	S
	NZ2EX2S1-16TE	-	Transistor Source	-	-/-	16	12/24 VDC	.5A/pt 4A/common	1-Wire, 16pt/common, spring clamp terminal	30 mA	84.5x50x68	S

Note 1:
Most main modules accept only 1 extension module. However, there are a few main modules that can connect to a maximum of 3 extension modules. These modules are listed in the table below.

Main Module	Number of Extension Modules that May be Connected
NZ2GF2B1N1-16D, NZ2GF2B1N1-16T, NZ2GF2B1N1-16TE	3
All other main modules	1

To connect multiple extension modules to a main module, you must use extension modules that support this feature.

Extension Module	Support for multiple extension modules
NZ2EX2B1N-16D, NZ2EX2B1N-16T, NZ2EX2B1N-16TE	Supported
NZ2EX2B1-16D, NZ2EX2B1-16T, NZ2EX2B1-16TE, NZ2EX2S1-16D, NZ2EX2S1-16T, NZ2EX2S1-16TE	Not supported

CC-Link IE Field Analog Modules

- Averaging can be set to be triggered by extension I/O module

Analog Input

Model Number		NZ2GF2BN-60AD4	NZ2EX2B-60AD4
Stocked Item		S	S
Certification		UL • cUL • CE	
Analog Input	Voltage	-10 to +10VDC (input resistance 1MΩ)	
	Current	0 to 20mA DC (input resistance 250Ω)	
Digital Resolution		16 bit + sign (-16384 to 16383)	
Input/Output Characteristics Accuracy (Switchable Ranges)		See table below	
Conversion Speed		400µs/channel	100µs/channel, 400µs/channel, 1ms/channel
Number of Analog Input Points		4 channels/module	
Station Type		Remote device station	Extension remote device station
Isolation Method		Between communication system terminal and all analog input terminals: Photocoupler isolation / Between power supply system terminal and all analog input terminals: Transformer insulation / Between input channels: Non-insulation	
External Connection Method		RJ45 connector (communication), terminal block (power supply), 18-point terminal block (analog input area)	
Applicable Wire Size		Power supply: core: 0.5 to 1.5mm² (20 to 16 AWG) I/O: core: 0.3 to 2.0mm² (22 to 14 AWG)	
Internal Current Consumption (24VDC)		210mA	90mA
Weight (kg)		0.3	0.22
Dimensions (W x H x D) mm		133 x 50 x 68	115 x 50 x 68

Input	Input Range	Digital Output Value	Maximum Resolution
Voltage	-10 to +10V	-16000 to 16000	0.625mV
	User range setting 1 (-10 to +10V)*		0.5mV
	User range setting 2 (-5 to +5V)*		0.25mV
	0 to 5V	0 to 16000	0.3125mV
	1 to 5V		0.25mV
Current	0 to 20mA	0 to 16000	1.25µA
	4 to 20mA		1µA
	User range setting 2 (-20 to +20mA)*	-16000 to 16000	1µA

* Applies to NZ2GF2BN-60AD4

Analog Output

Model Number		NZ2GF2BN-60DA4	NZ2EX2B-60DA4
Stocked Item		S	S
Certification		UL • cUL • CE	
Digital Resolution		16 bit + sign (-16384 to 16383, -288 to 12287, -12288 to 12287)	
Analog Output	Voltage	-10 to 10VDC (external load resistance value: 1kΩ to 1MΩ)	
	Current	0 to 20mADC (external load resistance value: 0Ω to 600Ω)	
Input/Output Characteristics Accuracy (Switchable Range)		See table below	
Output Short-Circuit Protection		Protected	
Conversion Speed		100µs/channel	
Number of Analog Input Points		4 channels/module	
Station Type		Remote device station	Extension remote device station
Isolation Method		Between communication system terminal and all analog input terminals: Photocoupler isolation / Between power supply system terminal and all analog input terminals: Transformer insulation / Between input channels: Non-insulation	
External Connection Method		RJ45 connector (communication), terminal block (power supply), 18-point terminal block (analog output area)	
Applicable Wire Size		Power supply: core: 0.5 to 1.5mm² (20 to 16 AWG) I/O: core: 0.3 to 2.0mm² (22 to 14 AWG)	
Internal Current Consumption (24VDC)		300mA	135mA
Weight (kg)		0.29	0.23
Dimensions (W x H x D) mm		133 x 50 x 68	115 x 50 x 68

Output	Output Range	Digital Value	Maximum Resolution
Voltage	-10 to +10V	-16000 to 16000	0.625mV
	0 to 5V	0 to 12000	0.416mV
	1 to 5V		0.333mV
	User range setting 2 (-20 to +20mA)*	12000 to 12000	0.333mV
Current	0 to 20mA	0 to 16000*	1.66µA
	4 to 20mA	0 to 12000	1.33µA
	User range setting 2 (-20 to +20mA)*	-16000 to 16000	0.95µA

* Applies to NZ2GF2BN-60DA4

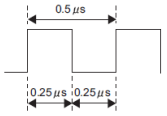
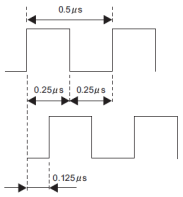
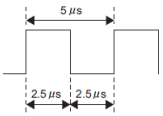
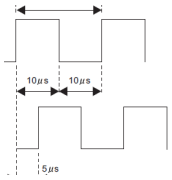
CC-Link Bridge Module

Enables simple access to CC-Link devices on a CC-Link IE Field network.

Model Number	NZ2GF-CCB		
Stocked Item	S		
Certification	UL • cUL • CE		
CC-Link IE Field Station Type	Intelligent device station		
Compatible CC-Link Version	Ver. 1.10		
Number of Connected CC-Link Modules	Up to 64 modules connectable with the following conditions		
	Condition 1	{(1 x a) + (2 x b) + (3 x c) + (4 x d)} ≤ 64	a: Number of modules occupying 1 station b: Number of modules occupying 2 stations c: Number of modules occupying 3 stations d: Number of modules occupying 4 stations
	Condition 2	(16 x A) + (54 x B) ≤ 2304	A: Number of remote I/O stations ≤ 64 B: Number of remote device stations ≤ 42
Transmission Speed	Selectable among 156kbps/625kbps/2.5Mbps/5Mbps/10Mbps		
External Power Supply	24VDC (20.4 to 28.8VDC), Current consumption: 290mA		
Weight (kg)	0.38		
Dimensions (W x H x D) mm	160 x 69.5 x 68		

CC-Link IE Field High-Speed Counter Module

- 32 bit counter
- 5/24VDC (2 to 5 mA input) or differential input
- Switchable counting speed up to 8Mpps
- PWM output function

Model Number			NZ2GFCF-D62PD2	
Stocked Item			-	
Certification			UL • cUL • CE	
Counting Speed Selector Switch Setting			Differential input	DC input
Number of Channels			2 channels	
Counting Input Signal		Phase	1-phase input (1 multiple / 2 multiples), 2-phase input (1 multiple / 2 multiples / 4 multiples), CW/CCW	
		Signal Level (øA, øB)	EIA Standards RS-422-A, differential line driver level (AM26LS31 [Texas Instruments] or equivalent)	5/24VDC, 4 to 8mA
Counter	Counting Speed (Max)	1 Phase Input	4Mpps	200kpps
		2 Phase Input	8Mpps	200kpps
	Counting Range		32-bit signed binary (-2147483648 to 2147483647)	
	Model		Count, subtraction count, Linear counter format, ring counter format, Preset/replace function, latch counter function	
	Minimum Count Pulse Width		 1-phase input (1 multiple/ 2 multiples), CW/CCW	 2-phase input (1 multiple/ 2 multiples/4 multiples)
			 1-phase input (1 multiple/ 2 multiples), CW/CCW	 2-phase input (1 multiple/ 2 multiples/4 multiples)
Coincidence Output		Comparison Range	32-bit signed binary	
		Comparison Result	Setting value < count value, setting value = count value, setting value > count value	
External Input		Phase Z	EIA Standards RS-422-A, differential line driver level (AM26LS31 [Texas Instruments] or equivalent): 2 points	5/24VDC, 4 to 8mA: 2 points
		Function Start	5/24VDC, 7 to 12mA: 2 points	
		Latch Counter	5/24VDC, 7 to 12mA: 2 points	
External Output		Coincidence Output	Transistor (sink type) output: 4 points 5 to 24VDC 0.1A/point, 0.4A/common	
Station Type			Remote device station	
Power Supply Voltage			20.4 to 26.4VDC	
Current Consumption (at 24VDC)			220mA	
Applicable Connector for External Wiring			A6CON1, A6CON2, A6CON4 (sold separately)	
Applicable Wire Size		External Device	0.3mm² (22 AWG) (A6CON1 and A6CON4), 0.088 to 0.24mm² (28 to 24 AWG) (A6CON2)	
		Power Supply	Core: 0.5 to 1.5mm² (20 to 16 AWG)	
Applicable Solderless Terminal			TE 0.5-10 (Nichifu Co. Ltd.) [Applicable wire size: 0.5mm2], TE 0.75-10 (Nichifu Co. Ltd.) [Applicable wire size: 0.75mm²], TE 1.0-10 (Nichifu Co. Ltd.) [Applicable wire size: 0.9 to 1.0mm²], TE 1.5-10 (Nichifu Co. Ltd.) [Applicable wire size: 1.25 to 1.5mm²], AI 0.5-10WH (Phoenix Contact Co. Ltd.) [Applicable wire size: 0.5mm²], AI 0.75-10GY (Phoenix Contact Co. Ltd.) [Applicable wire size: 0.75mm²], AI 1-10RD (Phoenix Contact Co. Ltd.) [Applicable wire size: 1.0mm²], AI 1.5-10BK (Phoenix Contact Co. Ltd.) [Applicable wire size: 1.5mm²]	
Weight (kg)			0.25	
Dimension (W x H x D) mm			133 × 68 × 50	

CC-Link IE Field Ethernet Adapter

The Ethernet Adapter is used to add standard Ethernet TCP/IP devices onto a CC-Link IE Field network, like PCs, GOT1000 HMIs, and 3rd party devices. These Ethernet TCP/IP devices are bridged into the control network using Seamless Message Protocol (SLMP), which also enables use of standard MC Protocol and MELSOFT programming port protocol. The Ethernet Adapter is DIN-rail mounted, separate from other controllers or hardware.

Model Number	NZ2GF-ETB
Stocked Item	S
Certification	UL • cUL • CE
Input Power Supply	24VDC (-35% to +30%)
Communication Speed	1Gbps or 100Mbps
Network Topology	Star, Line, Mixed Star and Line, and Ring
Communication Port	CC-Link IE Field network port x2, Ethernet TCP/IP
Maximum Stations per Network	121
Maximum Number of Networks	239
Maximum Station-to-Station Distance	100m
Maximum Ethernet TCP/IP Devices Per Ethernet Adapter	Up to 32
Connection Cable	Ethernet cable (Category 5e or higher, with shielded RJ45 connectors)
5VDC Internal Current Consumption	0.6A
Dimensions (W x H x D) mm	135 x 90 x 109
Weight (kg)	0.7

CC-Link IE Field Network Compatible Remote IO-Link Modules

With the influence of the Industrie 4.0 and IIoT, enhance information flow from field devices to production management system. IO-Link devices such as sensors, actuators, smart laps can feed diagnostic information allowing predicting device failure ahead of time.

- Support CC Link IE Field Network
- Easy programming reduces engineering time
- Simple configuration
- Detects device deterioration and errors
- Automatic parameter registration after sensor replacement
- Waterproof IP67

Model Number		NZ2GF12A-60IOLH8
Stocked Item		S
Certification		UL • CE
Module Type	CC-Link IE Field Network	Intelligent device station
	IO-Link	IO-Link master
Isolation Method		Non-isolation
Protection Degree		IP67
Wiring Method for Common		1 common
Surge Suppressor		Zener diode
Fuse		Module: Not available; Channel: Available
Protection Function	Overload Protection Function	Overcurrent is detectable on the CQ, Q, and L+ terminals on each channel.
External Interface	Module Power Supply Part	7/8" waterproof connector, 5 pins, male/female
	I/O Part	M12 waterproof connector, 5 pins, female, A-code
	Communication Part	M12 waterproof connector, 8 pins, female, X-code
Channel Setting		The following 3 modes are available; IO-Link mode; SIO mode (digital input) (default); SIO mode (digital output)
IO-Link Mode	Supported Protocol	v1.12
	Number of Channels	8 channels max.
	Max. Load Current (CQ)	500mA/channel, 9A/common
	Max. Load Current (L+)	1.3A/channel, 9A/common
	Transmission Speed	4.8kbaud (COM1); 38.4kbaud (COM2; 230.4kbaud (COM3) Determined by the IO-Link device connected
SIO Mode (CQ) (Digital Input)	Number of Points	8 points max.
	Input Type	Negative common (source type)
	Rated Input Current	IEC 61131-2 Type3
	Input Resistance	IEC 61131-2 Type3
	ON Voltage/ON Current	11VDC or more/15mA or more
	OFF Voltage/OFF Current	5.0VDC or less/1.5mA or less
	Input Response Time (OFF–ON)	0.1ms or less (excluding the internal processing time)
	Input Response Time (ON–OFF)	0.1ms or less (excluding the internal processing time)
SIO Mode (CQ) (Digital Output)	Number of Points	8 points max.
	Output Type	Source type
	Max. Load Current	2A/point, 9A/common
	Max. Inrush Current	17A (25°C, 150µs or less)
	Leakage Current at OFF	5µA or less
	Max. Voltage Drop at ON	0.85VDC, 2.0A
	Output Response Time (OFF–ON)	80µs or less
	Output Response Time (ON–OFF)	15µs or less
SIO Mode (Q) (Digital Input)	Number of Points	8 points max.
	Input Type	Negative common (source type)
	Rated Input Current	5mA TYP. (for 24VDC)
	Input Resistance	4.8kΩ
	ON Voltage/ON Current	15VDC or more/3.5mA or more
	OFF Voltage/OFF Current	3.0VDC or less/0.5mA or less
	Input Response Time (OFF–ON)	1.9ms
	Input Response Time (ON–OFF)	1.9ms
SIO Mode (Q) (Digital Output)	Number of Points	8 points max.
	Output Type	Source type
	Max. Load Current	2A/point, 9A/common
	Max. Inrush Current	17A (25°C, 150µs or less)
	Leakage Current at OFF	5µA or less
	Max. Voltage drop at ON	0.85VDC, 2.0A
	Output Response Time (OFF–ON)	80µs or less
	Output Response Time (ON–OFF)	105µs or less
Communication Cable		An Ethernet cable that meets the 1000BASE-T standard: Category 5e or higher (double shielded, STP), straight cable
IO-Link Cable	Cable Type	Unshielded
	Cable Length	20m max.
	Cable Diameter	Core 0.5 to 1.5²
Module/Sensor Power Supply	Voltage	24VDC (ripple rate: 1% or less) (Allowable voltage range: 20.4 to 28.8VDC) (20.4 to 26.4VDC for UL listed)
	Current (*1)	300mA or less (24VDC, no load) 9.3A or less (24VDC, max. load)
Output Power Supply	Voltage	24VDC (ripple rate: 1% or less) (Allowable voltage range: 20.4 to 28.8VDC) (20.4 to 26.4VDC for UL listed)
	Current (*1)	9.3A or less (24VDC, max. load)
Weight (kg)		0.685

Note 1: Ensure that the total current capacity of the module/sensor power supply and the output power supply does not exceed 9.3A.
Ensure that the total current capacity does not exceed 9.3A if transition wiring is used to supply power to multiple modules.
Ensure that the current capacity of the power supply connector (for module/sensor power supply + actuator power supply) of the first IO Link module connected to the power supplier does not exceed 9.3A.

Model Number		NZ2GF2S-60IOLD8
Stocked Item		S
Certification		UL • CE
Module type	CC-Link IE Field Network	Intelligent device station
	IO-Link	IO-Link master
Rated Input Voltage		24VDC (ripple rate: 5% or less) (allowable voltage range 20.4 to 28.8VDC (24VDC -15 to +20%))
Insulation Method	Between I/O and Power Supply	Digital isolator
	Between Channels	None
Withstand Voltage		500VDC for 1 minute between all DC external terminals and the ground
Insulation Resistance		10MΩ or higher between all DC external terminals and ground (500VDC insulation resistance tester)
Noise Immunity		Noise voltage 500Vp-p, noise width 1μs, noise frequency 25 to 60Hz (DC type noise simulator condition)
Protection Degree		IP2X
Wiring Method for Common		8 points/common
Surge Suppressor		Zener diode
Fuse		None
Protection Function	C/Q	Overcurrent, overload protection
	L+	Overcurrent
External Interface	CC-Link IE Field Network Part	RJ45 connector
	Module Power Supply Part	Terminal block for module power supply and FG (spring clamp terminal block (push-in type))
	IO-Link Part	40-point 2-piece spring clamp terminal block (push-in type)
Module Operation Start Time (*4)	IO-Link Mode (*5)	1 channel: 1.5 to 4 seconds; 8 channels: 12 to 32 seconds
	SIO Mode	1 channel: 0.2 seconds; 8 channels: 0.2 seconds
Applicable DIN Rail		TH35-7.5Fe, TH35-7.5AI (compliant with IEC 60715)
Applicable Wire Size	Terminal Block for Module Power Supply and FG	Core: 0.5 to 2.0² (20 to 14 AWG), terminal slot size: 2.8mm x 2.0mm
	IO-Link Terminal Block	For +24V/24G/FG; Core: 0.5 to 1.5² (20 to 16 AWG), terminal slot size: 2.4mm x 1.5mm For CQ/L+/L-/DI; Core: 0.2 to 1.5² (24 to 16 AWG), terminal slot size: 2.4mm x 1.5mm
Applicable Solderless Terminal		Terminal block for module power supply and FG (*1) See Applicable solderless terminal in the product manual
	IO-Link Terminal Block (*1, *3)	See Applicable solderless terminal in the product manual
Operation Mode		The following 6 modes are available: Disabled mode, IO-Link (standard) mode, IO-Link (sink input) mode, SIO (sink input) mode, SIO (source output) mode, Power supply mode
IO-Link Mode	Supported Protocol	v1.1.2
	Number of Channels	8 channels max.
	Rated Load Current (C/Q)	200mA/channel, 4A/common
	Rated Load Current (L+)	1.6A/channel, 4A/common
	Transmission Speed	COM1: 4.8kbps, COM2: 38.4kbps; COM3: 230.4kbps; Determined by the IO-Link device connected. The transmission speed is switched automatically.
	IO-Link Mode	Compliant with IO-Link standard
Cyclic Transmission	RX/RY Points	48 points
	RWr/RWw Points	132 points
IO-Link (Sink Input) Mode	Number of Channels	8 channels max.
	Rated Input Current	2.5mA TYP. (for 24VDC)
	Input Response Time	0ms, 1ms, 1.5ms, 5ms, 10ms (default value), 20ms, 70ms
	ON Voltage/ON Current	12VDC or more/2mA or more
	OFF Voltage/OFF Current	6VDC or less/2mA or less
SIO (Sink Input) Mode	Number of Channels	8 channels max.
	Rated Input Current	2.4mA TYP. (for 24VDC)
	Input Response Time (*2)	0ms, 1ms, 1.5ms, 5ms, 10ms (default value), 20ms, 70ms
	ON Voltage/ON Current	11VDC or more/2mA or more
	OFF Voltage/OFF Current	6VDC or less/2mA or less
SIO (Source Output) Mode	Number of Channels	8 channels max.
	Rated Load Current	200mA/point, 4A/common
	Maximum Inrush Current	650mA 100μs or less
	Leakage Current at OFF	0.1mA or less
	Maximum Voltage Drop at ON	0.88V or less, 0.2mA
IO-Link Cable	Cable Type	Unshielded
	Cable Length	20m maximum
	Cable Diameter	Core 0.2 to 1.5²
Communication Cable		An Ethernet cable that meets the 1000BASE-T standard: Category 5e or higher (double shielded, STP), straight cable
Module Power Supply	Voltage	24VDC (ripple rate: 5% or less) (allowable voltage range 20.4 to 28.8VDC (24VDC -15 to +20%))
	Current	130mA (24VDC, all points ON)
	Protection Function	None
	Fuse	None
External Power Supply	Voltage	24VDC (ripple rate: 5% or less) (allowable voltage range 20.4 to 28.8VDC (24VDC -15 to +20%))
	Current	95mA or less (24VDC, all points ON)
	Protection Function	None
	Fuse	None
Weight (kg)		0.24

Notes

1. Only one wire can be connected to a terminal. Multiple wires cannot be connected to a terminal. Connecting two or more wires may cause a poor contact.
2. For details on the input response time, refer to the following. See the Processing Time section in the product manual
3. Use cables suitable for the current value used.
4. The time taken for data link establishment with the master station at power-on is not included.
5. The module operation start time written is a rough standard. The time depends on the response performance and data storage size of the IO-Link device. In addition, because the start processing is performed for each channel, it takes longer time to start operation of the module as the number of channels of which operation mode is set to IO-Link mode increases.