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# CompoNet Gateway Unit for CC-Link

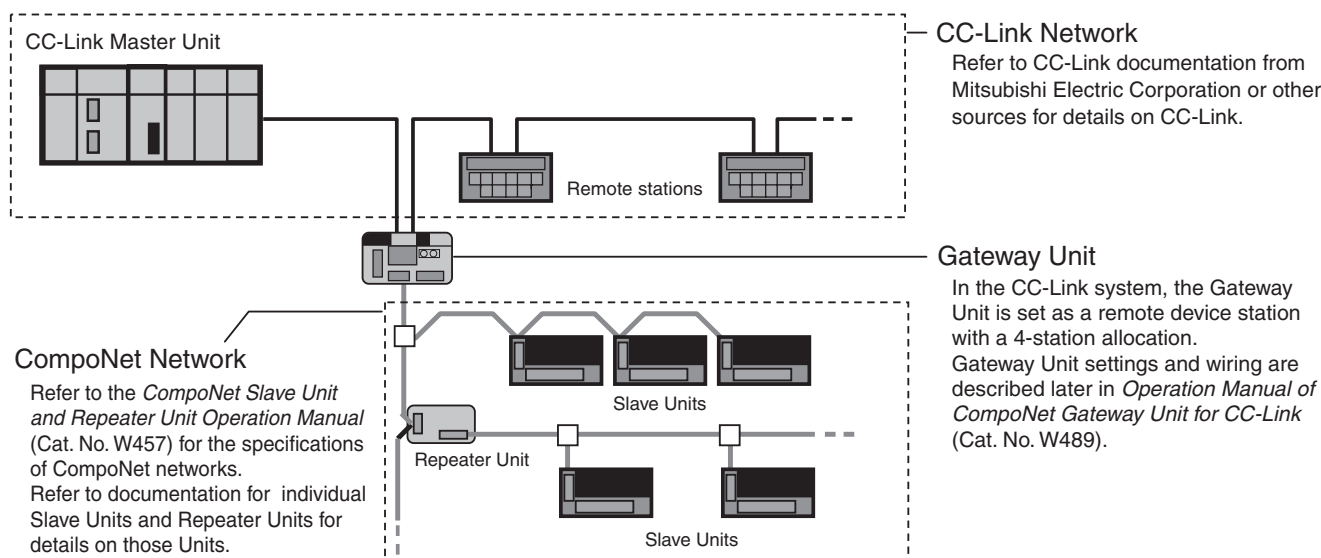
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GQ-CRM21

## Overview of Gateway Unit

The CompoNet Gateway Unit works as a converter to connect CompoNet with another network with different protocol. The GQ-CRM21 CompoNet Gateway Unit for CC-Link provides one CC-Link port and one CompoNet port. It cyclically transfers I/O data between the CompoNet Slave Units and the CC-Link Master Unit.



- "CC-Link" is a registered trademark of Mitsubishi Electric Corporation.
- "GX-Developer" is a registered trademark of Mitsubishi Electric Corporation.

## CompoNet Settings

### ■ Setting the Communications Mode

To use the Gateway Unit, select the communications mode with the setting switches on the Gateway Unit. The below table lists the number of Slave Units (Word Slave Units and Bit Slave Units) and Control Points (the range of buffer memory allocated to the Gateway Unit in the CC-Link Master Unit) in each communications mode.

Refer to *Operation Manual of CompoNet Gateway Unit for CC-Link* (Cat. No. W489) for details.

The expanded cyclic setting (a network parameter set with the GX-Developer) in the station information must be set according to the communications mode.

Mode number	Name	Connectable node addresses	Number of connected nodes	Control Points	CC-Link version and expanded cyclic setting
0	Communications mode 0	Word Slave Unit: IN 0 to IN 63 and OUT 0 to OUT 63 Bit Slave Unit: IN 0 to IN 127 and OUT 0 to OUT 127	Word Slave Unit IN 64/OUT 64 Bit Slave Unit IN 128/OUT 128	Word Slave Unit: 1,024 inputs and 1,024 outputs Bit Slave Unit: 256 inputs and 256 outputs	Version 2, octuple (default)
1	Communications mode 1	Word Slave Unit: IN 0 to IN 31 and OUT 0 to OUT 31 Bit Slave Unit: IN 0 to IN 95 and OUT 0 to OUT 95	Word Slave Unit IN 32/OUT 32 Bit Slave Unit IN 96/OUT 96	Word Slave Unit: 512 inputs and 512 outputs Bit Slave Unit: 192 inputs and 192 outputs	Version 2, quadruple
2	Communications mode 2	Word Slave Unit: IN 0 to IN 15 and OUT 0 to OUT 15 Bit Slave Unit: IN 0 to IN 47 and OUT 0 to OUT 47	Word Slave Unit IN 16/OUT 16 Bit Slave Unit IN 48/OUT 48	Word Slave Unit: 256 inputs and 256 outputs Bit Slave Unit: 96 inputs and 96 outputs	Version 2, double
3	Communications mode 3	Word Slave Unit: IN 0 to IN 7 and OUT 0 to OUT 7 Bit Slave Unit: IN 0 to IN 15 and OUT 0 to OUT 15	Word Slave Unit IN 8/OUT 8 Bit Slave Unit IN 16/OUT 16	Word Slave Unit: 128 inputs and 128 outputs Bit Slave Unit: 32 inputs and 32 outputs	Version 1
4	Communications mode 4	Word Slave Unit: IN 0 to IN 63 and OUT 0 to OUT 63 Bit Slave Unit: IN 0 to IN 127 and OUT 0 to OUT 127	Word Slave Unit IN 64/OUT 64 Bit Slave Unit IN 128/OUT 128	Word Slave Unit: 1,024 inputs and 1,024 outputs Bit Slave Unit: 256 inputs and 256 outputs	Version 2, quadruple
5	Communications mode 5	Word Slave Unit: IN 0 to IN 31 and OUT 0 to OUT 31 Bit Slave Unit: IN 0 to IN 95 and OUT 0 to OUT 95	Word Slave Unit IN 32/OUT 32 Bit Slave Unit IN 96/OUT 96	Word Slave Unit: 512 inputs and 512 outputs Bit Slave Unit: 192 inputs and 192 outputs	Version 2, double
6	Communications mode 6	Word Slave Unit: IN 0 to IN 15 and OUT 0 to OUT 15 Bit Slave Unit: IN 0 to IN 47 and OUT 0 to OUT 47	Word Slave Unit IN 16/OUT 16 Bit Slave Unit IN 48/OUT 48	Word Slave Unit: 256 inputs and 256 outputs Bit Slave Unit: 96 inputs and 96 outputs	Version 1
7 to 9	Reserved	---	---	---	---

# CompoNet Gateway Unit for CC-Link GQ-CRM21

## "Easy" and "Flexible" system expansion with linked CC-Link and CompoNet

- Branching is easily made with CompoNet. Wiring material cost can be reduced.
- Bit-level I/O distribution reduces wiring in the system.
- A wide variety of CompoNet Slave Units contribute to system size reduction.
- Seven-segment Display on the Gateway Unit helps to detect errors on site.
- The Participation Flags and Communications Error Flags can be checked at the Host Controller to detect the location and content of the error.



**NEW**

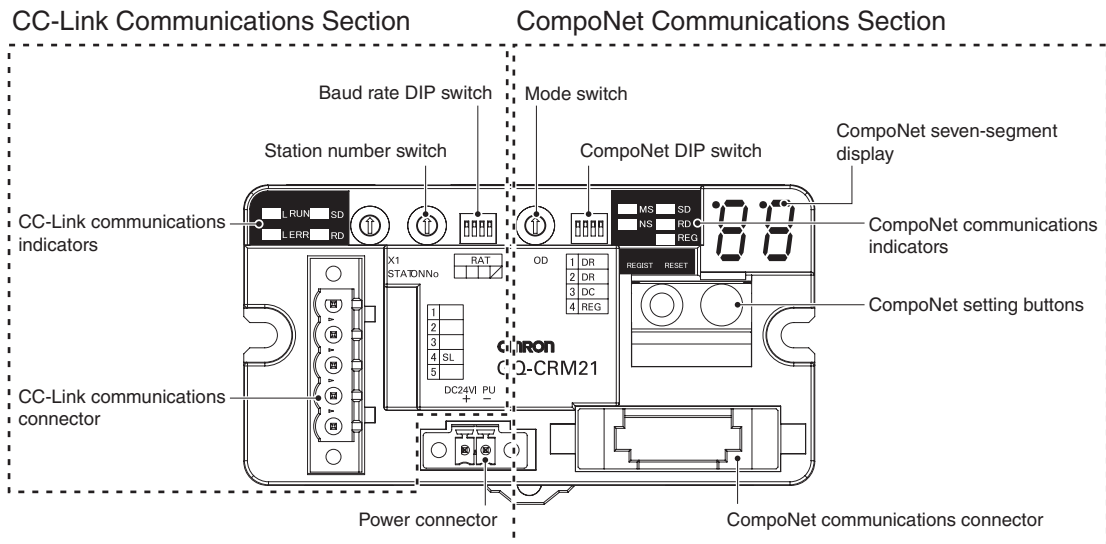
### Ordering Information

Name	Specification					Model
	CC-Link Communications Specification			CompoNet Communications Specification		
	Station Type	Number of stations occupied	CC-Link Version	Types of communications	Maximum I/O capacity	
CompoNet Gateway Unit for CC-Link	Remote device stations	4	Version 1.10 or 2.00 (Selected using mode switch.)	Remote I/O Communications	Word Slave Units: 2,048 I/O points total (1,024 inputs and 1,024 outputs) Bit Slave Units: 512 I/O points total (256 inputs and 256 outputs)	<b>GQ-CRM21</b>

### General Specifications

Item	Specification
Unit power supply voltage	21.6 to 26.4 VDC (24 VDC±10%) (Supplied from power supply connector.)
Current consumption	Communications power supply
	Internal current power consumption
Noise immunity	Conforms to IEC 61000-4-4, 2.0 kV
Vibration resistance	Malfunction: 10 to 60 Hz with 0.7-mm double amplitude, 60 to 150 Hz, 50 m/s <sup>2</sup> for 80 min in X, Y, and Z directions
Shock resistance	150 m/s <sup>2</sup> , 3 times in 6 directions on 3 axes
Dielectric strength	500 VAC
Installation method	Mounted to DIN Track or by using M4 screws
Ambient operating temperature	0 to 55°C
Ambient operating humidity	10% to 90% (with no condensation)
Ambient storage temperature	-25 to 65°C
Weight	110 g max.
Ambient operating atmosphere	No corrosive gases

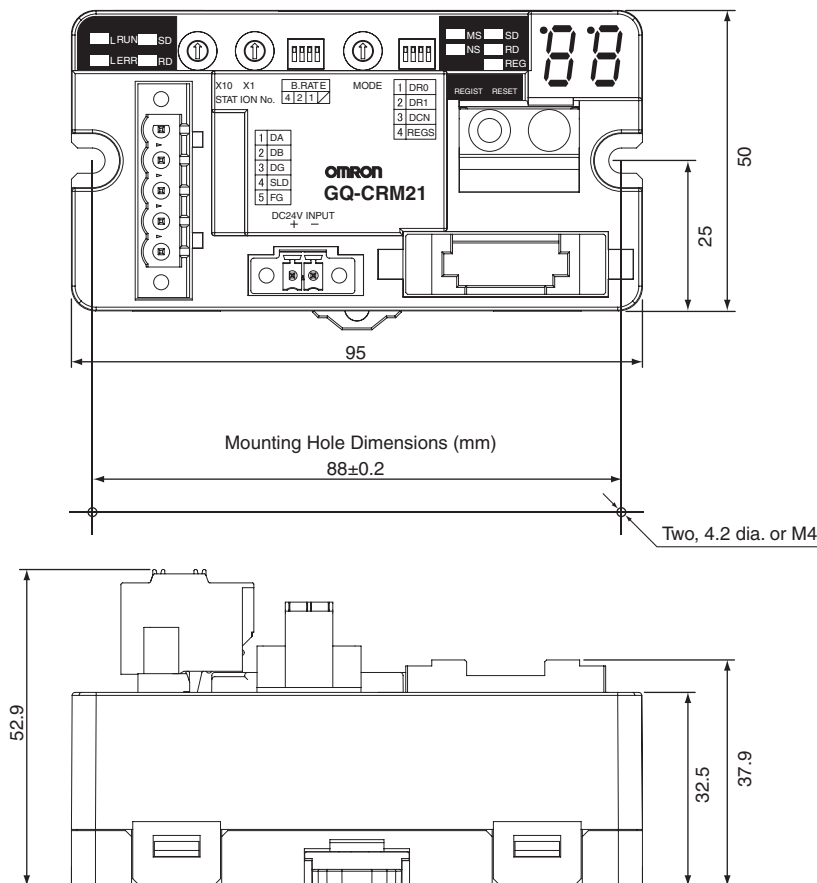
### Component Names and Functions



Dimensions

(Unit: mm)

GQ-CRM21



CC-Link Communications Specifications

Item	Specification
Version	CC-Link version 1.10 or 2.00 (Selected using mode switch.)
Baud rate	156 kbps, 625 kbps, 2.5 Mbps, 5 Mbps, or 10 Mbps
Communications method	Broadcast polling
Synchronization method	Frame synchronization
Encoding	NRZI
Transmission path	Bus (Conforms to RS-485.)
Transmission format	Conforms to HDLC.
Communications media	CC-Link cable (shielded, 3-core twisted-pair cable)
Number of connected nodes	Must meet specifications of the CC-Link Master Unit.
Remote stations	1 to 61 (Four station numbers are allocated starting from the specified station number.)
Error control	CRC ( $X^{16} + X^{12} + X^5 + 1$ )
RAS functions	Automatic recovery function, slave cutoff, data link status checks, offline testing
Allocated station numbers	Allocated four stations numbers as a remote device station

**Note: Do not use this document to operate the Unit.**

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