CSCAM GX Series Computer Link

V1.4.2 or higher



Supported version TOP Design Studio

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We want to thank our customers who use the Touch Operation Panel.

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Describes the cable specifications required for connection.

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Refer to this section to check the addresses which can communicate with an external device.



1. System configuration

The system configuration of TOP and CSCAM's GX Series Computer link is as follows:

Series	CPU	Link I/F	Communication method	Communication setting	Cable
GX	All CPU	-	RS-232C	<u>3. TOP</u> communication <u>setting</u>	5.1. Cable table 1

■ Connection configuration

• 1:1 (one TOP and one external device) connection – configuration which is possible in RS232C/422/485 communication.





2. External device selection

■ Select a TOP model and a port, and then select an external device.

PLC select [CO	DM1]					
Filter : [All]	-		\sim	9	Search :	
					Mode	I 🔿 Vendor
Vendor		Mode	el			
ROOTECH		^ 🌮	CSCAM G			
CKD Corporation						
CSCAM						
IDEC Corporation						
HAWE HYDRAULIK						
SEHAN Electools						
TOHO Electronics Inc.						
IAI Corporation						
MKP						
TEMCOLINE Co., Ltd.						
LINMOT						
CHINO Corporation						
KOLVER Srl						
SENGENUITY	_	•				
elect Device						
PLC Setting[CSCA						
PLC Setting[CSCA Alias Name :	PLC1					
PLC Setting[CSCA Alias Name : Interface :	PLC1 Serial		~			nm Manual
PLC Setting[CSCA Alias Name : Interface : Protocol :	PLC1 Serial CNET		v v hange		Co	mm Manual
PLC Setting[CSCA Alias Name : Interface : Protocol : String Save Mode :	PLC1 Serial CNET First LH HL	C	~		Co	mm Manual
PLC Setting[CSCA Alias Name : Interface : Protocol : String Save Mode :	PLC1 Serial CNET First LH HL		~		Co	mm Manual
PLC Setting[CSCA Alias Name : Interface : Protocol : String Save Mode :	PLC1 Serial CNET First LH HL Y ND ~	c	~)	60	mm Manual
PLC Setting[CSCA Alias Name : Interface : String Save Mode : Use Redundance Operate Condition :	PLC1 Serial CNET First LH HL Y ND ~		hange	,		mm Manual
PLC Setting[CSCA Alias Name : Interface : String Save Mode : Use Redundance Operate Condition :	PLC1 Serial CNET First LH HL Y ND ~ TimeOut		hange			
PLC Setting[CSCA Alias Name : Interface : String Save Mode : String Save Mode : Operate Condition : Change Condition :	PLC1 Serial CNET First LH HL VD ~ TimeOut Condition	5	hange	, ,		
PLC Setting[CSCA Alias Name : Interface : String Save Mode : Use Redundanc Operate Condition : Aliange Condition : Primary Option	PLC1 Serial CNET First LH HL V V VD ~ TimeOut Condition	5 msec	hange)		
PLC Setting[CSCA Alias Name : Interface : String Save Mode : Use Redundanc Operate Condition : A Change Condition : C Primary Option Timeout	PLC1 Serial ONET First LH HL Y VD Condition	5 msec	hange			
PLC Setting[CSCA Alias Name : Interface : String Save Mode : Use Redundance Operate Condition : Change Condition : Primary Option Timeout Send Wait	PLC1 Serial CNET First LH HL Y ND Y ND Solo 300 5	5 msec	hange			
PLC Setting[CSCA Alias Name : Interface : String Save Mode : Use Redundance Operate Condition : A Change Condition : A Change Condition : A Primary Option Timeout Send Wait Retry	PLC1 Serial CNET First LH HL Y ND Y ND Solo 300 5	5 msec	hange			
PLC Setting[CSCA Alias Name : Interface : String Save Mode : Use Redundance Operate Condition : A Change Condition : A Change Condition : A Primary Option Timeout Send Wait Retry	PLC1 Serial CNET First LH HL Y ND Y ND Solo 300 5	5 msec	hange			
PLC Setting[CSCA Alias Name : Interface : String Save Mode : Use Redundance Operate Condition : A Change Condition : A Change Condition : A Primary Option Timeout Send Wait Retry	PLC1 Serial CNET First LH HL Y ND Y ND Solo 300 5	5 msec	hange			
PLC Setting[CSCA Alias Name : Interface : String Save Mode : Use Redundance Operate Condition : A Change Condition : A Change Condition : A Primary Option Timeout Send Wait Retry	PLC1 Serial CNET First LH HL Y ND Y ND Solo 300 5	5 msec	hange			

Set	tings		Contents			
ТОР	Model	Check the TOP displa	Check the TOP display and process to select the touch model.			
External device	Vendor	Select the vendor of Select "CSCAM".	to TOP.			
	PLC	Select an external de	vice to connect to TOP.			
		Model	Interface	Protocol		
		CSCAM	Computer Link	CNET		
		5	tem configuration in Chapter 1 to hose system can be configured.	see if the external device you want to		



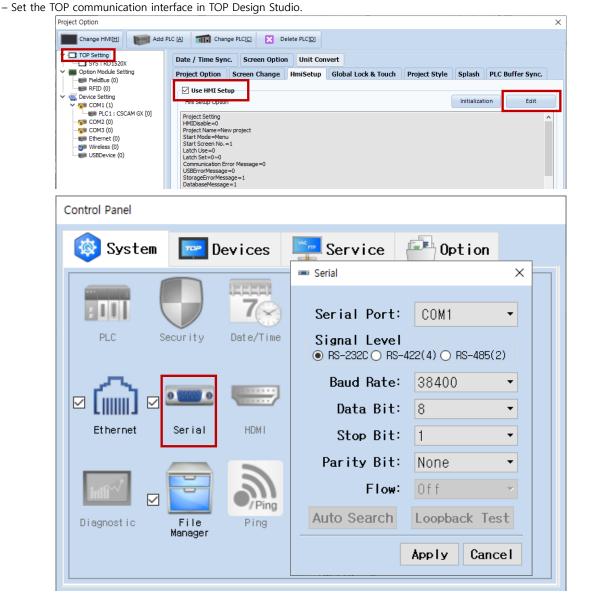
3. TOP communication setting

The communication can be set in TOP Design Studio or TOP main menu. The communication should be set in the same way as that of the external device.

3.1 Communication setting in TOP Design Studio

(1) Communication interface setting

■ [Project > Project Property > TOP Setting] → [Project Option > "Use HMI Setup" Check > Edit > Serial]



Items	ТОР	External device	Remarks
Signal Level (port)	RS-232C	RS-232C	
Baud Rate	38400		
Data Bit	8		
Stop Bit	1		
Parity Bit	Nor	ne	

* The above settings are examples recommended by the company.

ltems	Description
Signal Level	Select the serial communication method between the TOP and an external device.
Baud Rate	Select the serial communication speed between the TOP and an external device.
Data Bit	Select the serial communication data bit between the TOP and an external device.
Stop Bit	Select the serial communication stop bit between the TOP and an external device.
Parity Bit	Select the serial communication parity bit check method between the TOP and an external device.



(2) Communication option setting

- [Project > Project Property > Device Setting > COM > "CSCAM GX"]
 - Set the options of the Computer Link communication driver in TOP Design Studio.

Project Option		×
Change HMI[H] Add F	PLC [A] TI Change PLC[C] Celete PLC[D]	
Change HMI[H] Add F Change HMI[H] Mile Add F Comparison of the setting Comparison of the setting C	PLC Setting[CSCAM GX] Alias Name : PLC1 Interface : Serial Protocol : CNET String Save Mode : First LH HL Change Operate Condition : AND Change Condition : TimeOut 5 \$ (Second) Edit Primary Option Timeout 300 \$ msec Send Wait 0 \$ msec	Comm Manual
		Apply Close

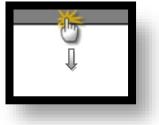
Items	Settings	Remarks
Interface	Configure the communication interface between the TOP and an external device.	Refer to "2. External
Protocol	Configure the communication protocol between the TOP and an external device.	device selection".
TimeOut (ms)	Set the time for the TOP to wait for a response from an external device.	
SendWait (ms)	Set the waiting time between TOP's receiving a response from an external device and	
	sending the next command request.	



3.2. Communication setting in TOP

* This is a setting method when "Use HMI Setup" in the setting items in "3.1 TOP Design Studio" is not checked.

■ Touch the top of the TOP screen and drag it down. Touch "EXIT" in the pop-up window to go to the main screen.



(1) Communication interface setting

■ [Main Screen > Control Panel > Serial]

VNC Viewer Screen shot	System Devi PLC Security Dat Serial	Serial Port ∟Signal Leve	Serial × t: COM1 • el • • s-422(4) O RS-485(2) • e: 38400 • t: 8 • t: 1 • t: None • : Off •		
	gnostic File Manager System]		Apply Cancel	DSe	
Toprx – Toprx0800s			A 20	21-09-01 10:	46:01 AM
Items	ТОР		External devic	e	Remarks

Signal Level (port)	RS-232C	RS-232C	
Baud Rate	384	00	Fixed
Data Bit	8		
Stop Bit	1		
Parity Bit	Nor	ne	

* The above settings are setting examples recommended by the company.

Items	Description
Signal Level	Select the serial communication method between the TOP and an external device.
Baud Rate	Select the serial communication speed between the TOP and an external device.
Data Bit	Select the serial communication data bit between the TOP and an external device.
Stop Bit	Select the serial communication stop bit between the TOP and an external device.
Parity Bit	Select the serial communication parity bit check method between the TOP and an external device.



(2) Communication option setting

■ [Main Screen > Control Panel > PLC]

	ō	5001	PLC	×	
Run	🔯 System	Driver(COM1)	PLC1(CSCAM GX)		
Hun	PLC Se	Interface Protocol Timeout	Serial CNET 300 🗣 msec	 ▼ 	
VNC Viewer	Ethernet S	Send Wait Retry Node ID	0 + msec 5 + 0 +		
Screen	Diagnostic Ma				
	[System]	Diagnostic		Apply Cancel	
Toprx - Toprx080	OS			A 2021-09-01 10:46:15	AM

Items	Settings	Remarks
Interface	Configure the communication interface between the TOP and an external device.	Refer to "2. External
Protocol	Configure the communication protocol between the TOP and an external device.	device selection".
TimeOut (ms)	Set the time for the TOP to wait for a response from an external device.	
SendWait (ms)	Set the waiting time between TOP's receiving a response from an external device and sending the next command request.	
NODE ID	Configure the node ID for target device.	



3.3 Communication diagnostics

■ Check the interface setting status between the TOP and external device.

- Touch the top of the TOP screen and drag it down. Touch "EXIT" in the pop-up window to go to the main screen.
- Check if the COM port settings you want to use in [Control Panel > Serial] are the same as those of the external device.
- Diagnosis of whether the port communication is normal or not
- Touch "Communication diagnostics" in [Control Panel > PLC].
- The Diagnostics dialog box pops up on the screen and determines the diagnostic status.

ОК	Communication setting normal
Time Out Error	Communication setting abnormal
	- Check the cable, TOP, and external device setting status. (Reference: Communication diagnostics sheet)

Communication diagnostics sheet

- If there is a problem with the communication connection with an external terminal, please check the settings in the sheet below.

Items	Contents		Check		Remarks	
System	How to connect the system		OK	NG	1. Containing firm with a	
configuration	Connection cable nam	OK	NG	1. System configuration		
ТОР	Version information	OK	NG			
	Port in use	OK	NG			
	Driver name	OK	NG			
	Other detailed settings	5	OK	NG		
	Relative prefix	Project setting	OK	NG		
		Communication diagnostics	ОК	NG	2. External device selection 3. Communication setting	
	Serial Parameter	Transmission Speed	ОК	NG		
		Data Bit	OK	NG		
		Stop Bit	OK	NG		
		Parity Bit	OK	NG		
External device	CPU name	OK	NG			
	Communication port n	OK	NG			
	Protocol (mode)	OK	NG			
	Setup Prefix	OK	NG			
	Other detailed settings		OK	NG	4. External device cetting	
	Serial Parameter	Transmission Speed	ОК	NG	<u>4. External device setting</u>	
		Data Bit	OK	NG		
		Stop Bit	OK	NG		
		Parity Bit	OK	NG		
	Check address range				6. Supported addresses	
			ОК	NG	(For details, please refer to the PLC vendor's manual.)	

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4. External device setting

Set as below using "GX-Builder". For more detailed setting method than that described in this example, refer to the PLC user manual.

- 1. Go to "Register Editor, and select D (Device Parameter).
- 2. Double-click "CPU device" on the list of available devices.
- **3.** Configure the device settings as shown below.

Contents	For [RS232_1] - RS-232A		For [RS232_2] - RS-232B	
Master/Slave	RegNo 151	SLAVE	RegNo 162	SLAVE
Communication protocol	RegNo 152	МК	RegNo 163	МК
Baudrate	RegNo 154	38400	RegNo 155	38400
Data Bit	RegNo 154	8	RegNo 155	8
Parity Bit	RegNo 154	NONE	RegNo 155	NONE
Stop Bit	RegNo 154	1	RegNo 155	1



5. Cable table

This chapter introduces a cable diagram for normal communication between the TOP and the corresponding device. (The cable diagram described in this section may differ from the recommendations of "**CSCAM GX Series Computer Link**")

5.1. Cable table 1

■ 1:1 connection

TOP COM Port (9 pin)

TOP COM				External device		
Pin	Signal	Pin	Cable connection	Pin	Signal	Pin
arrangement*Note 1)	name	number		number	name	arrangement*Note 1)
1 5	CD	1		1	CD	1 5
$(\circ \circ)$	RD	2		2	RD	$(\circ \circ)$
	SD	3 -		3	SD	
6 9 Based on	DTR	4		4	DTR	6 9 Based on
communication	SG	5		5	SG	communication
cable connector	DSR	6		6	DSR	cable connector
front,	RTS	7		7	RTS	front,
D-SUB 9 Pin male	CTS	8		8	CTS	D-SUB 9 Pin male
(male, convex)		9		9		(male, convex)

*Note 1) The pin arrangement is as seen from the connecting side of the cable connection connector.



6. Supported addresses

The devices available in TOP are as follows:

The device range (address) may differ depending on the CPU module series/type. The TOP series supports the maximum address range used by the external device series. Please refer to each CPU module user manual and be take caution to not deviate from the address range supported by the device you want to use.

Device Name	Bit Address	Word Address	Remarks
M Register	M0000 – M191F	M000 – M191	*Note 1)
D Register	D0000.0 – D3999.F	D0000 – D3999	*Note 1)

*Note 1) 16 bit device; a register mapped to the CSCAM address, therefore refer to the following PLC manual.