LS Industrial Systems Co., Ltd.

GLOFA-GM(CPUC Type) Series

CNET Driver

Support version	OS	V4.0 and over
	XDesignerPlus	4.0.0.0 and over

CONTENTS

Thank you for using TOP series of M2I corporation.
Please read this manual carefully to know connection methods and procedures of "TOP to External device".

1. System configuration

System configuration of TOP and "LS Industrial System Co., Ltd. – GLOFA-GM(CPUC Type) Series CNET".

Series	CPU	Link I/F	Comm. Type	System setting	Cable
GMR	GMR-CPUA GMR-CPUB	G3L-CUEA(K7F-CUEA) *1)	RS-232C	3.1 setting ex 1 (5 Page)	5.1 cable diagram 1 (40 Page)
			RS-422 (4 wire)	3.2 setting ex 2 (7 Page)	5.2 cable diagram 2 (41 Page)
			RS-485 (2 wire)	3.3 setting ex 3 (9 Page)	5.3 cable diagram 3 (42 Page)
GM1	GM1-CPUA GM1-CPUB	G3L-CUEA(K7F-CUEA) *1)	RS-232C	3.1 setting ex 1 (5 Page)	5.1 cable diagram 1 (40 Page)
			RS-422 (4 wire)	3.2 setting ex 2 (7 Page)	5.2 cable diagram 2 (41 Page)
			RS-485 (2 wire)	3.3 setting ex 3 (9 Page)	5.3 cable diagram 3 (42 Page)
GM2	GM2-CPUA GM2-CPUB	G3L-CUEA(K7F-CUEA) *1)	RS-232C	3.1 setting ex 1 (5 Page)	5.1 cable diagram 1 (40 Page)
			RS-422 (4 wire)	3.2 setting ex 2 (7 Page)	5.2 cable diagram 2 (41 Page)
			RS-485 (2 wire)	3.3 setting ex 3 (9 Page)	5.3 cable diagram 3 (42 Page)
GM3	GM3-CPUA	G3L-CUEA(K7F-CUEA) *1)	RS-232C	3.1 setting ex 1 (5 Page)	5.1 cable diagram 1 (40 Page)
			RS-422 (4 wire)	3.2 setting ex 2 (7 Page)	5.2 cable diagram 2 (41 Page)
			RS-485 (2 wire)	3.3 setting ex 3 (9 Page)	5.3 cable diagram 3 (42 Page)
GM4	GM4-CPUA GM4-CPUB GM4-CPUC	G4L-CUEA(K4F-CUEA) *1)	RS-232C	3.1 setting ex 1 (5 Page)	5.1 cable diagram 1 (40 Page)
			RS-422 (4 wire)	3.2 setting ex 2 (7 Page)	5.2 cable diagram 2 (41 Page)
			RS-485 (2 wire)	3.3 setting ex 3 (9 Page)	5.3 cable diagram 3 (42 Page)
GM6	GM6-CPUA *2) GM6-CPUB *3) GM6-CPUC *2)	CPU with a built in Cnet	RS-232C	3.4 setting ex 4 (11 Page)	5.4 cable diagram 4 (43 Page)
		CPU with a built in Cnet	RS-422 (4 wire)	3.5 setting ex 5 (13 Page)	5.2 cable diagram 2 (41 Page)
			RS-485 (2 wire)	3.6 setting ex 6 (15 Page)	5.3 cable diagram 3 (42 Page)
		G6L-CUEB(K3F-CU2A) *1)	RS-232C	3.7 setting ex 7 (17 Page)	5.1 cable diagram 1 (40 Page)
		G6L-CUEC(K3F-CU4A) *1)	RS-422 (4 wire)	3.8 setting ex 8 (19 Page)	5.2 cable diagram 2 (41 Page)
			RS-485 (2 wire)	3.9 setting ex 9 (21 Page)	5.3 cable diagram 3 (42 Page)

*1) Name of module in brackets is name of old type.

*2) GM6-CPU A/C type only has a built in RS-232C Cnet in CPU module.

*3) GM6-CPU B type only has a built in RS-422 Cnet in CPU module.

Series	CPU	Link I/F	Comm. Type	System setting	Cable
GM7U	G7M-D□20U *4) G7M-D□30U *4) G7M-D□40U *4) G7M-D□60U *4)	CPU with a built in Cnet, Ch0	RS-232C	3.10 setting ex 10 (23 Page)	5.4 cable diagram 4 (43 Page)
		CPU with a built in Cnet, Ch1	RS-485	3.11 setting ex 11 (25 Page)	5.5 cable diagram 5 (44 Page)
		G7L-CUEB	RS-232C	3.12 setting ex 12 (27 Page)	5.1 cable diagram 1 (40 Page)
		G7L-CUEC	RS-422 (4 wire)	3.13 setting ex 13 (29 Page)	5.2 cable diagram 2 (41 Page)
			RS-485 (2 wire)	3.14 setting ex 14 (31 Page)	5.3 cable diagram 3 (42 Page)
GM7	G7M-D□10A *5) G7M-D□20A *6) G7M-D□30A *6) G7M-D□40A *6) G7M-D□60A *6)	CPU with a built in Cnet, Ch0	RS-232C	3.15 setting ex 15 (33 Page)	5.4 cable diagram 4 (43 Page)
			RS-485	3.16 setting ex 16 (35 Page)	5.5 cable diagram 5 (44 Page)
		G7L-CUEB	RS-232C	3.12 setting ex 12 (27 Page)	5.1 cable diagram 1 (40 Page)
		G7L-CUEC	RS-422 (4 wire)	3.13 setting ex 13 (29 Page)	5.2 cable diagram 2 (41 Page)
			RS-485 (2 wire)	3.14 setting ex 14 (31 Page)	5.3 cable diagram 3 (42 Page)

*4) If you don't use an extension communication module, use both CH0 and CH1. If you use an extension communication module (Dip switch of built-in Cnet is Off : It is set to use an extension communication module), can't use built-in RS-232C of Ch0 and can use built-in RS-485 Cnet of Ch1.

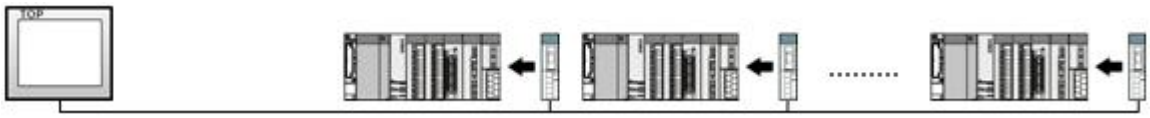
*5) "G7M-D□10A" type can use only one built-in Cnet. If dip switch of built-in Cnet is On, It is built-in RS-232C channel. If dip switch of built-in Cnet is Off, It is built-in RS-422 channel. And it can't use an extension module.

*6) "G7M D□20A ~ D□60A" CPU economical type can use only "built in Cnet Ch0(RS-232C) of PC connection loader port".
If you don't use an extension communication module(Dip switch of built-in Cnet is Off : It is set to use an extension communication module), can't use built-in Cnet.

■ Connection configuration

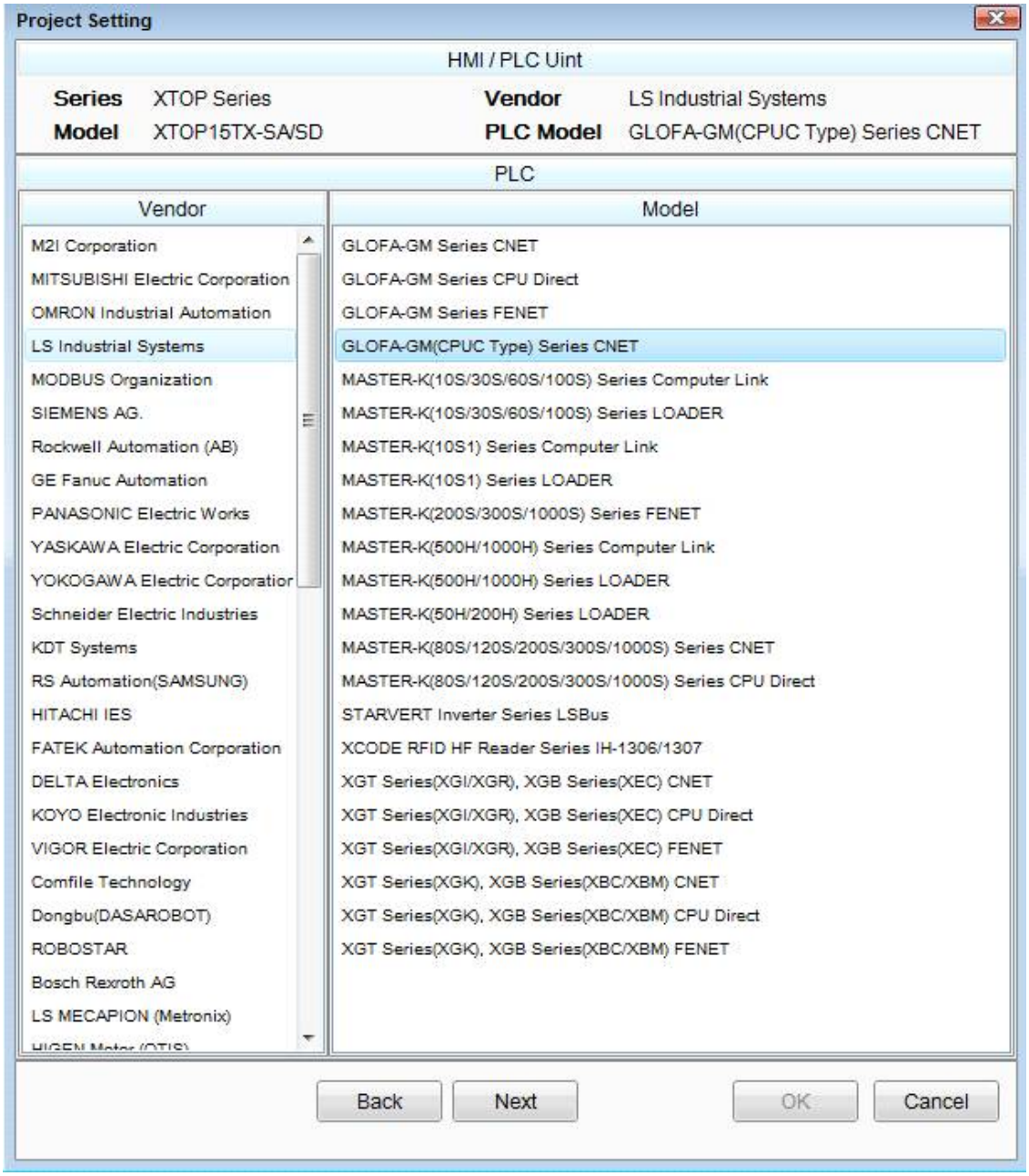
• 1 : 1(TOP 1 unit to External device 1 unit) connection – It is available with RS232C/422/485.

• 1 : N(TOP 1 unit to External device N unit) connection – It is available with RS422/485.



2. Selection of TOP, External device

Select a external device which is communicated to the TOP.



Setting Items		Description
TOP	Series	Select a TOP series which is communicated with external device. Install an OS file v3.1 as diagram below before download a project file you have made. Series: XTOP / HTOP — OS Version: V4.0
	Name	Select a TOP model which is communicated with external device.
External Device	Vendor	Select vendor of the external device which is communicated with TOP. Select "LS INDUSTRIAL SYSTEMS CO., LTD".
	PLC	Select a model name of the external device which is communicated with TOP. Select "GLOFA-GM(CPUC Type) Series CNET". Check whether the external device you want to use is connectable or not in "1. System configuration".

3. Example of system setting

Set Communication interface of TOP and external device as below.

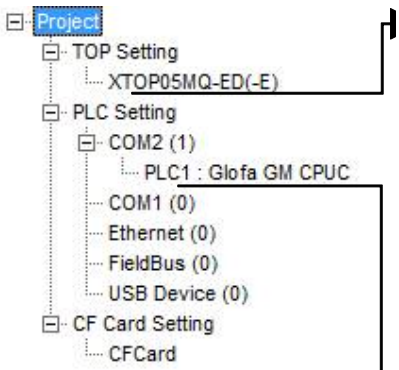
3.1 Example 1

Set your system as below.

Item	TOP	GLOFA-GM Series	Note
Serial Signal Level (port/channel)	RS-232 (COM2)	RS-232	User set
Station number (PLC Address)	—	0	User set
Serial Baud rate [BPS]	38400		User set
Serial Data bit [Bit]	8		User set
Serial Stop bit [Bit]	1		User set
Serial Parity bit [Bit]	NONE		User set
Run Mode	private mode		User set

(1) XDesignerPlus Setting

Set [Project >Project property] of XDesignerPlus as below and download it to TOP machine.



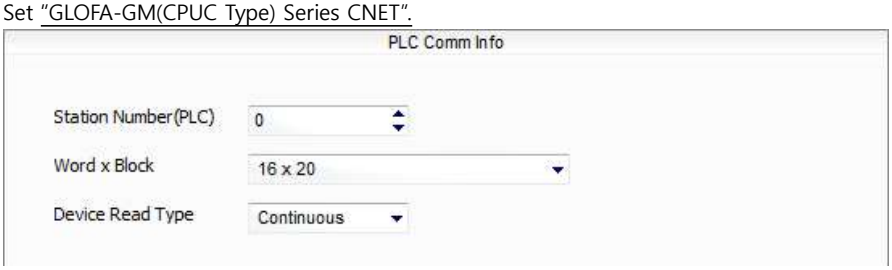
■ [Project >Project Property > Project >TOP Setting > TOP Name]

Set communication interface of TOP.

-Right Window : [HMI Setting > Check HMI Setting using > Device manager]

■ External device setup

Set "GLOFA-GM(CPUC Type) Series CNET".



-Station Number : Station number of external device.

-WordxBlock : Input WordxBlock size of GLOFA-GM.

-Device Read Type : Select the protocol type.

(2) External device setup – Link type

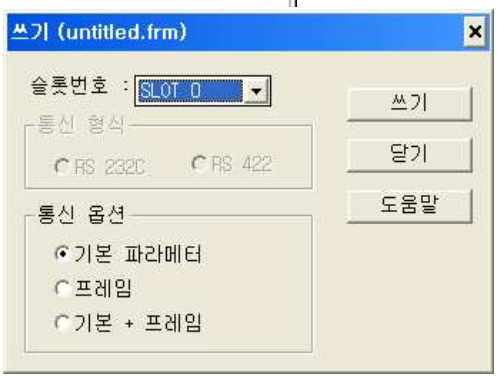
Run "Cnet Frame Editor" program of communication system setting tool of GLOFA-GM series for communication setting and set as below. If you want to change communication interface, modify refer to PLC manual.

[GLOFA GM loader cable]

PC (9pin)		GM(9pin)	
signal	pin	pin	signal
RD	2	2	RD
SD	3	3	SD
SG	5	5	SG

1. Connect to RS-232 port of CPU unit and PC with [GLOFA GM loader cable].
2. MODE Rotary switch of Cnet communication module set **"3"(private communication mode)** and reset power of PLC.
3. Run "Cnet Frame Editor".
4. Run [Option > Select communication port] and select PC connection port and PLC"only" on Dialog Box and push "OK" button.
5. Run [Online > Connect] and connect to PC and external device.
6. Set communication setting at "Cnet Frame Editor".

7. Select [Online > Write].
   Set as below on Dialog Box and click write.



8. Select [Online > Online mode change].
   Set as below on Dialog Box and click write.

Item	Setting ex	contents
Slot number	SLOT 0	Slot of Cnet module
Comm. option	Default parameter	Write contents

9. Select [Online > Change operation]. Set communication card setup slot and RS-232C and click "communication run" on Dialog Box.

Item	Setting ex	contents
Slot number	SLOT 0	Slot of Cnet module
Comm. type	RS-232C	

Item	Setting ex	contents
Slot number	SLOT 0	Slot of Cnet module
CH operation	independence	
RS-232C	Privation mode	


동작전환
슬롯 번호
LINK 0
통신 형식
RS_232C
RS_422
통신 런
통신 스톱
닫기

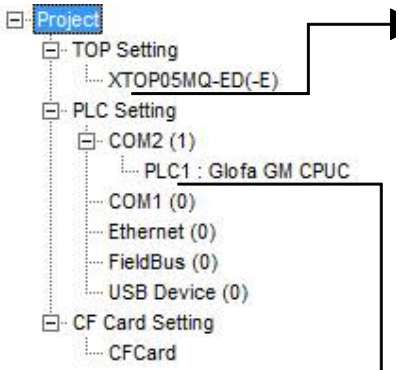
3.2 Example 2

Set your system as below.

Item	TOP	GLOFA-GM Series	Note
Serial Signal Level (port/channel)	RS-422 (4 wire, COM2)	RS-422	User set
Station number (PLC Address)	—	0	User set
Serial Baud rate [BPS]	38400		User set
Serial Data bit [Bit]	8		User set
Serial Stop bit [Bit]	1		User set
Serial Parity bit [Bit]	NONE		User set
Run Mode	private mode		User set

(1) XDesignerPlus Setting

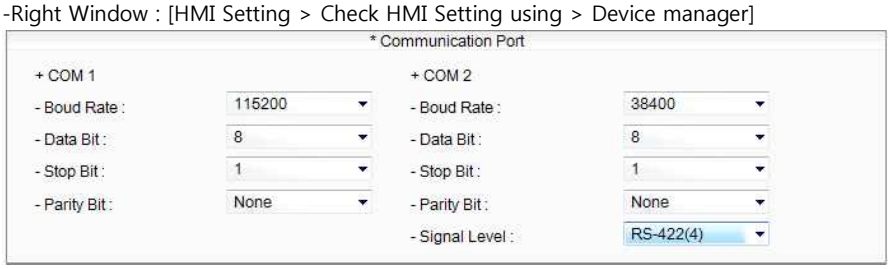
Set [Project >Project property] of XDesignerPlus as below and download it to TOP machine.



■ [Project >Project Property > Project >TOP Setting > TOP Name]

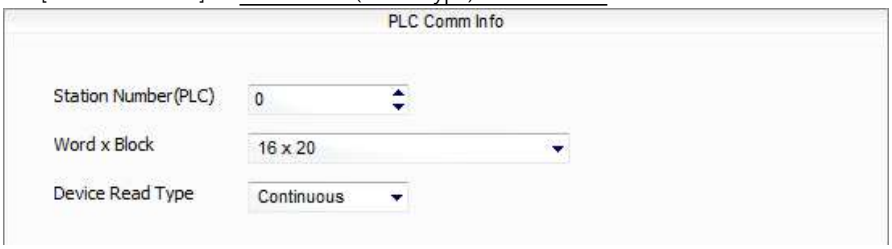
Set communication interface of TOP.

-Right Window : [HMI Setting > Check HMI Setting using > Device manager]



■ External device setup

Set [PLC Comm Info] of "GLOFA-GM(CPUC Type) Series CNET".



-Station Number : Station number of external device.

-WordxBlock : Input WordxBlock size of GLOFA-GM.

-Device Read Type : Select the protocol type.

(2) External device setup – link type

Run "Cnet Frame Editor" program of communication system setting tool of GLOFA-GM series for communication setting and set as below. If you want to change communication interface, modify refer to PLC manual.

[GLOFA GM loader cable]

PC (9pin)		GM(9pin)	
signal	pin	pin	signal
RD	2	2	RD
SD	3	3	SD
SG	5	5	SG

1. Connect to RS-232 port of CPU unit and PC with [GLOFA GM loader cable].

2. MODE Rotary switch of Cnet communication module set **"3"(private communication mode)** and reset power of PLC.

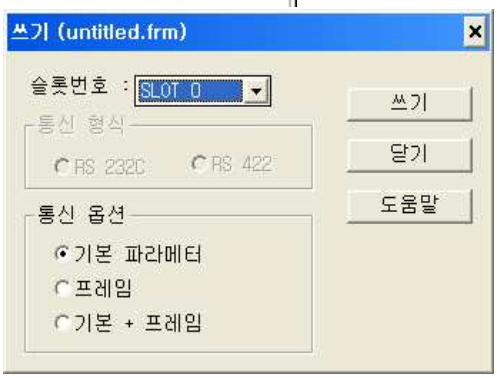
3. Run "Cnet Frame Editor".

4. Run [Option > Select communication port] and select PC connection port and PLC"only" on Dialog Box and push "OK" button.

5. Run [Online > Connect] and connect to PC and external device.

6. Set communication setting at "Cnet Frame Editor".

7. Select [Online > Write].
Set as below on Dialog Box and click write.



8. Select [Online > Online mode change].
Set as below on Dialog Box and click write.

Item	Setting ex	contents
Slot number	SLOT 0	Slot of Cnet module
Comm. option	Default parameter	Write contents

9. Select [Online > Change operation]. Set communication card setup slot and RS-232C and click "communication run" on Dialog Box.

Item	Setting ex	contents
Slot number	SLOT 0	Slot of Cnet module
CH operation	independence	
RS-422	Privation mode	

Item	Setting ex	contents
Slot number	SLOT 0	Slot of Cnet module
Comm. type	RS_422	

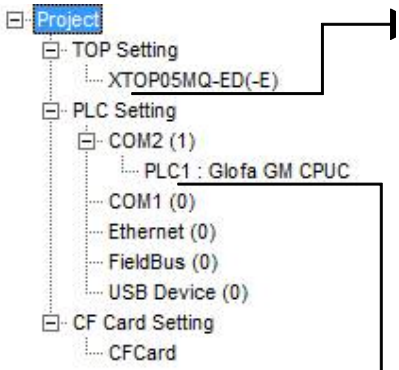
3.3 Example 3

Set your system as below.

Item	TOP	GLOFA-GM Series	Note
Serial Signal Level (port/channel)	RS-485 (2 wire, COM2)	RS-485	User set
Station number (PLC Address)	—	0	User set
Serial Baud rate [BPS]	38400		User set
Serial Data bit [Bit]	8		User set
Serial Stop bit [Bit]	1		User set
Serial Parity bit [Bit]	NONE		User set
Run Mode	private mode		User set

(1) XDesignerPlus Setting

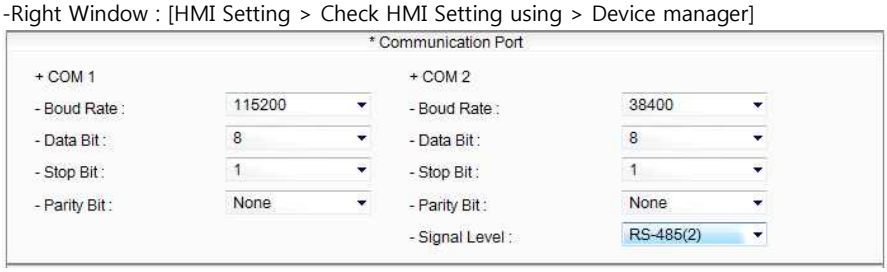
Set [Project >Project property] of XDesignerPlus as below and download it to TOP machine.



■ [Project >Project Property > Project >TOP Setting > TOP Name]

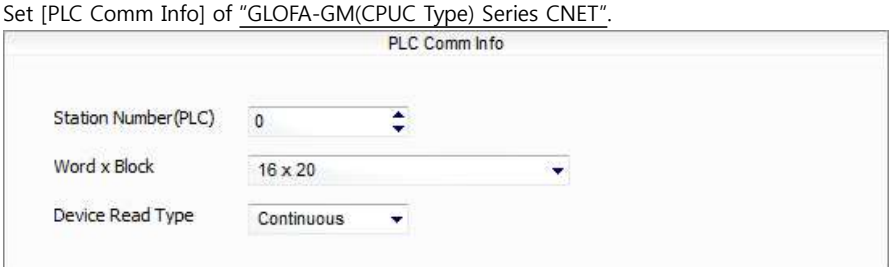
Set communication interface of TOP.

-Right Window : [HMI Setting > Check HMI Setting using > Device manager]



■ External device setup

Set [PLC Comm Info] of "GLOFA-GM(CPUC Type) Series CNET".



-Station Number : Station number of external device.

-WordxBlock : Input WordxBlock size of GLOFA-GM.

-Device Read Type : Select the protocol type.

(2) External device setup – link type

Run "Cnet Frame Editor" program of communication system setting tool of GLOFA-GM series for communication setting and set as below. If you want to change communication interface, modify refer to PLC manual.

[GLOFA GM loader cable]

PC (9pin)		GM(9pin)	
signal	pin	pin	signal
RD	2	2	RD
SD	3	3	SD
SG	5	5	SG

1. Connect to RS-232 port of CPU unit and PC with [GLOFA GM loader cable].

2. MODE Rotary switch of Cnet communication module set **"3"(private communication mode)** and reset power of PLC.

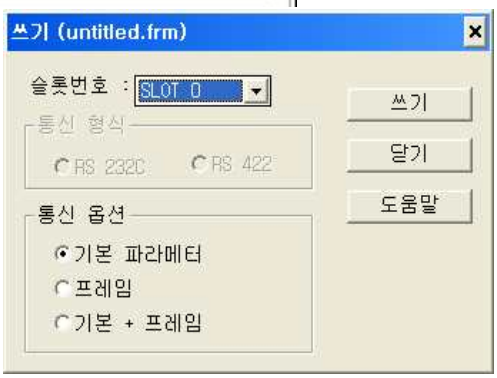
3. Run "Cnet Frame Editor".

4. Run [Option > Select communication port] and select PC connection port and PLC"only" on Dialog Box and push "OK" button.

5. Run [Online > Connect] and connect to PC and external device.

6. Set communication setting at "Cnet Frame Editor".

7. Select [Online > Write].
Set as below on Dialog Box and click write.



8. Select [Online > Online mode change].
Set as below on Dialog Box and click write.

Item	Setting ex	contents
Slot number	SLOT 0	Slot of Cnet module
Comm. option	Default parameter	Write contents

9. Select [Online > Change operation]. Set communication card setup slot and RS-422 and click "communication run" on Dialog Box.

Item	Setting ex	contents
Slot number	SLOT 0	Slot of Cnet module
CH operation	independence	
RS-422	Privation mode	

Item	Setting ex	contents
Slot number	SLOT 0	Slot of Cnet module
Comm. type	RS_422	

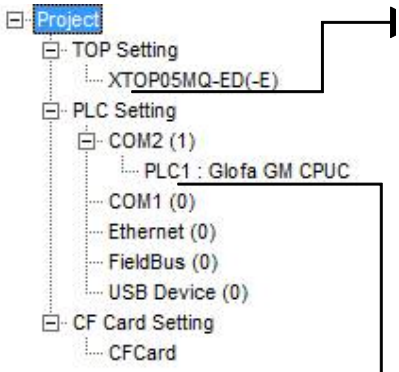
3.4 Example 4

Set your system as below.

Item	TOP	GLOFA-GM Series	Note
Serial Signal Level (port/channel)	RS-232 (COM2)	RS-232	User set
Station number (PLC Address)	—	0	User set
Serial Baud rate [BPS]	38400		User set
Serial Data bit [Bit]	8		User set
Serial Stop bit [Bit]	1		User set
Serial Parity bit [Bit]	NONE		User set
Run Mode	private mode		User set

(1) XDesignerPlus Setting

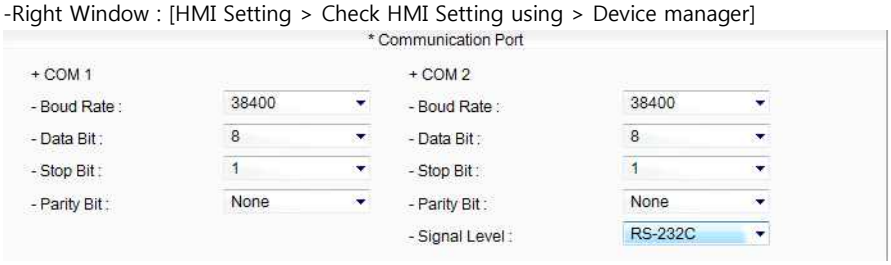
Set [Project >Project property] of XDesignerPlus as below and download it to TOP machine.



■ [Project >Project Property > Project >TOP Setting > TOP Name]

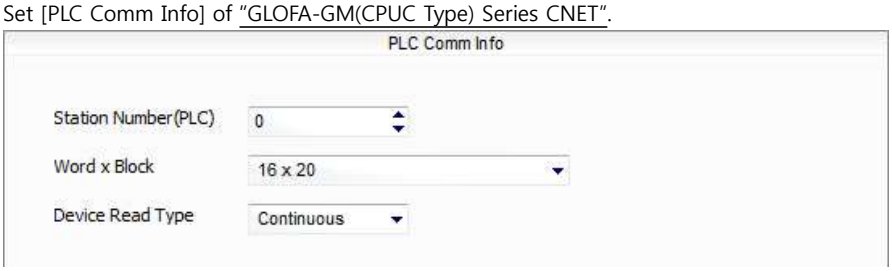
Set communication interface of TOP.

-Right Window : [HMI Setting > Check HMI Setting using > Device manager]



■ External device setup

Set [PLC Comm Info] of "GLOFA-GM(CPUC Type) Series CNET".



-Station Number : Station number of external device.

-WordxBlock : Input WordxBlock size of GLOFA-GM.

-Device Read Type : Select protocol type.

(2) External device setup – Built in Cnet type

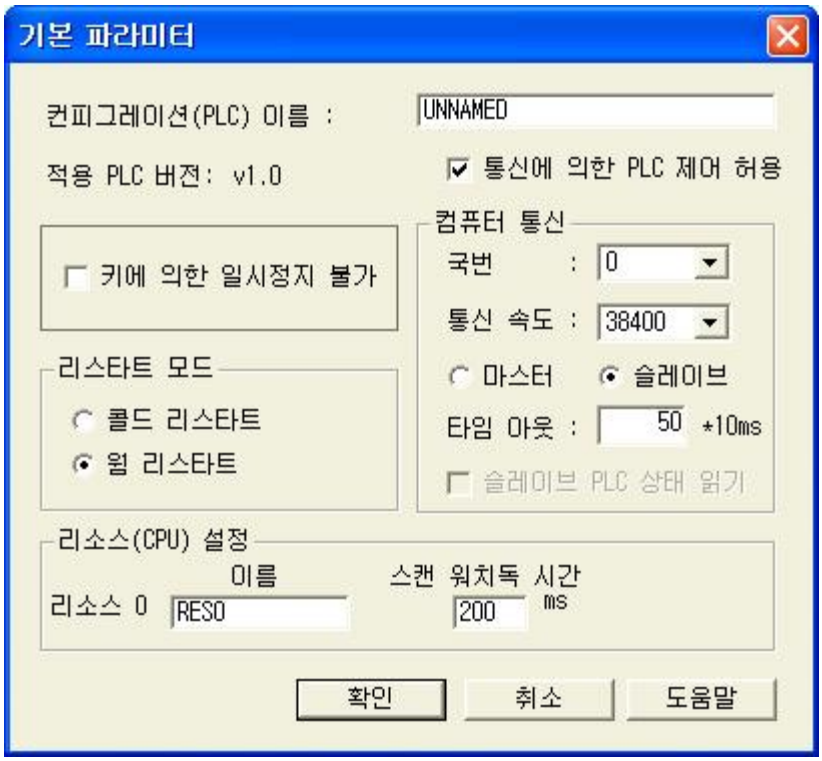
Run GLOFA GM series Ladder Software "GM_WIN" and set as below.

If you want to change communication interface, modify refer to PLC manual.

[GLOFA GM loader cable]

PC (9pin)		GM(9pin)	
signal	pin	pin	signal
RD	2	2	RD
SD	3	3	SD
SG	5	5	SG

1. Connect to RS-232 port of CPU unit and PC with [GLOFA GM loader cable].
2. Run GM_WIN program, and create new project about [GM6].
3. Double click [Parameter > Default parameter] on project dialog and set as below.



4. Run [Online > Connect] and connect to PC and external device.
5. Select [Write] menu and download communication setting to external device.

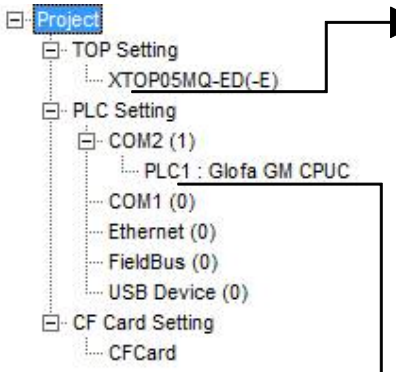
3.5 Example 5

Set your system as below.

Item	TOP	GLOFA-GM Series	Note
Serial Signal Level (port/channel)	RS-422 (4 wire, COM2)	RS-422	User set
Station number (PLC Address)	—	0	User set
Serial Baud rate [BPS]	38400		User set
Serial Data bit [Bit]	8		User set
Serial Stop bit [Bit]	1		User set
Serial Parity bit [Bit]	NONE		User set
Run Mode	private mode		User set

(1) XDesignerPlus Setting

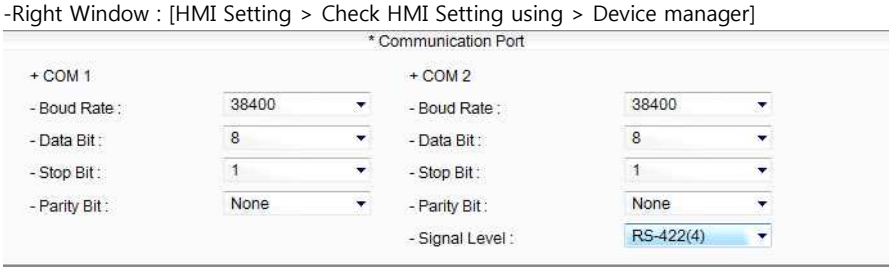
Set [Project >Project property] of XDesignerPlus as below and download it to TOP machine.



■ [Project >Project Property > Project >TOP Setting > TOP Name]

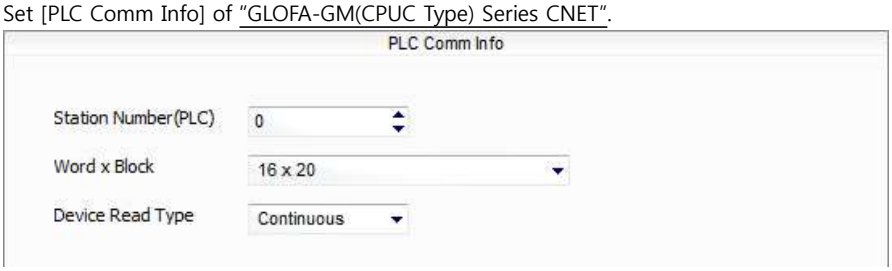
Set communication interface of TOP.

-Right Window : [HMI Setting > Check HMI Setting using > Device manager]



■ External device setup

Set [PLC Comm Info] of "GLOFA-GM(CPUC Type) Series CNET".



-Station Number : Station number of external device.

-WordxBlock : Input WordxBlock size of GLOFA-GM.

-Device Read Type : Select protocol type.

(2) External device setup – Built in Cnet type

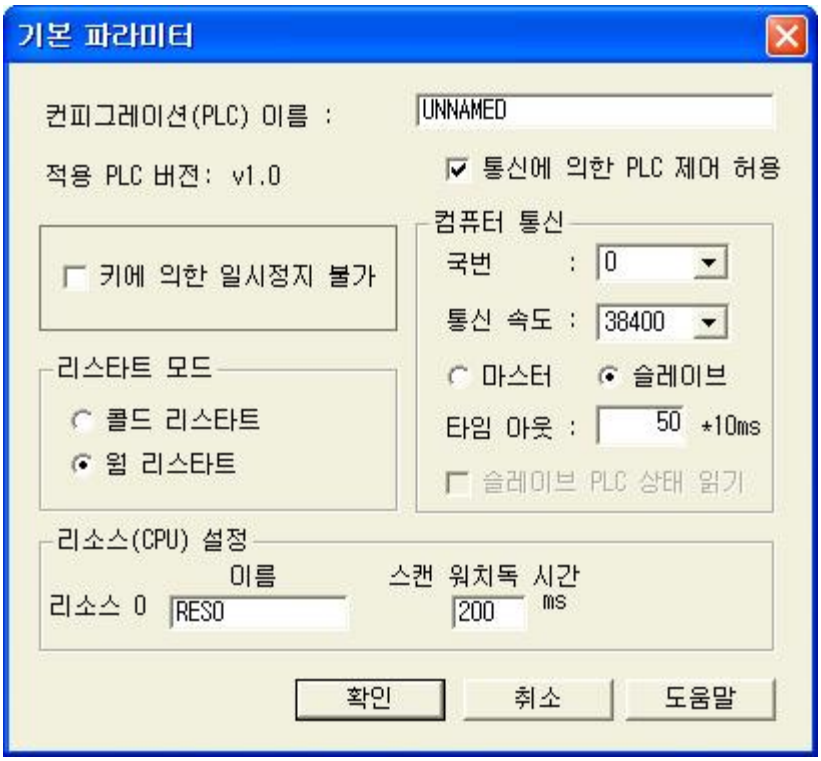
Run GLOFA GM series Ladder Software "GM_WIN" and set as below.

If you want to change communication interface, modify refer to PLC manual.

[GLOFA GM loader cable]

PC (9pin)		GM(9pin)	
signal	pin	pin	signal
RD	2	2	RD
SD	3	3	SD
SG	5	5	SG

1. Connect to RS-232 port of CPU unit and PC with [GLOFA GM loader cable].
2. Run GM_WIN program, and create new project about [GM6].
3. Double click [Parameter > Default parameter] on project dialog and set as below.



4. Run [Online > Connect] and connect to PC and external device.
5. Select [Write] menu and download communication setting to external device.

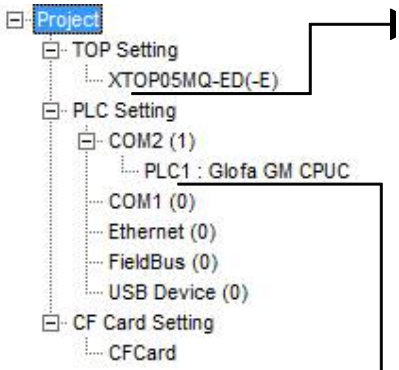
3.6 Example 6

Set your system as below.

Item	TOP	GLOFA-GM Series	Note
Serial Signal Level (port/channel)	RS-485 (2 wire, COM2)	RS-485	User set
Station number (PLC Address)	—	0	User set
Serial Baud rate [BPS]	38400		User set
Serial Data bit [Bit]	8		User set
Serial Stop bit [Bit]	1		User set
Serial Parity bit [Bit]	NONE		User set
Run Mode	private mode		User set

(1) XDesignerPlus Setting

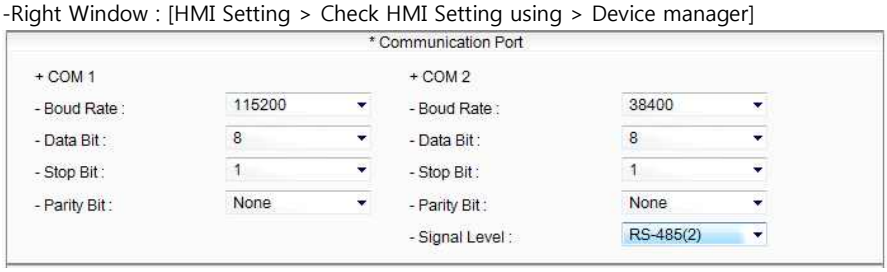
Set [Project >Project property] of XDesignerPlus as below and download it to TOP machine.



■ [Project >Project Property > Project >TOP Setting > TOP Name]

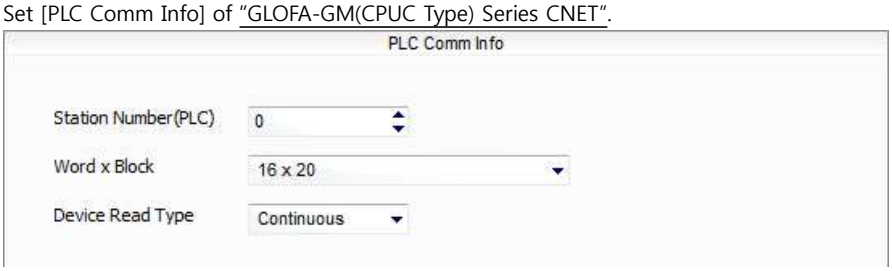
Set communication interface of TOP.

-Right Window : [HMI Setting > Check HMI Setting using > Device manager]



■ External device setup

Set [PLC Comm Info] of "GLOFA-GM(CPUC Type) Series CNET".



-Station Number : Station number of external device.

-WordxBlock : Input WordxBlock size of GLOFA-GM.

-Device Read Type : Select protocol type.

(2) External device setup – Built in Cnet type

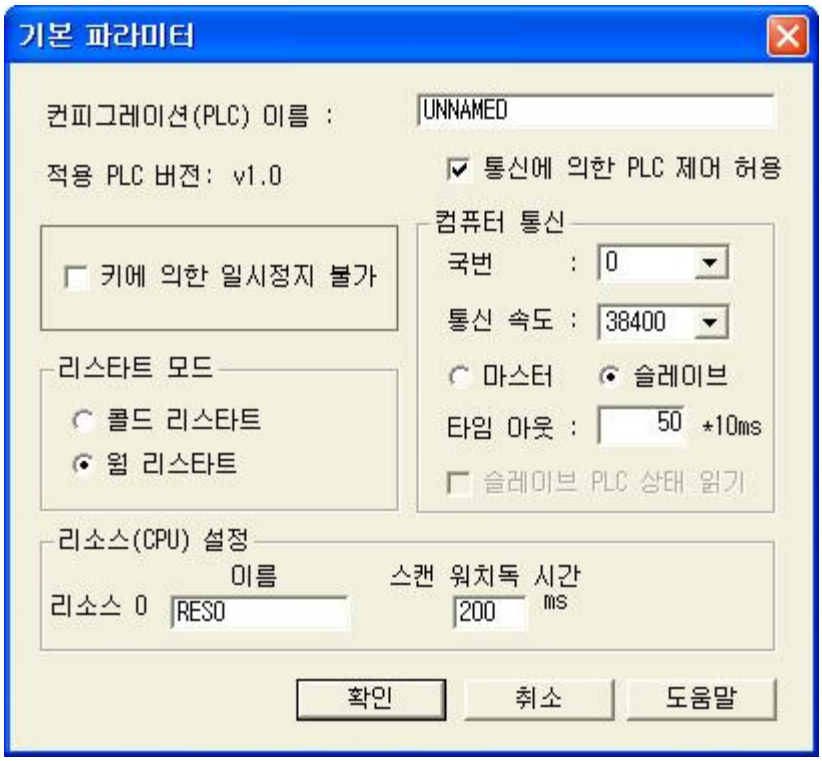
Run GLOFA GM series Ladder Software "GM_WIN" and set as below.

If you want to change communication interface, modify refer to PLC manual.

[GLOFA GM loader cable]

PC (9pin)		GM(9pin)	
signal	pin	pin	signal
RD	2	2	RD
SD	3	3	SD
SG	5	5	SG

1. Connect to RS-232 port of CPU unit and PC with [GLOFA GM loader cable].
2. Run GM_WIN program, and create new project about [GM6].
3. Double click [Parameter > Default parameter] on project dialog and set as below.



4. Run [Online > Connect] and connect to PC and external device.
5. Select [Write] menu and download communication setting to external device.

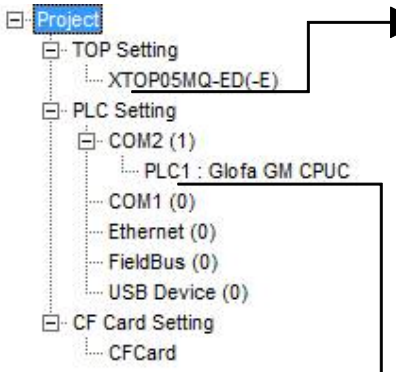
3.7 Example 7

Set your system as below.

Item		TOP	GLOFA-GM Series	Note
Serial Signal Level (port/channel)		RS-232 (COM2)	RS-232	User set
Station number (PLC Address)		—	0	User set
Serial Baud rate	[BPS]	38400		User set
Serial Data bit	[Bit]	8		User set
Serial Stop bit	[Bit]	1		User set
Serial Parity bit	[Bit]	NONE		User set
Run Mode		private mode		User set

(1) XDesignerPlus Setting

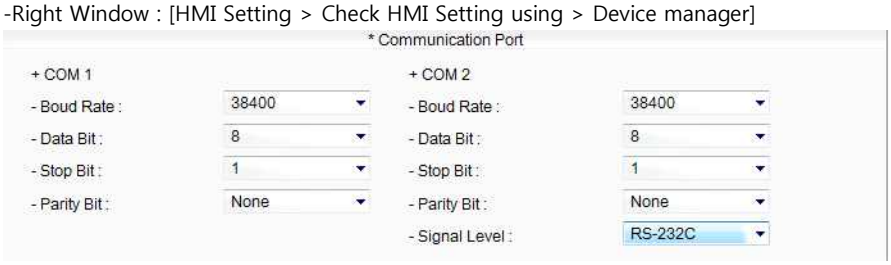
Set [Project >Project property] of XDesignerPlus as below and download it to TOP machine.



■ [Project >Project Property > Project >TOP Setting > TOP Name]

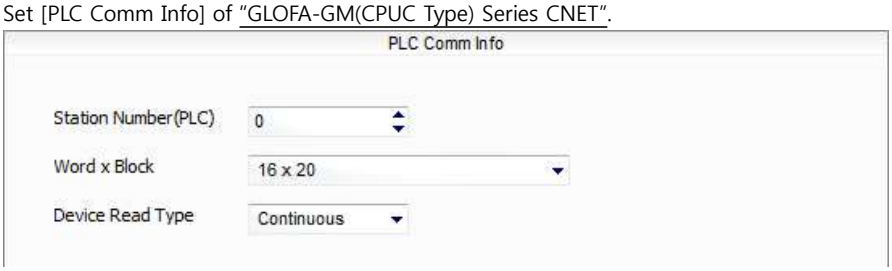
Set communication interface of TOP.

-Right Window : [HMI Setting > Check HMI Setting using > Device manager]



■ External device setup

Set [PLC Comm Info] of "GLOFA-GM(CPUC Type) Series CNET".



-Station Number : Station number of external device.

-WordxBlock : Input WordxBlock size of GLOFA-GM.

-Device Read Type : Select protocol type.

(2) External device setup – link type

Run "Cnet Frame Editor" program of communication system setting tool of GLOFA-GM series for communication setting and set as below. If you want to change communication interface, modify refer to PLC manual.

[GLOFA GM loader cable]

PC (9pin)		GM(9pin)	
signal	pin	pin	signal
RD	2	2	RD
SD	3	3	SD
SG	5	5	SG

1. Connect to RS-232 port of CPU unit and PC with [GLOFA GM loader cable].

2. MODE Rotary switch of Cnet communication module set **"1"(private communication mode)** and reset power of PLC.

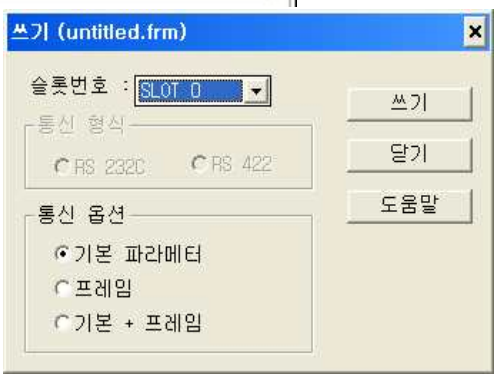
3. Run "Cnet Frame Editor".

4. Run [Option > Select communication port] and select PC connection port and PLC"only" on Dialog Box and push "OK" button.

5. Run [Online > Connect] and connect to PC and external device.

6. Set communication setting at "Cnet Frame Editor".

7. Select [Online > Write].
Set as below on Dialog Box and click write.



8. Select [Online > Online mode change].
Set as below on Dialog Box and click write.

Item	Setting ex	contents
Slot number	SLOT 0	Slot of Cnet module
Comm. option	Default parameter	Write contents

9. Select [Online > Change operation]. Set communication card setup slot and RS-232C and click "communication run" on Dialog Box.

Item	Setting ex	contents
Slot number	SLOT 0	Slot of Cnet module
Comm. type	RS-232C	

Item	Setting ex	contents
Slot number	SLOT 0	Slot of Cnet module
CH operation	independence	
RS-232C	Privation mode	


동작전환
슬롯 번호
LINK 0
통신 형식
RS_232C
RS_422
통신 런
통신 스톱
닫기

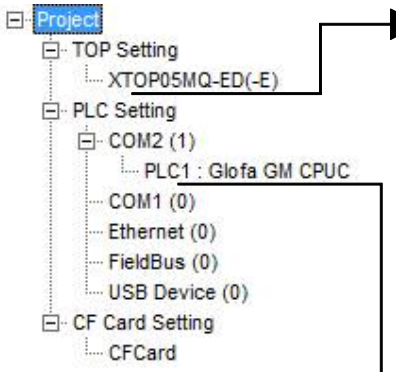
3.8 Example 8

Set your system as below.

Item	TOP	GLOFA-GM Series	Note
Serial Signal Level (port/channel)	RS-422 (4 wire, COM2)	RS-422	User set
Station number (PLC Address)	—	0	User set
Serial Baud rate [BPS]	38400		User set
Serial Data bit [Bit]	8		User set
Serial Stop bit [Bit]	1		User set
Serial Parity bit [Bit]	NONE		User set
Run Mode	private mode		User set

(1) XDesignerPlus Setting

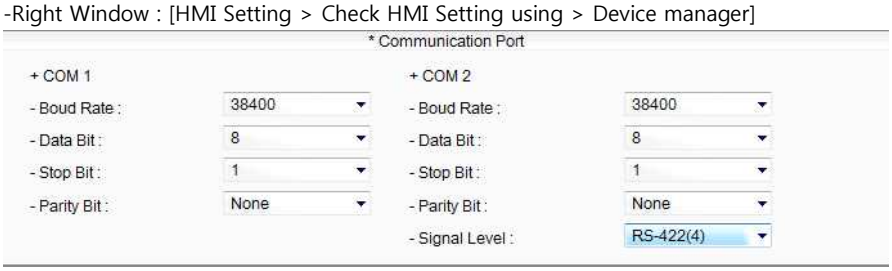
Set [Project >Project property] of XDesignerPlus as below and download it to TOP machine.



■ [Project >Project Property > Project >TOP Setting > TOP Name]

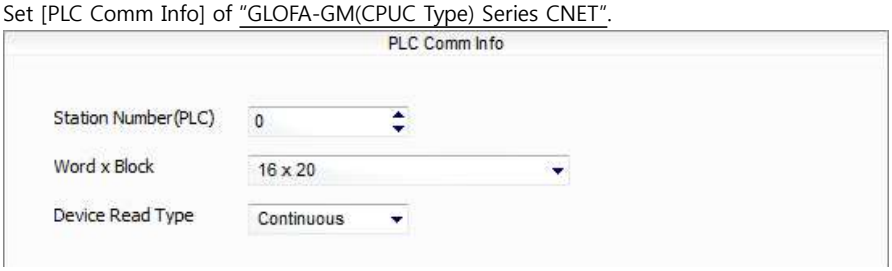
Set communication interface of TOP.

-Right Window : [HMI Setting > Check HMI Setting using > Device manager]



■ External device setup

Set [PLC Comm Info] of "GLOFA-GM(CPUC Type) Series CNET".



-Station Number : Station number of external device.

-WordxBlock : Input WordxBlock size of GLOFA-GM.

-Device Read Type : Select protocol type.

(2) External device setup – link type

Run "Cnet Frame Editor" program of communication system setting tool of GLOFA-GM series for communication setting and set as below. If you want to change communication interface, modify refer to PLC manual.

[GLOFA GM loader cable]

PC (9pin)		GM(9pin)	
signal	pin	pin	signal
RD	2	2	RD
SD	3	3	SD
SG	5	5	SG

1. Connect to RS-232 port of CPU unit and PC with [GLOFA GM loader cable].

2. MODE Rotary switch of Cnet communication module set **"1"(private communication mode)** and reset power of PLC.

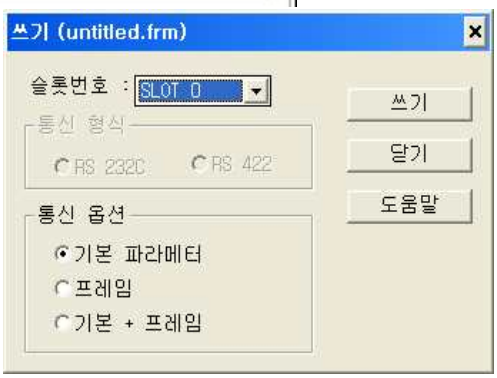
3. Run "Cnet Frame Editor".

4. Run [Option > Select communication port] and select PC connection port and PLC"only" on Dialog Box and push "OK" button.

5. Run [Online > Connect] and connect to PC and external device.

6. Set communication setting at "Cnet Frame Editor".

7. Select [Online > Write].
Set as below on Dialog Box and click write.



8. Select [Online > Online mode change].
Set as below on Dialog Box and click write.

Item	Setting ex	contents
Slot number	SLOT 0	Slot of Cnet module
Comm. option	Default parameter	Write contents

9. Select [Online > Change operation]. Set communication card setup slot and RS-422 and click "communication run" on Dialog Box.

Item	Setting ex	contents
Slot number	SLOT 0	Slot of Cnet module
CH operation	independence	
RS-422	Privation mode	

Item	Setting ex	contents
Slot number	SLOT 0	Slot of Cnet module
Comm. type	RS_422	

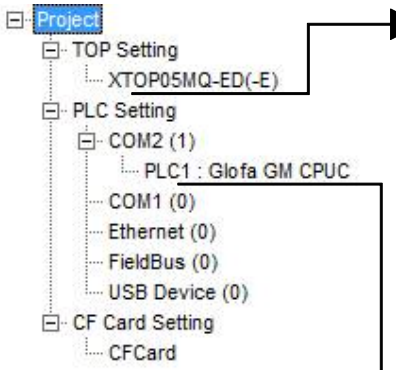
3.9 Example 9

Set your system as below.

Item	TOP	GLOFA-GM Series	Note
Serial Signal Level (port/channel)	RS-485 (2 wire, COM2)	RS-485	User set
Station number (PLC Address)	—	0	User set
Serial Baud rate [BPS]	38400		User set
Serial Data bit [Bit]	8		User set
Serial Stop bit [Bit]	1		User set
Serial Parity bit [Bit]	NONE		User set
Run Mode	private mode		User set

(1) XDesignerPlus Setting

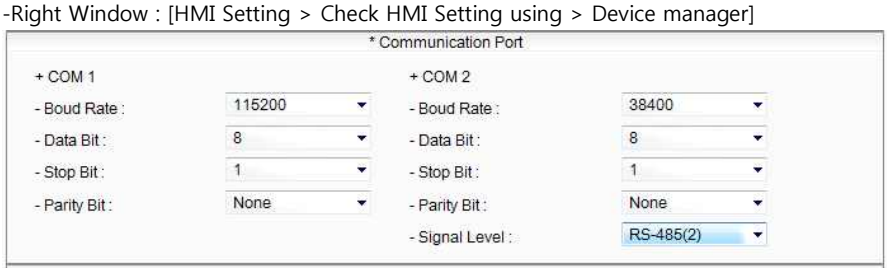
Set [Project >Project property] of XDesignerPlus as below and download it to TOP machine.



■ [Project >Project Property > Project >TOP Setting > TOP Name]

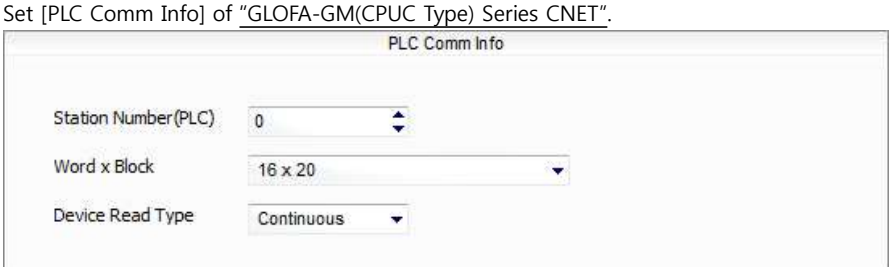
Set communication interface of TOP.

-Right Window : [HMI Setting > Check HMI Setting using > Device manager]



■ External device setup

Set [PLC Comm Info] of "GLOFA-GM(CPUC Type) Series CNET".



-Station Number : Station number of external device.

-WordxBlock : Input WordxBlock size of GLOFA-GM.

-Device Read Type : Select protocol type.

(2) External device setup – link type

Run "Cnet Frame Editor" program of communication system setting tool of GLOFA-GM series for communication setting and set as below. If you want to change communication interface, modify refer to PLC manual.

[GLOFA GM loader cable]

PC (9pin)		GM(9pin)	
signal	pin	pin	signal
RD	2	2	RD
SD	3	3	SD
SG	5	5	SG

1. Connect to RS-232 port of CPU unit and PC with [GLOFA GM loader cable].

2. MODE Rotary switch of Cnet communication module set **"1"(private communication mode)** and reset power of PLC.

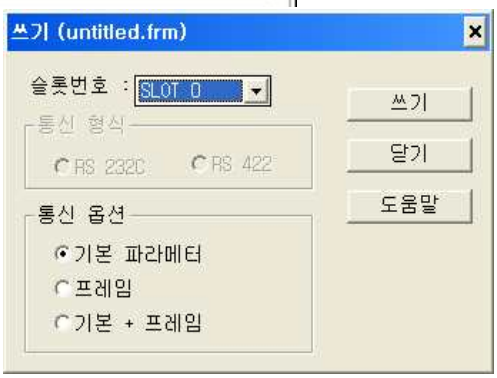
3. Run "Cnet Frame Editor".

4. Run [Option > Select communication port] and select PC connection port and PLC"only" on Dialog Box and push "OK" button.

5. Run [Online > Connect] and connect to PC and external device.

6. Set communication setting at "Cnet Frame Editor".

7. Select [Online > Write].
Set as below on Dialog Box and click write.



8. Select [Online > Online mode change].
Set as below on Dialog Box and click write.

Item	Setting ex	contents
Slot number	SLOT 0	Slot of Cnet module
Comm. option	Default parameter	Write contents

9. Select [Online > Change operation]. Set communication card setup slot and RS-232C and click "communication run" on Dialog Box.

Item	Setting ex	contents
Slot number	SLOT 0	Slot of Cnet module
CH operation	independence	
RS-422	Privation mode	

Item	Setting ex	contents
Slot number	SLOT 0	Slot of Cnet module
Comm. type	RS_422	

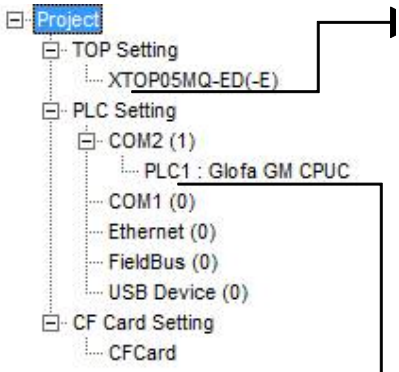
3.10 Example 10

Set your system as below.

Item	TOP	GLOFA-GM Series	Note
Serial Signal Level (port/channel)	RS-232 (COM2)	RS-232	User set
Station number (PLC Address)	—	0	User set
Serial Baud rate [BPS]	38400		User set
Serial Data bit [Bit]	8		User set
Serial Stop bit [Bit]	1		User set
Serial Parity bit [Bit]	NONE		User set
Run Mode	private mode		User set

(1) XDesignerPlus Setting

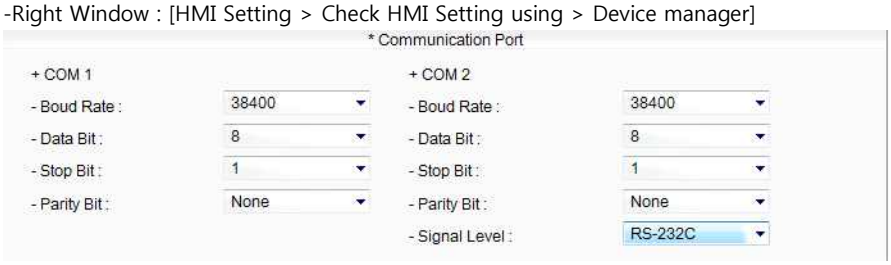
Set [Project >Project property] of XDesignerPlus as below and download it to TOP machine.



■ [Project >Project Property > Project >TOP Setting > TOP Name]

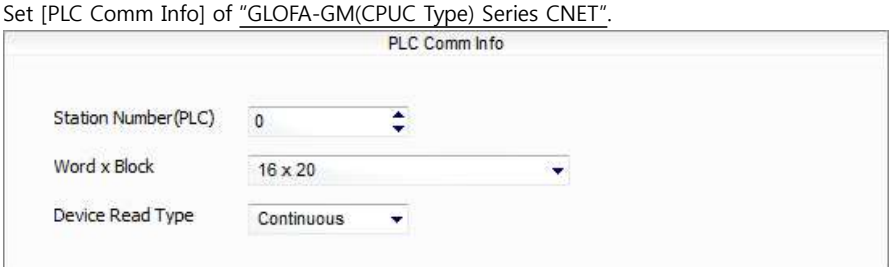
Set communication interface of TOP.

-Right Window : [HMI Setting > Check HMI Setting using > Device manager]



■ External device setup

Set [PLC Comm Info] of "GLOFA-GM(CPUC Type) Series CNET".



-Station Number : Station number of external device.

-WordxBlock : Input WordxBlock size of GLOFA-GM.

-Device Read Type : Select protocol type.

(2) External device setup – Built in Cnet Type

Run Ladder Software "GM_WIN" of GLOFA-GM series for communication setting and set as below.

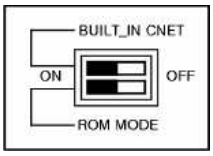
If you want to change communication interface, modify refer to PLC manual.

1. Connect to RS-232 port of CPU unit and PC with [GLOFA GM loader cable].

[GLOFA GM loader cable]

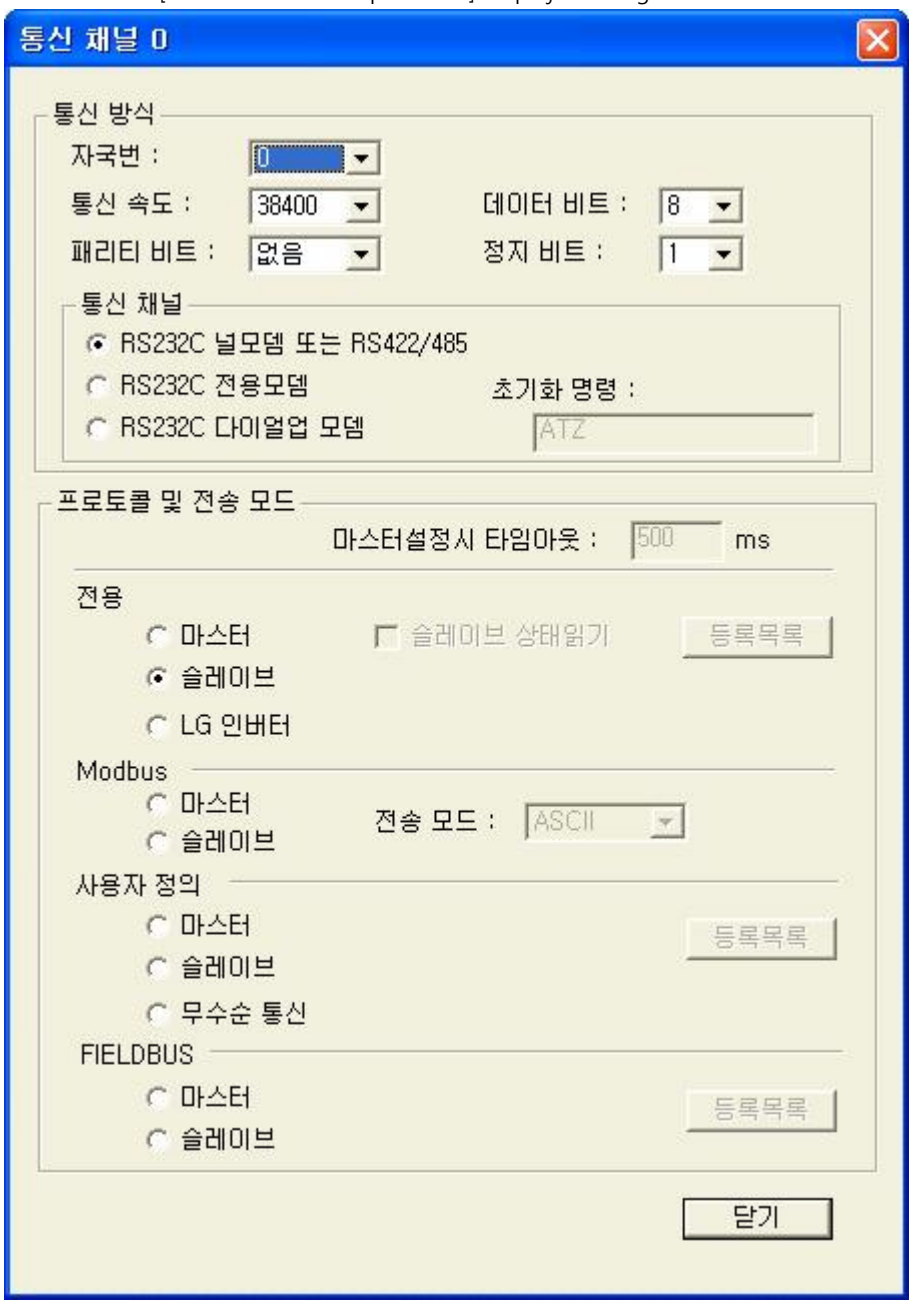
PC (9pin)		GM(9pin)	
signal	pin	pin	signal
RD	2	2	RD
SD	3	3	SD
SG	5	5	SG

If you use built in Cnet(RS-232C), set "BUILT IN CNET" DIP switch to "ON'.



2. Run GM_WIN and create new project about [GM7U].

3. Double click [Parameter > Default parameter] on project dialog and select CH0 and set as below.



4. Run [Online > Connect] and connect to PC and external device.

5. Select [Write] menu and download communication setting to external device.

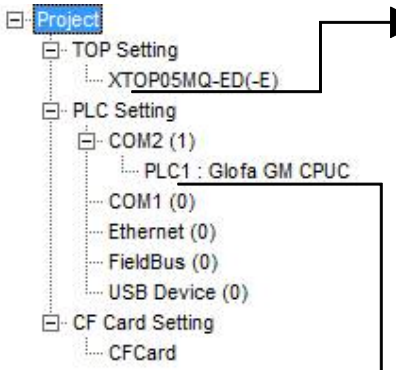
3.11 Example 11

Set your system as below.

Item	TOP	GLOFA-GM Series	Note
Serial Signal Level (port/channel)	RS-485 (2 wire, COM2)	RS-485	User set
Station number (PLC Address)	—	0	User set
Serial Baud rate [BPS]	38400		User set
Serial Data bit [Bit]	8		User set
Serial Stop bit [Bit]	1		User set
Serial Parity bit [Bit]	NONE		User set
Run Mode	private mode		User set

(1) XDesignerPlus Setting

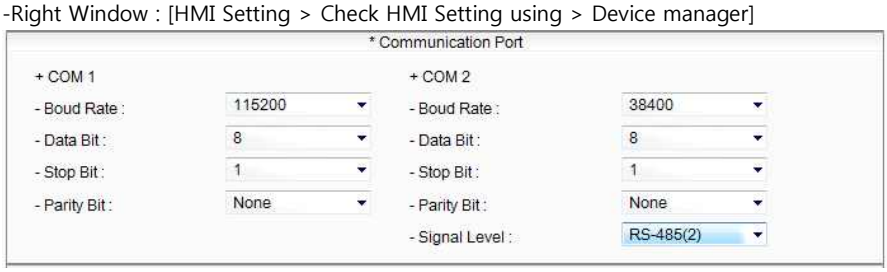
Set [Project >Project property] of XDesignerPlus as below and download it to TOP machine.



■ [Project >Project Property > Project >TOP Setting > TOP Name]

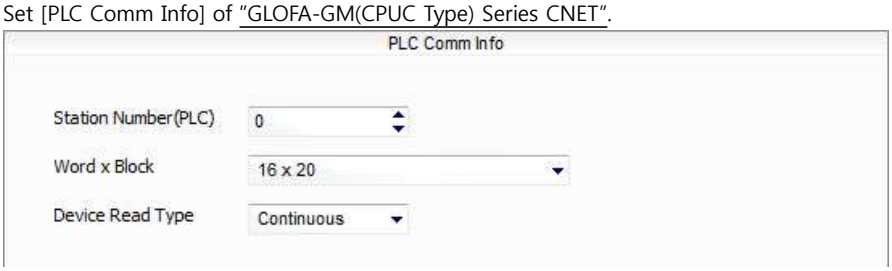
Set communication interface of TOP.

-Right Window : [HMI Setting > Check HMI Setting using > Device manager]



■ External device setup

Set [PLC Comm Info] of "GLOFA-GM(CPUC Type) Series CNET".



-Station Number : Station number of external device.

-WordxBlock : Input WordxBlock size of GLOFA-GM.

-Device Read Type : Select protocol type.

(2) External device setup – Built in Cnet Type

Run Ladder Software "GM_WIN" of GLOFA-GM series for communication setting and set as below.

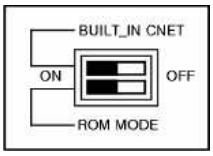
If you want to change communication interface, modify refer to PLC manual.

1. Connect to RS-232 port of CPU unit and PC with [GLOFA GM loader cable].

[GLOFA GM loader cable]

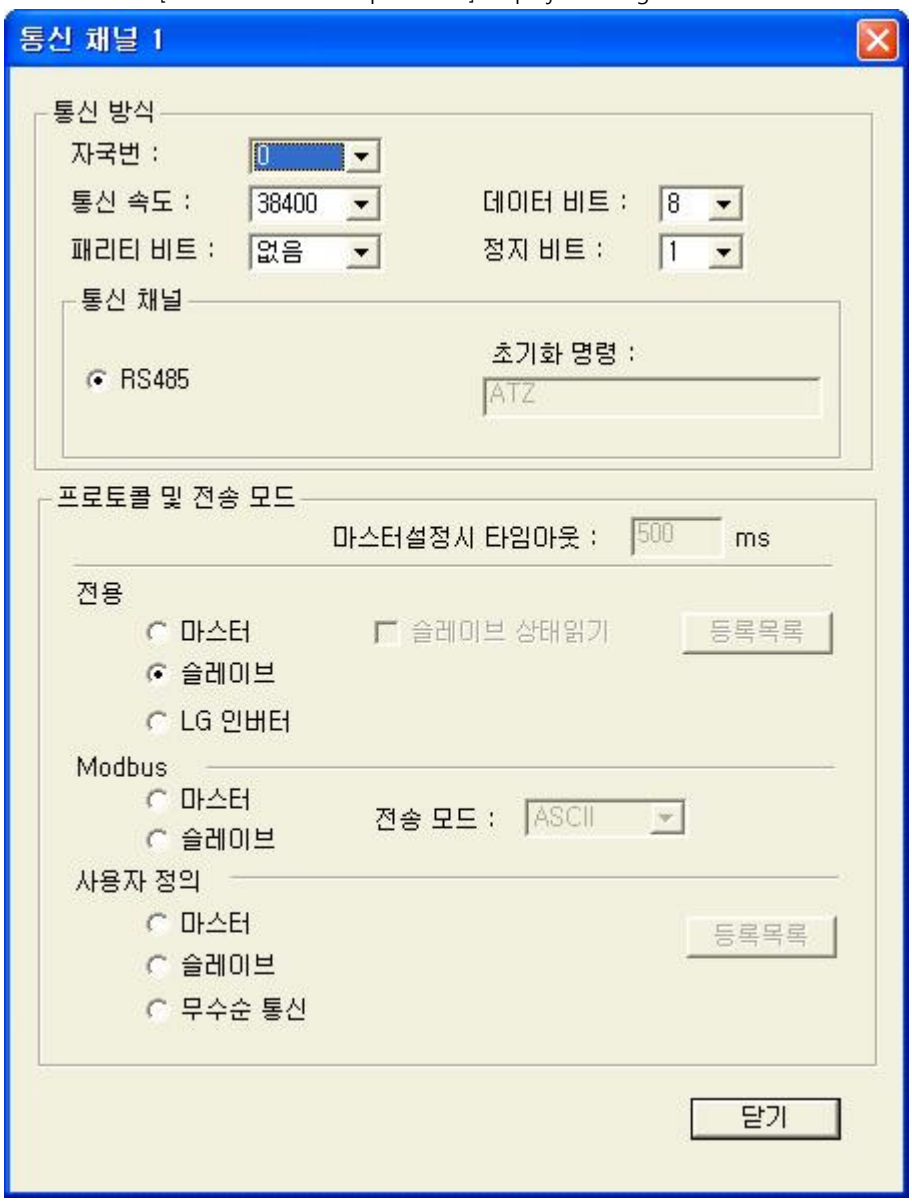
PC (9pin)		GM(9pin)	
signal	pin	pin	signal
RD	2	2	RD
SD	3	3	SD
SG	5	5	SG

If you use built in Cnet(RS-232C), set "BUILT IN CNET" DIP switch to "ON'.



2. Run GM_WIN and create new project about [GM7U].

3. Double click [Parameter > Default parameter] on project dialog and select CH1 and set as below.



4. Run [Online > Connect] and connect to PC and external device.

5. Select [Write] menu and download communication setting to external device.

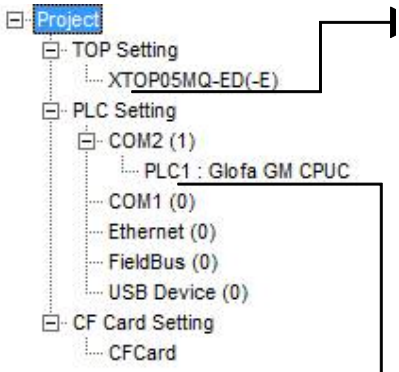
3.12 Example 12

Set your system as below.

Item	TOP	GLOFA-GM Series	Note
Serial Signal Level (port/channel)	RS-232 (COM2)	RS-232	User set
Station number (PLC Address)	—	0	User set
Serial Baud rate [BPS]	38400		User set
Serial Data bit [Bit]	8		User set
Serial Stop bit [Bit]	1		User set
Serial Parity bit [Bit]	NONE		User set
Run Mode	private mode		User set

(1) XDesignerPlus Setting

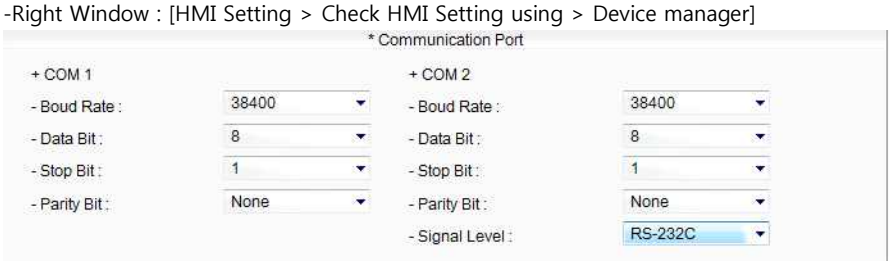
Set [Project >Project property] of XDesignerPlus as below and download it to TOP machine.



■ [Project >Project Property > Project >TOP Setting > TOP Name]

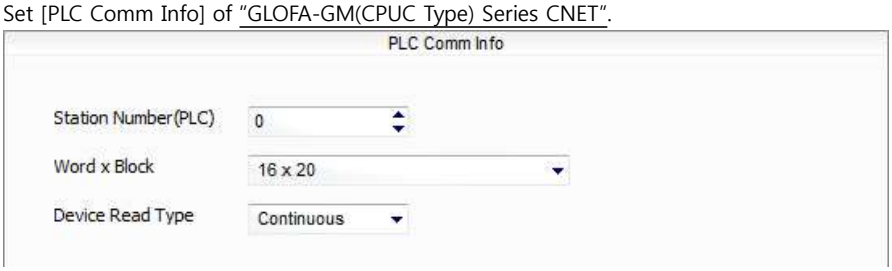
Set communication interface of TOP.

-Right Window : [HMI Setting > Check HMI Setting using > Device manager]



■ External device setup

Set [PLC Comm Info] of "GLOFA-GM(CPUC Type) Series CNET".



-Station Number : Station number of external device.

-WordxBlock : Input WordxBlock size of GLOFA-GM.

-Device Read Type : Select protocol type.

(2) External device setup – Built in Cnet Type

Run Ladder Software "GM_WIN" of GLOFA-GM series for communication setting and set as below.

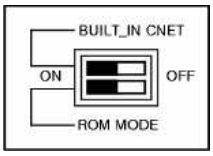
If you want to change communication interface, modify refer to PLC manual.

1. Connect to RS-232 port of CPU unit and PC with [GLOFA GM loader cable].

[GLOFA GM loader cable]

PC (9pin)		GM(9pin)	
signal	pin	pin	signal
RD	2	2	RD
SD	3	3	SD
SG	5	5	SG

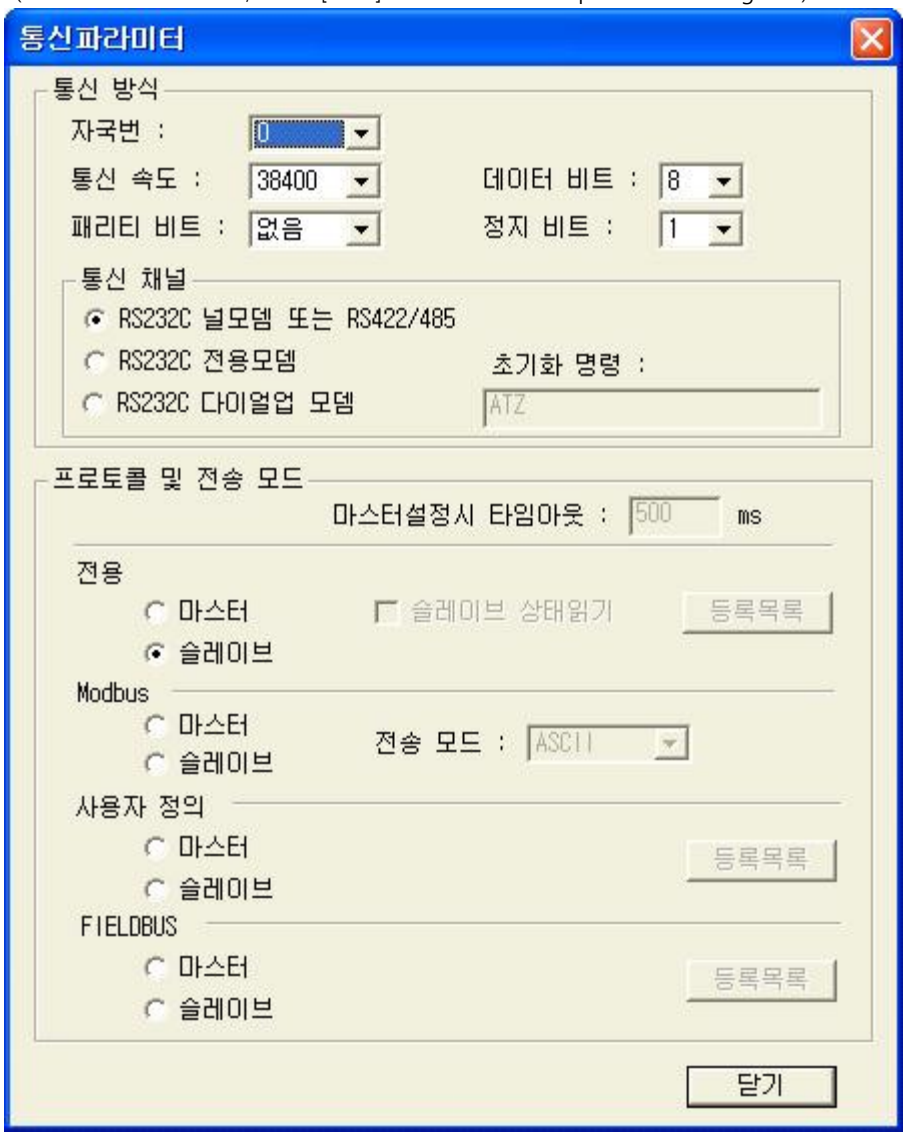
If you use built in Cnet(RS-232C), set "BUILT IN CNET" DIP switch to "ON'.



2. Run GM_WIN and create new project about [GM7U].

3. Double click [Parameter > Default parameter] on project dialog and set as below.

(In case of GM7U series, select [CH 0] at "communication parameter" dialog box.)



4. Run [Online > Connect] and connect to PC and external device.

5. Select [Write] menu and download communication setting to external device.

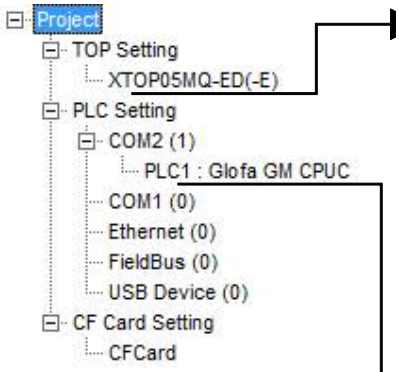
3.13 Example 13

Set your system as below.

Item	TOP	GLOFA-GM Series	Note
Serial Signal Level (port/channel)	RS-422 (4 wire, COM2)	RS-422	User set
Station number (PLC Address)	—	0	User set
Serial Baud rate [BPS]	38400		User set
Serial Data bit [Bit]	8		User set
Serial Stop bit [Bit]	1		User set
Serial Parity bit [Bit]	NONE		User set
Run Mode	private mode		User set

(1) XDesignerPlus Setting

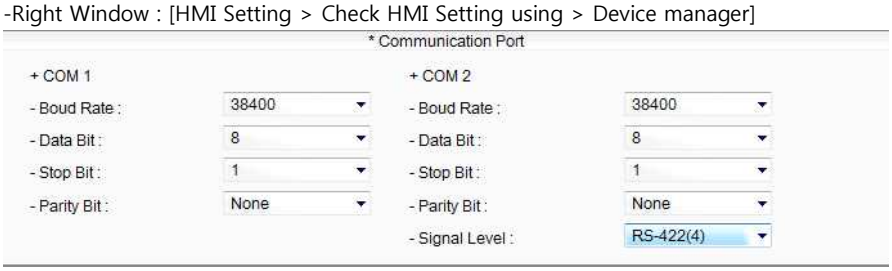
Set [Project >Project property] of XDesignerPlus as below and download it to TOP machine.



■ [Project >Project Property > Project >TOP Setting > TOP Name]

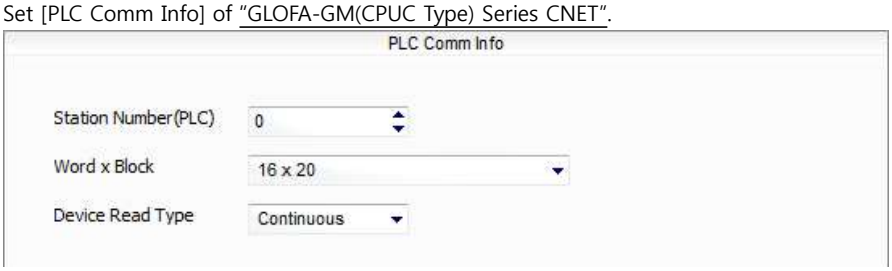
Set communication interface of TOP.

-Right Window : [HMI Setting > Check HMI Setting using > Device manager]



■ External device setup

Set [PLC Comm Info] of "GLOFA-GM(CPUC Type) Series CNET".



-Station Number : Station number of external device.

-WordxBlock : Input WordxBlock size of GLOFA-GM.

-Device Read Type : Select protocol type.

(2) External device setup – Built in Cnet Type

Run Ladder Software "GM_WIN" of GLOFA-GM series for communication setting and set as below.

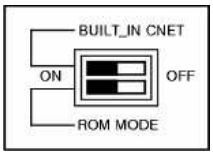
If you want to change communication interface, modify refer to PLC manual.

1. Connect to RS-232 port of CPU unit and PC with [GLOFA GM loader cable].

[GLOFA GM loader cable]

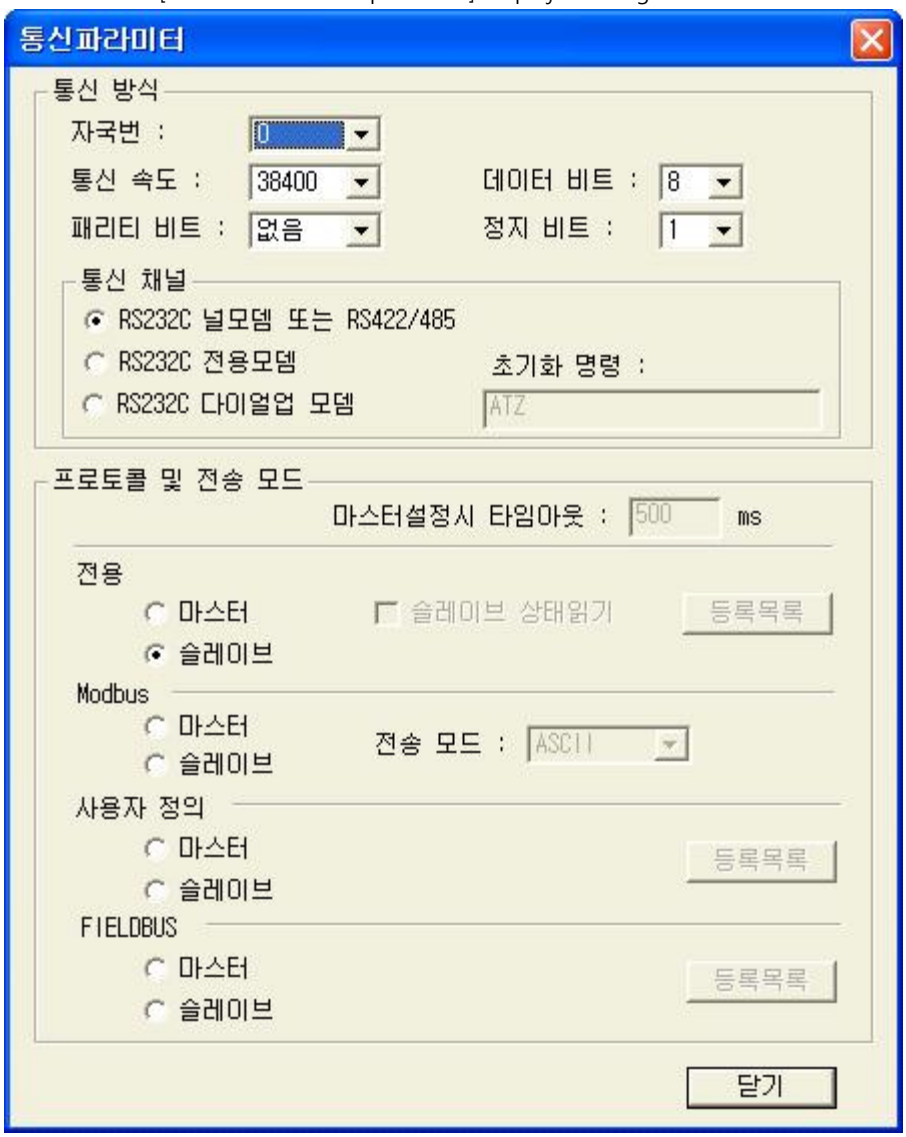
PC (9pin)		GM(9pin)	
signal	pin	pin	signal
RD	2	2	RD
SD	3	3	SD
SG	5	5	SG

If you use built in Cnet(RS-232C), set "BUILT IN CNET" DIP switch to "ON'.



2. Run GM_WIN and create new project about [GM7U].

3. Double click [Parameter > Default parameter] on project dialog and set as below.



4. Run [Online > Connect] and connect to PC and external device.

5. Select [Write] menu and download communication setting to external device.

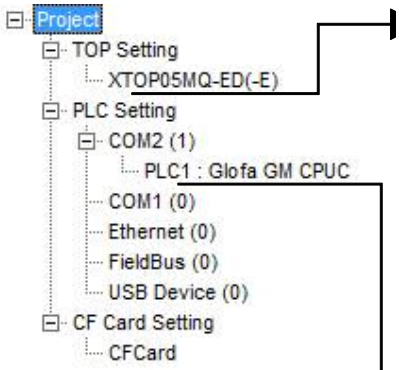
3.14 Example 14

Set your system as below.

Item	TOP	GLOFA-GM Series	Note
Serial Signal Level (port/channel)	RS-485 (2 wire, COM2)	RS-485	User set
Station number (PLC Address)	—	0	User set
Serial Baud rate [BPS]	38400		User set
Serial Data bit [Bit]	8		User set
Serial Stop bit [Bit]	1		User set
Serial Parity bit [Bit]	NONE		User set
Run Mode	private mode		User set

(1) XDesignerPlus Setting

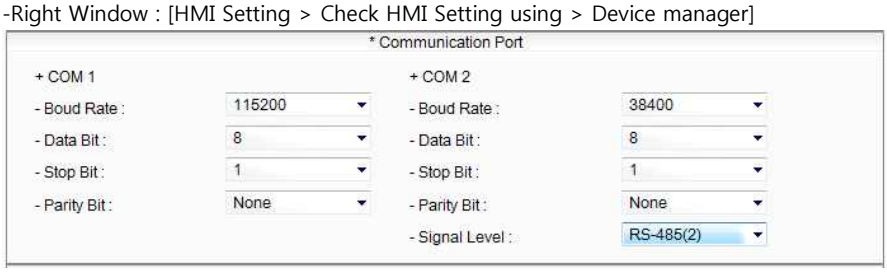
Set [Project >Project property] of XDesignerPlus as below and download it to TOP machine.



■ [Project >Project Property > Project >TOP Setting > TOP Name]

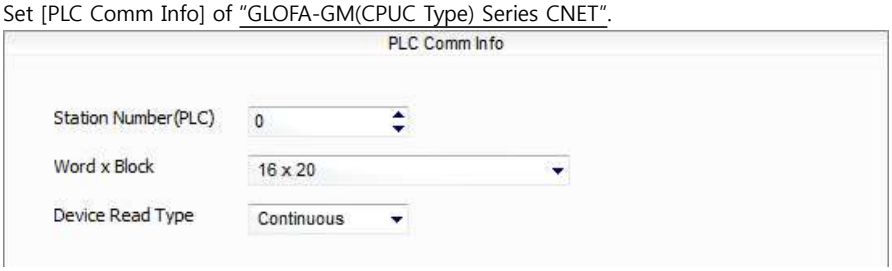
Set communication interface of TOP.

-Right Window : [HMI Setting > Check HMI Setting using > Device manager]



■ External device setup

Set [PLC Comm Info] of "GLOFA-GM(CPUC Type) Series CNET".



-Station Number : Station number of external device.

-WordxBlock : Input WordxBlock size of GLOFA-GM.

-Device Read Type : Select protocol type.

(2) External device setup – Built in Cnet Type

Run Ladder Software "GM_WIN" of GLOFA-GM series for communication setting and set as below.

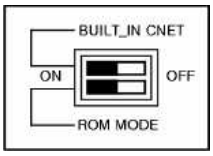
If you want to change communication interface, modify refer to PLC manual.

1. Connect to RS-232 port of CPU unit and PC with [GLOFA GM loader cable].

[GLOFA GM loader cable]

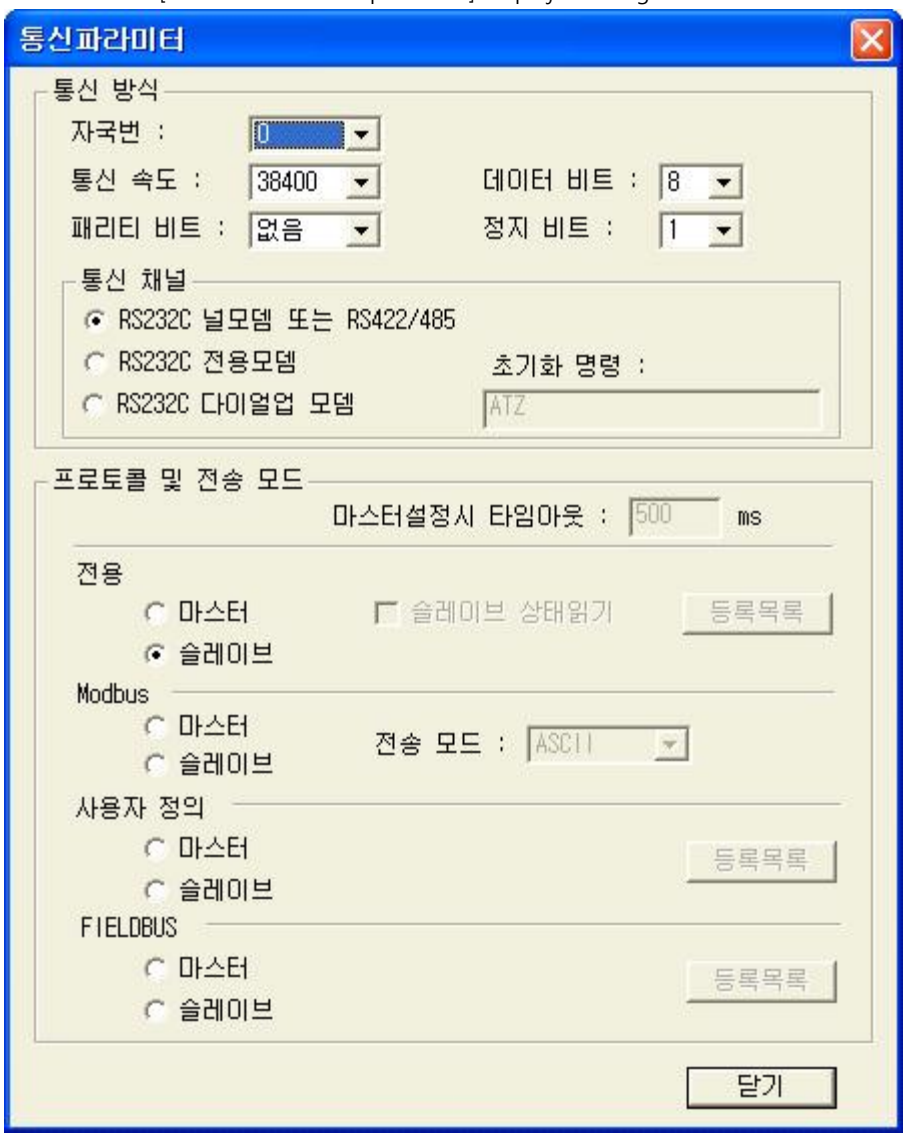
PC (9pin)		GM(9pin)	
signal	pin	pin	signal
RD	2	2	RD
SD	3	3	SD
SG	5	5	SG

If you use built in Cnet(RS-232C), set "BUILT IN CNET" DIP switch to "ON'.



2. Run GM_WIN and create new project about [GM7U].

3. Double click [Parameter > Default parameter] on project dialog and set as below.



4. Run [Online > Connect] and connect to PC and external device.

5. Select [Write] menu and download communication setting to external device.

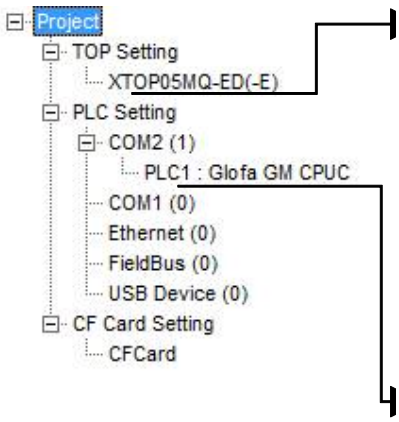
3.15 Example 15

Set your system as below.

Item		TOP	GLOFA-GM Series	Note
Serial Signal Level (port/channel)		RS-232 (COM2)	RS-232	User set
Station number (PLC Address)		—	0	User set
Serial Baud rate	[BPS]	38400		User set
Serial Data bit	[Bit]	8		User set
Serial Stop bit	[Bit]	1		User set
Serial Parity bit	[Bit]	NONE		User set
Run Mode		private mode		User set

(1) XDesignerPlus Setting

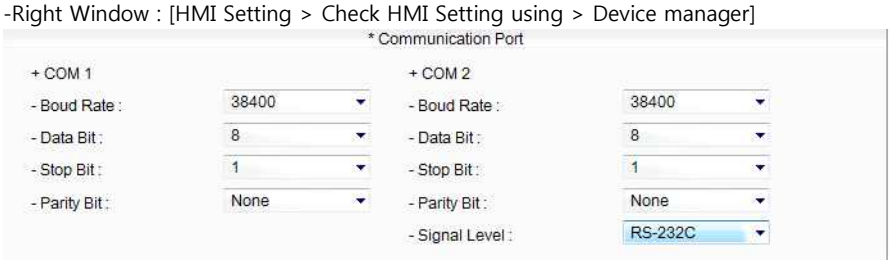
Set [Project >Project property] of XDesignerPlus as below and download it to TOP machine.



■ [Project >Project Property > Project >TOP Setting > TOP Name]

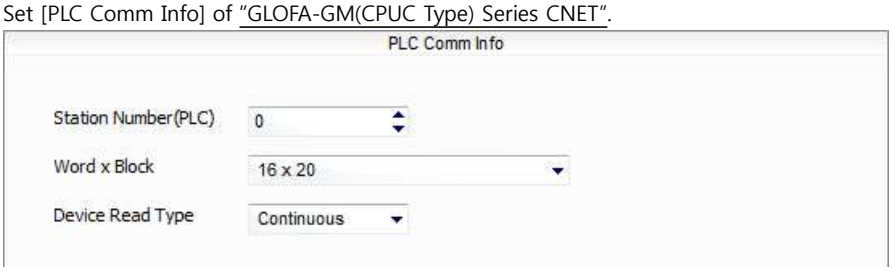
Set communication interface of TOP.

-Right Window : [HMI Setting > Check HMI Setting using > Device manager]



■ External device setup

Set [PLC Comm Info] of "GLOFA-GM(CPUC Type) Series CNET".



-Station Number : Station number of external device.

-WordxBlock : Input WordxBlock size of GLOFA-GM.

-Device Read Type : Select protocol type.

(2) External device setup – Built in Cnet Type

Run Ladder Software "GM_WIN" of GLOFA-GM series for communication setting and set as below.

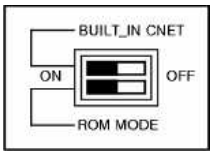
If you want to change communication interface, modify refer to PLC manual.

1. Connect to RS-232 port of CPU unit and PC with [GLOFA GM loader cable].

[GLOFA GM loader cable]

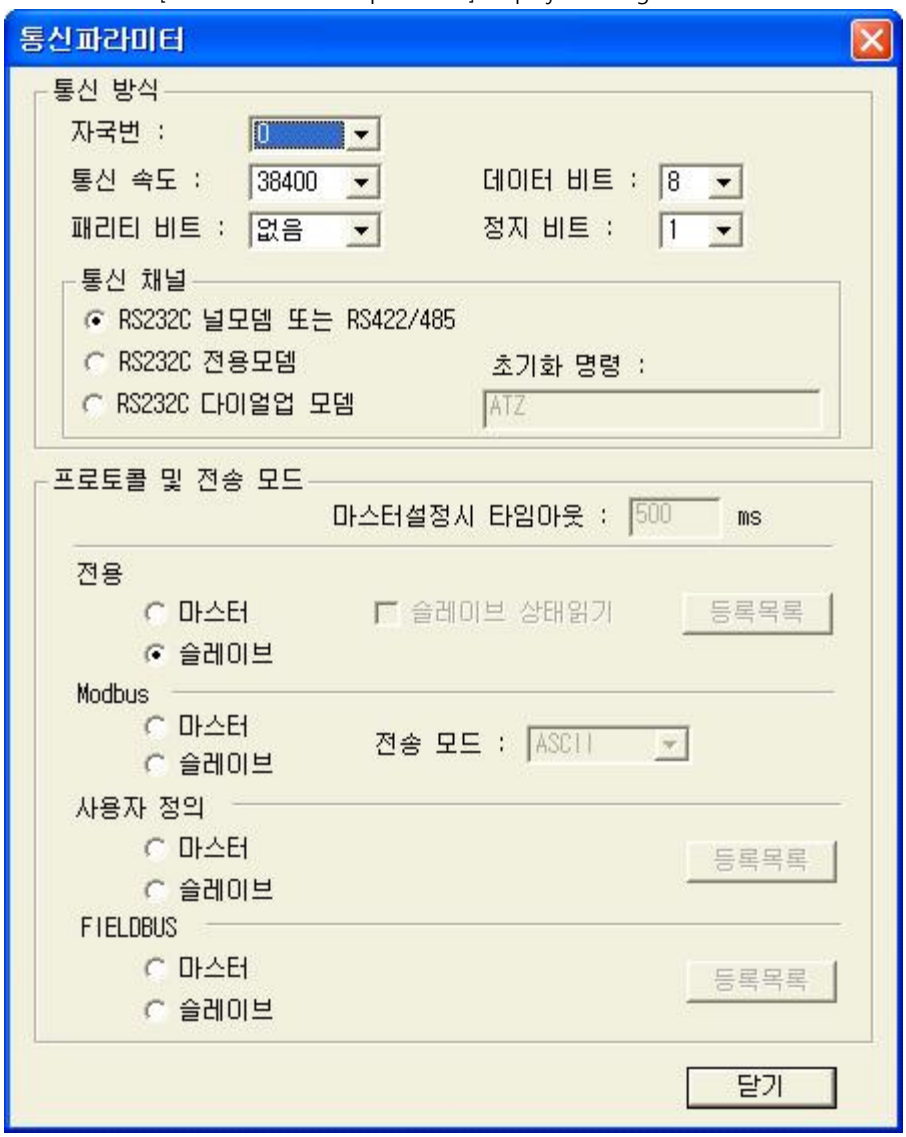
PC (9pin)		GM(9pin)	
signal	pin	pin	signal
RD	2	2	RD
SD	3	3	SD
SG	5	5	SG

If you use built in Cnet(RS-232C), set "BUILT IN CNET" DIP switch to "ON'.



2. Run GM_WIN and create new project about [GM7U].

3. Double click [Parameter > Default parameter] on project dialog and set as below.



4. Run [Online > Connect] and connect to PC and external device.

5. Select [Write] menu and download communication setting to external device.

3.16 Example 16

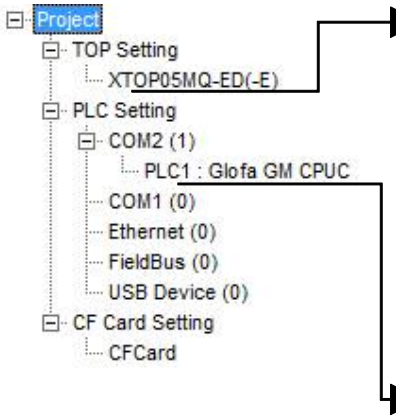
'M-D□10A model of GM7 Series is only supported RS-485 communication.
'M-D□10A model of GM7 Series can use one of the RS-485 and RS-232C communication of CH 0.

Set your system as below.

Item	TOP	GLOFA-GM Series	Note
Serial Signal Level (port/channel)	RS-485 (2 wire, COM2)	RS-485	User set
Station number (PLC Address)	—	0	User set
Serial Baud rate [BPS]	38400		User set
Serial Data bit [Bit]	8		User set
Serial Stop bit [Bit]	1		User set
Serial Parity bit [Bit]	NONE		User set
Run Mode	private mode		User set

(1) XDesignerPlus Setting

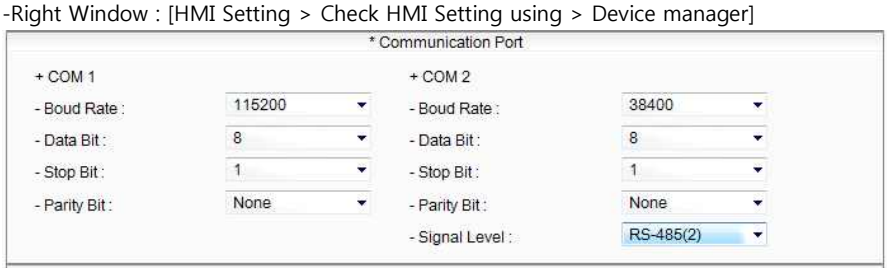
Set [Project >Project property] of XDesignerPlus as below and download it to TOP machine.



■ [Project >Project Property > Project >TOP Setting > TOP Name]

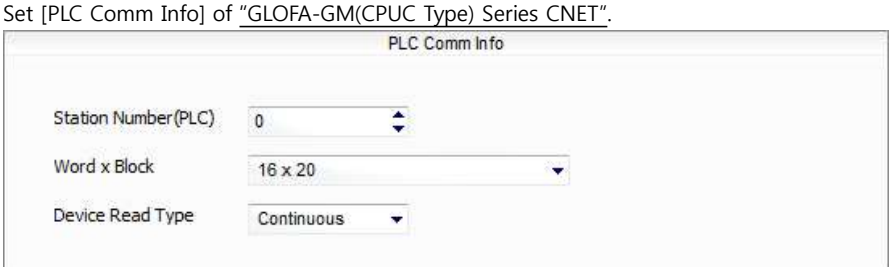
Set communication interface of TOP.

-Right Window : [HMI Setting > Check HMI Setting using > Device manager]



■ External device setup

Set [PLC Comm Info] of "GLOFA-GM(CPUC Type) Series CNET".



-Station Number : Station number of external device.

-WordxBlock : Input WordxBlock size of GLOFA-GM.

-Device Read Type : Select protocol type.

(2) External device setup – Built in Cnet Type

Run Ladder Software "GM_WIN" of GLOFA-GM series for communication setting and set as below.

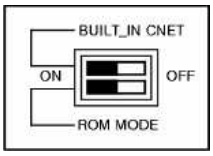
If you want to change communication interface, modify refer to PLC manual.

1. Connect to RS-232 port of CPU unit and PC with [GLOFA GM loader cable].

[GLOFA GM loader cable]

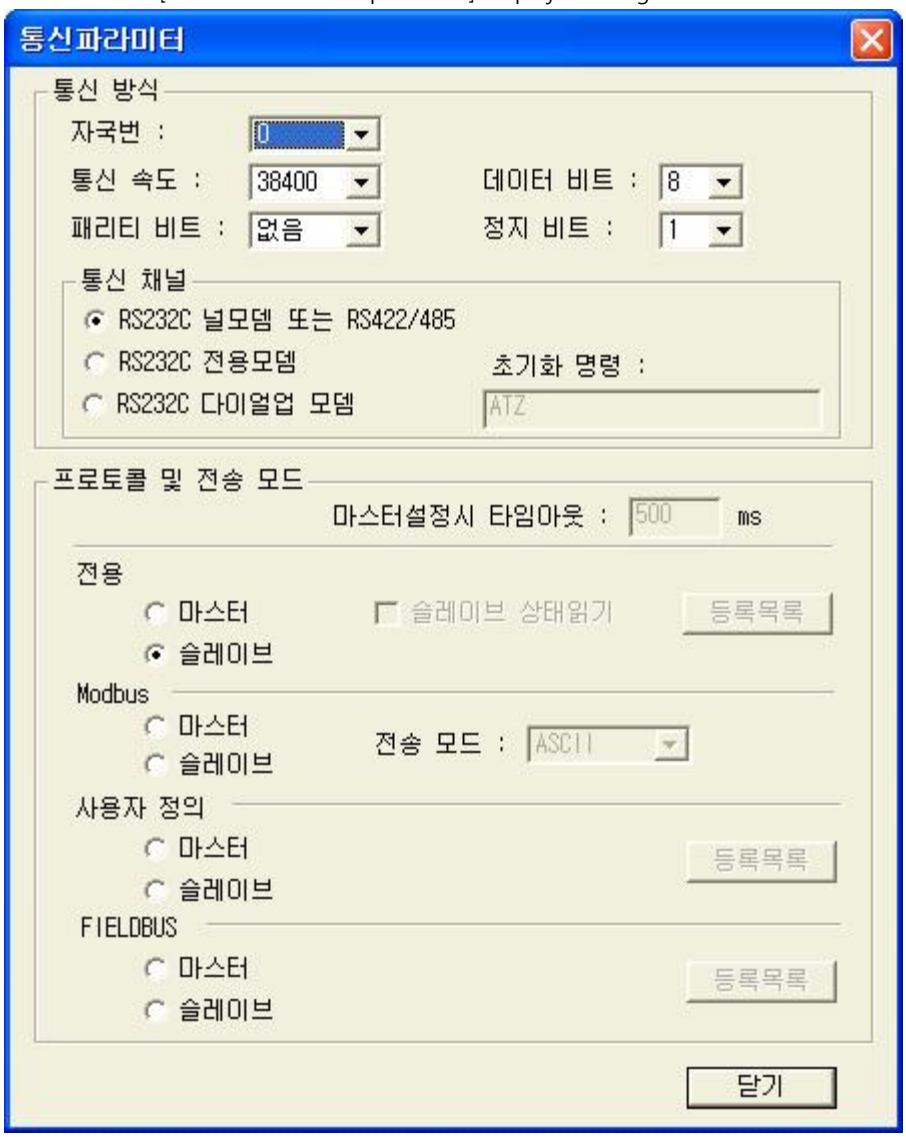
PC (9pin)		GM(9pin)	
signal	pin	pin	signal
RD	2	2	RD
SD	3	3	SD
SG	5	5	SG

If you use built in Cnet(RS-232C), set "BUILT IN CNET" DIP switch to "ON'.



2. Run GM_WIN and create new project about [GM7U].

3. Double click [Parameter > Default parameter] on project dialog and set as below.



4. Run [Online > Connect] and connect to PC and external device.

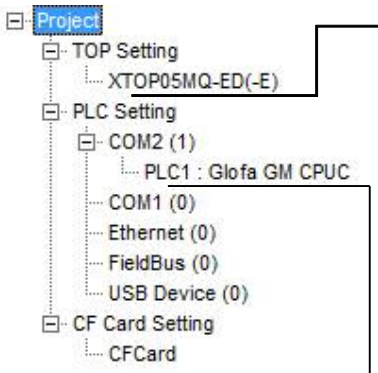
5. Select [Write] menu and download communication setting to external device.

4. Communication setting

Communication setup can be set on XDesignerPlus or TOP Main Menu. The setting should be the same with the external device.

4.1 XDesignerPlus setting

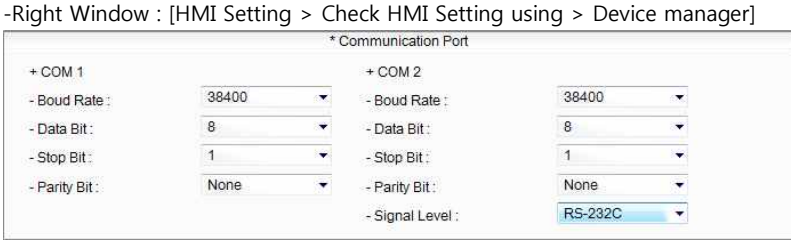
Select [Project >Project property] of XDesignerPlus.



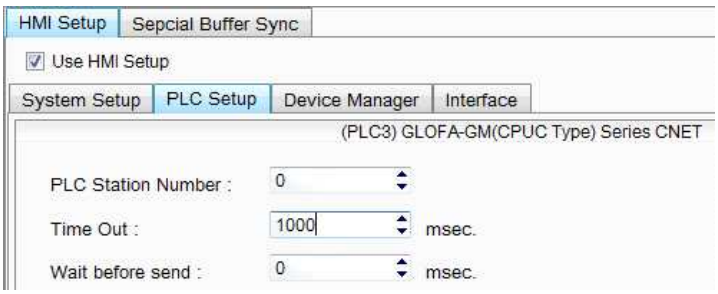
■ [Project >Project Property > Project >TOP Setting > TOP Name]

Set communication interface of TOP.

-Right Window : [HMI Setting > Check HMI Setting using > Device manager]

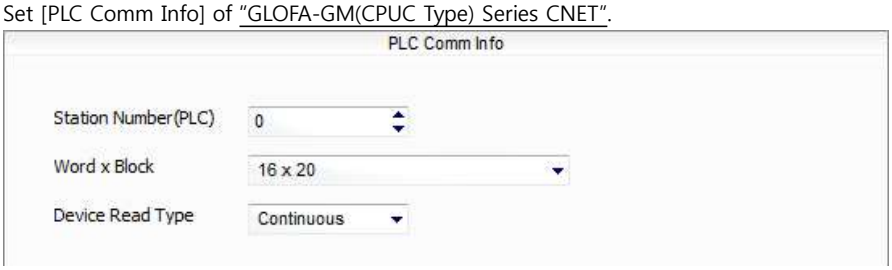


-Right Window : [HMI Setting > Check HMI Setting using > PLC Setting]



■ External device setup

Set [PLC Comm Info] of "GLOFA-GM(CPUC Type) Series CNET".

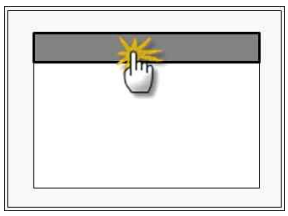


■ Setting communication Interface

Item	Description
Serial Signal Level	Setup signal level(RS-232C/422/485) of PLC connected with COM2/1 port. (COM1 only RS-232C)
Serial Baud Rate	Setup [communications Baud rate] of PLC connected with COM2/1 port.
Serial Data Bit	Setup [Data Bit] of PLC connected with COM2/1 port.
Serial Stop Bit	Setup [Stop Bit] of PLC connected with COM2/1 port.
Serial Parity Bit	Setup [Parity Bit] of PLC connected with COM2/1 port.
Time Out [x100 mSec]	Setup [Time Out] of PLC connected with COM2/1 port. (Timeout: waiting time for answer of PLC)
Send Wait [x10 mSec]	Setup [Send Wait] of PLC connected with COM2/1 port. (Send Wait: communicate after waiting setting time when touch screen requires communications.)
Station Num. in Diag.[0~31]	Setup [Station Num.(0~31)] using "4.3 Communication Diagnosis"

4.2 Set TOP Main Menu

- When a buzzer is on during the power reset, touch 1 spot at the upper LCD to move to "TOP Management Main" display.
- Set up driver interface at TOP according to below **Step1 → Step2**.
  (Press "TOP COM 2/1 setup" in **Step 1** to change setup at **Step 2**.)



Step 1. [PLC setup] - Setup driver interface.

PLC setup	
PLC Address : 00 Timeout : 1000 [mSec] Delay time of transmission : 0 [mSec] TOP COM 2/1 : RS - 232C , 38400 , 8 , 1 , NONE TOP COM 2/1 setup communication test	Communication Interface Settings

Step 1–Reference.

Details	Contents
PLC address [0~65535]	Address of other device. Select between [0 - 65535].
Timeout [x1 mSec]	Set up TOP's response waiting time from external device at [0 – 5000] x 1 mSec.
Delay time of transmission [x1 mSec]	Set up TOP's waiting time between response receiving – next command request transmission from external device at [0 – 5000] x 1 mSec.
TOP COM 2/1	TOP's Interface setup to external device.

Step 2. [PLC setup] >[TOP COM2/COM1 Setting] – Setup relevant port's serial parameter.

Port Settings	
* Serial communication + COM-1 Port - Baud rate : 38400 [BPS] - Data bit : 8 [BIT] - Stop bit : 1 [BIT] - Parity bit : NONE [BIT] - Signal level : RS – 232C	COM 1 Port Communication Interface Settings
+ COM-2 Port - Baud rate : 38400 [BPS] - Data bit : 8 [BIT] - Stop bit : 1 [BIT] - Parity bit : NONE [BIT] - Signal level : RS – 232C	COM-2 Port Communication Interface Settings

Step 2-Reference.

Details	Contents
Baud rate	External device – select serial communication speed between TOPs.
Data bit	External device – select serial communication data bit between TOPs.
Stop bit	External device – select serial communication stop bit between TOPs.
Parity bit	External device – select serial communication parity bit check method between TOPs.
Signal level	External device – select serial communication method between TOPs.

4.3 Communication Diagnosis

■ TOP - Confirming interface setting condition between external devices

- Move to Menu by clicking the top side of LCD screen as resetting the power of TOP.
- Confirms if Port [COM 2 or COM 1] setting that is willing to use in [Communication Settings] matches with the setting of external devices.

■ Port Communication Issue Diagnosis

- PLC Setting > TOP [COM 2 or COM 1] click "Communication Diagnosis" button.
- Diagnosis dialog box will pop up on the screen, you can judge by following information that is shown on box no. 3 section.

OK!	**Communication setting normal**
Time Out Error!	Abnormal Communication setting. - Error in the setting situation of Cable and TOP / External device **(reference : Communication Diagnosis sheet)**

■ Communication Diagnosis Sheet

- Please refer to the information below if you have a problem between external devices and communication connection.

Designer Version		O.S Version				
Details	Contents				Confirm	
System configuration	Name of CPU				OK	NG
	Name of confront port that is communicating				OK	NG
	System Connection Method	1:1	1:N	N:1	OK	NG
Connection Cable	Name of Cable				OK	NG
PLC setup	Setup address				OK	NG
	Serial baud rate	[BPS]			OK	NG
	Serial data bit	[BIT]			OK	NG
	Serial Stop bit	[BIT]			OK	NG
	Serial parity bit	[BIT]			OK	NG
	Assigned Address Limit				OK	NG
TOP setup	Setup port	COM 1	COM 2		OK	NG
	Name of Driver				OK	NG
	Confront Address	Project Property Setup			OK	NG
		When Diagnosing Communication			OK	NG
	Serial baud rate	[BPS]			OK	NG
	Serial data bit	[BIT]			OK	NG
	Serial Stop bit	[BIT]			OK	NG
	Serial parity bit	[BIT]			OK	NG

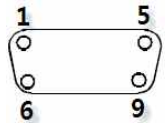
5. Cable diagram 11

This Chapter introduces cable wiring guidance for communication between TOP and PLC concerned. (The cable diagrams in this section may differ from the recommendations of "LS Industrial Systems Co., Ltd.")

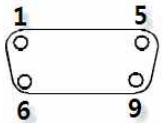
■ 1 : 1 Connection

(A) XTOP COM 2 Port(9pin)

XTOP COM2			Cable Wiring	PLC		
Pin Assignment *1	Signal	Pin No.		Pin No.	Signal	Pin Assignment *1
	CD			1	CD	
	RD	2		2	RD	
	SD	3		3	SD	
	DTR	4		4	DTR	
	SG	5		5	SG	
	DSR	6		6	DSR	
	RTS	7		7	RTS	
	CTS	8		8	CTS	
		9		9		



Front View of D-SUB 9 Pin (male, convex)

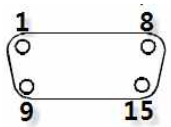


Front View of D-SUB 9Pin (male, convex)

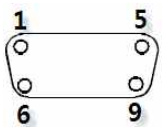
*1) Pin assignment of the cable connector is seen on the face of Front View.

(B) XTOP COM 2 Port(15pin)

XTOP COM2			Cable Wiring	PLC		
Pin Assignment *1	Signal	Pin No.		Pin No.	Signal	Pin Assignment *1
	CD			1	CD	
	RD	2		2	RD	
	SD	3		3	SD	
	DTR	4		4	DTR	
	SG	5		5	SG	
	DSR	6		6	DSR	
	RTS	7		7	RTS	
	CTS	8		8	CTS	
		9		9		



Front View of D-SUB 15 Pin (male, convex)

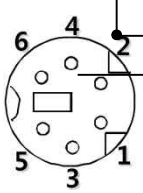


Front View of D-SUB 9Pin (male, convex)

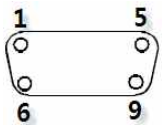
*1) Pin assignment of the cable connector is seen on the face of Front View.

(B) XTOP/ATOP COM 1 Port(6pin)

XTOP/ATOP COM 1 port			Cable Wiring	PLC		
Pin Assignment *1	Signal	Pin No.		Pin No.	Signal	Pin Assignment *1
				1	CD	
	RD	2		2	RD	
	SG	3		3	SD	
		4		4	DTR	
		5		5	SG	
	SD	6		6	DSR	
				7	RTS	
				8	CTS	
				9		



Front View of D-SUB 6 Pin (male, convex)



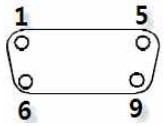
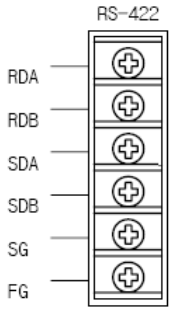
Front View of D-SUB 9Pin (male, convex)

1*1) Pin assignment of the cable connector is seen on the face of Front View.

5.2 Cable Diagram Table 2

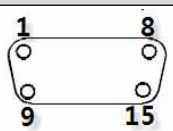
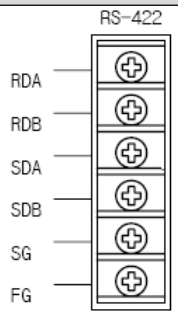
■ 1 : 1 Connection

(A) XTOP COM 2 Port(9pin)

XTOP COM2			Cable Wiring	PLC	
Pin Assignment *1	Signal	Pin No.		Signal	Pin Assignment
 Front View of D-SUB 9 Pin (male, convex)	RDA	1		SDA	
		2		SDB	
		3		RDA	
	RDB	4		RDB	
	SG	5		SG	
	SDA	6			
		7			
		8			
	SDB	9			

*1) Pin assignment of the cable connector is seen on the face of Front View.

(B) XTOP COM 2 Port(15pin)

XTOP COM2			Cable Wiring	PLC	
Pin Assignment *1	Signal	Pin No.		Signal	Pin Assignment
 Front View of D-SUB 15 Pin (male, convex)	–	1		SDA	
	(omission)			SDB	
				RDA	
	–	10		RDB	
	RDA	11		SG	
	RDB	12			
	SDA	13			
	SDB	14			
	SG	15			

*1) Pin assignment of the cable connector is seen on the face of Front View.

■ 1 : N connection – Connect as below refer to 1:1 connection.

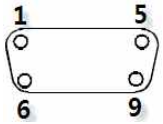
TOP	Cable Wiring	PLC	Cable Wiring	PLC
Signal		Signal		Signal
RDA		SDA		SDA
RDB		SDB		SDB
SDA		RDA		RDA
SDB		RDB		RDB
SG		SG		SG

5.3 Cable Diagram Table 3 1

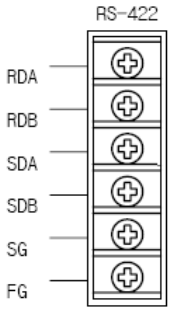
■ 1 : 1 Connection

(A) XTOP COM 2 Port(9pin)

XTOP COM2			Cable Wiring	PLC	
Pin Assignment *1	Signal	Pin No.		Signal	Pin Assignment
	RDA			SDA	
		2		SDB	
		3		RDA	
	RDB	4		RDB	
	SG	5		SG	
	SDA	6			
		7			
		8			
		9			
	SDB				



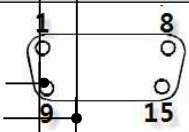
Front View of
D-SUB 9 Pin
(male, convex)



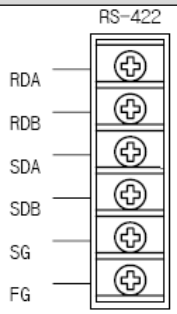
*1) Pin assignment of the cable connector is seen on the face of Front View.

(B) XTOP COM 2 Port(15pin)

XTOP COM2			Cable Wiring	PLC	
Pin Assignment *1	Signal	Pin No.		Signal	Pin Assignment
	–	1		SDA	
	(omission)			SDB	
				RDA	
	–	10		RDB	
	RDA	11		SG	
	RDB	12			
	SDA	13			
	SDB	14			
	SG	15			



Front View of
D-SUB 15 Pin
(male, convex)



*1) Pin assignment of the cable connector is seen on the face of Front View.

RDA

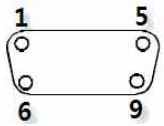
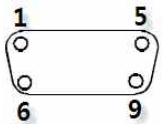
■ 1 : N / N : 1 connection : Connect as below refer to 1:1 connection.

TOP	Cable Wiring	PLC	Cable Wiring	PLC
Signal		Signal		Signal
		SDA		SDA
RDB		SDB		SDB
SDA		RDA		RDA
SDB		RDB		RDB
SG		SG		SG

5.4 Cable Diagram Table 4

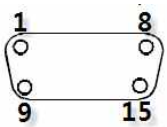
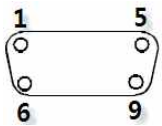
■ 1 : 1 Connection

(A) XTOP COM 2 Port(9pin)

XTOP COM2			Cable Wiring	PLC		
Pin Assignment *1	Signal	Pin No.		Pin No.	Signal	Pin Assignment *1
	CD	1		1		
		2		2		
	RD				RD1	
 Front View of D-SUB 9 Pin (male, convex)						 Front View of D-SUB 9Pin (male, convex)
	SD	3		3	SD1	
	DTR	4		4	RD2	
	SG	5		5	SG	
	DSR	6		6		
	RTS	7		7	SD2	
	CTS	8		8		
		9		9		

*1) Pin assignment of the cable connector is seen on the face of Front View.

(B) XTOP COM 2 Port(15pin)

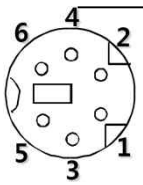
XTOP COM2			Cable Wiring	PLC		
Pin Assignment *1	Signal	Pin No.		Pin No.	Signal	Pin Assignment *1
	CD	1		1		
	RD	2		2	RD1	
 Front View of D-SUB 15 Pin (male, convex)	SD	3		3	SD1	 Front View of D-SUB 9Pin (male, convex)
	DTR	4		4	RD2	
	SG	5		5	SG	
	DSR	6		6		
	RTS	7		7	SD2	
	CTS	8		8		
		9		9		

*1) Pin assignment of the cable connector is seen on the face of Front View.

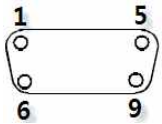
1

(B) XTOP/ATOP COM 1 Port(6pin)

XTOP/ATOP COM 1 port			Cable Wiring	PLC		
Pin Assignment *1	Signal	Pin No.		Pin No.	Signal	Pin Assignment *1
		1		1		
	RD	2		2	RD1	
	SG	3		3	SD1	
		4		4	RD2	
		5		5	SG	
	SD	6		6		
				7	SD2	
				8		
				9		



Front View of
D-SUB 6 Pin
(male, convex)



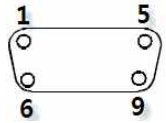
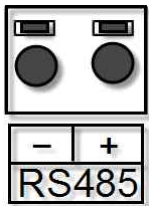
Front View of
D-SUB 9Pin
(male, convex)

*1) Pin assignment of the cable connector is seen on the face of Front View.

5.5 Cable Diagram Table 5

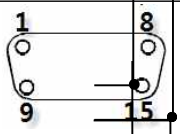
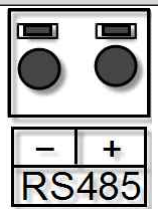
■ 1 : 1 Connection

(A) XTOP COM 2 Port(9pin)

XTOP COM2			Cable Wiring	PLC	
Pin Assignment *1	Signal	Pin No.		Signal	Pin Assignment
 Front View of D-SUB 9 Pin (male, convex)	RDA			+	
		2		–	
		3			
	RDB	4			
	SG	5			
	SDA	6			
		7			
		8			
	SDB	9			

*1) Pin assignment of the cable connector is seen on the face of Front View.

(B) XTOP COM 2 Port(15pin)

XTOP COM2			Cable Wiring	PLC	
Pin Assignment *1	Signal	Pin No.		Signal	Pin Assignment
 Front View of D-SUB 15 Pin (male, convex)	–			+	
	(omission)			-	
	–	10			
	RDA	11			
	RDB	12			
	SDA	13			
	SDB	14			
	SG	15			

1*1) Pin assignment of the cable connector is seen on the face of Front View.

■ 1 : N / N : 1 N connection – Connect as below refer to 1:1 connection.

TOP	Direction of cable connection and signal	PLC	Direction of cable connection and signal	PLC
Signal		Signal		Signal
RDA		+		+
RDB		-		-
SDA				
SDB				
SG				

6. Available Address

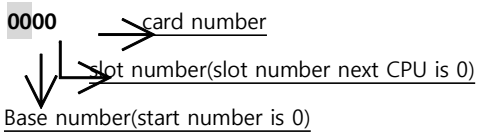
The available address of device are as below.

Device(address) range might be different according to series/type of CPU. TOP Series are capable of supporting maximum address range which is available in external Device.

Be careful get out of address range.

model	WORD	Address range
GM1	%I(input)	%IW00.0.0 ~ %IW63.7.3
	%Q(output)	%QW00.0.0 ~ %QW63.7.3
	%M(inner memory)	%MW00000 ~ %MW65535
GM2	%I(input)	%IW00.0.0 ~ %IW31.7.3
	%Q(output)	%QW00.0.0 ~ %QW31.7.3
	%M(inner memory)	%MW00000 ~ %MW65535
GM3, GM4	%I(input)	%IW00.0.0 ~ %IW07.7.3
	%Q(output)	%QW00.0.0 ~ %QW07.7.3
	%M(inner memory)	%MW00000 ~ %MW32767
GM6, GM7	%I(input)	%IW00.0.0 ~ %IW07.7.3
	%Q(output)	%QW00.0.0 ~ %QW07.7.3
	%M(inner memory)	%MW00000 ~ %MW16383

* Setting method of Input and Output(IW / QW) address



※ card number explanation - Card number of 16 point card is 0. If it is 32 point card, card number of 0~15 bit is 0, card number of 16~31 bit is 1. If it is 64 point card, card number of 0~15 bit is 0, card number of 16~31 bit is 1, card number of 32~47 bit is 2, card number of 48~63 bit is 3.