

Easy! Smooth!

GP/ST-3300 Series→GP4000 Series

Replacement Guidebook

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Preface

This guidebook introduces the procedures to replace a unit in GP/ST-3300 series with a unit in GP4000 series.

Model in use	Recommended Substitution	
GP-3300T/S/L	GP-4301T	
GP-3301S	GP-43011	
GP-3301L	- GP-4301TW	
GP-3302B		
ST-3301T	GP-4301T	
ST-3301S/B	GP-4301TW	
ST-3302B	GP-4303T	

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Chapter 1 Specification Comparison

1.1 Specifications of GP-3300T/S/L and GP-4301T

		GP-3300T/S/L	GP-4301T
Display -	GP-3300T	TFT color LCD	
Type	GP-3300S	STN color LCD	TFT color LCD
туре	GP-3300L	Monochrome LCD	
Display	GP-3300T	65,536 colors (without blink)/	
Colors,	GF-33001	16,384 colors (with blink)	65,536 colors (without blink)/
Levels	GP-3300S	4,096 colors	16,384 colors (with blink)
Levels	GP-3300L	Monochrome, 16 levels	
Display	Resolution	QVGA (320	x240 pixels)
	el Cutout	156(W)×123.5(H)	
Dimens	sions (mm)		
External Dimensions (mm)		167.5(W)x135(H)x59.5(D)	169.5(W)x137(H)x59.5(D)
Touch	Panel Type	Analog	
Mamanu	Application	6MB	UP! 16MB
Memory	SRAM	320KB	320KB
Backu	ip Battery	Secondary Battery (Rechargeable Lithium battery)	NEW! Primary Battery (Replaceable Lithium battery) → <u>See 2.6</u>
Rated Input Voltage		DC 24V	
Serial	COM1	D-Sub 9 pin (plug) RS-232C/422/485	D-Sub 9 pin (plug) RS-232C → <u>See 2.4.1</u>
I/F	COM2	D-Sub 9 pin (socket) RS-422/485	D-Sub 9 pin (plug) RS-422/485 → <u>See 2.4.1</u>

Ethe	ernet I/F	10BASE-T/100BASE-TX	
CF Card I/F		✓ - → <u>See 2.4.2</u>	
SD	Card I/F	- NEW! 🗸	
USB	Туре А	v	v
I/F	Type mini B	-	→ <u>See 2.3</u>
Pri	nter I/F	USB (Type A)	
Expans	ion Unit I/F	✓ - <u>→See 2.5.3</u>	

1.2 Specifications of GP-3301S and GP-4301T

		GP-3301S	GP-4301T
Displ	ау Туре	STN color LCD	UP! TFT color LCD
	y Colors, evels	4,096 colors	UP! 65,536 colors (without blink)/ 16,384 colors (with blink)
Display	Resolution	QVGA (320	0x240 pixels)
	l Cutout ions (mm)	156(W):	x123.5(H)
	Dimensions nm)	167.5(W)x135(H)x59.5(D) 169.5(W)x137(H)x59.5(D)	
Touch P	anel Type	Analog	
Memory	Application	6MB	UP! 16MB
Wernor y	SRAM	320KB	320KB
Backuj	o Battery	Secondary Battery (Rechargeable Lithium battery)	NEW! Primary Battery (Replaceable Lithium battery) → <u>See 2.6</u>
Rated In	put Voltage	DC 24V	
Serial	COM1	D-Sub 9 pin (plug) RS-232C/422/485	D-Sub 9 pin (plug) RS-232C → <u>See 2.4.1</u>
I/F	COM2	D-Sub 9 pin (socket) RS-422/485	D-Sub 9 pin (plug) RS-422/485 → <u>See 2.4.1</u>
Ether	net I/F	-	NEW! 10BASE-T/100BASE-TX
CF C	ard I/F	v	- → <u>See 2.4.2</u>
SD C	ard I/F	- NEW! 🗸	

USB	Туре А	v	 ✓
I/F	Type mini B	-	→ <u>See 2.3</u>
Prin	iter I/F	USB (Type A)	
Expansi	on Unit I/F	~	- <u>→See 2.5.3</u>

1.3 Specifications of GP-3301L and GP-4301TW

		GP-3301L	GP-4301TW
Disp	lay Type	Monochrome LCD	UP! TFT color LCD
	ay Colors, .evels	Monochrome, 16 levels	UP! 65,536 colors (without blink)/ 16,384 colors (with blink)
Display	Resolution	QVGA (32)	0x240 pixels)
	el Cutout sions (mm)	156(W)	x123.5(H)
	l Dimensions (mm)	167.5(W)x135(H)x59.5(D)	169.5(W)x137(H)x59.5(D)
Touch	Panel Type	Analog	
Memory	Application	6MB	UP! 8MB
Wernory	SRAM	320KB	128KB
Backup Battery		Secondary Battery (Rec	hargeable Lithium battery)
Rated In	nput Voltage	DC 24V	
Serial	COM1	D-Sub 9 pin (plug) RS-232C/422/485	D-Sub 9 pin (plug) RS-232C → <u>See 2.4.1</u>
I/F	COM2	D-Sub 9 pin (socket) RS-422/485	D-Sub 9 pin (plug) RS-422/485 → <u>See 2.4.1</u>
Ethernet I/F		-	NEW! 10BASE-T/100BASE-TX
CF Card I/F		<i>v</i>	- → <u>See 2.4.2</u>
USB	Туре А	<i>v</i>	~
I/F	Type mini B	-	→ <u>See 2.3</u>
Printer I/F		USB	(Туре А)
Expansion Unit I/F		v	- <u>→See 2.5.3</u>

1.4 Specifications of GP-3302B and GP-4301TW

		GP-3302B	GP-4301TW	
Displ	ау Туре	Monochrome Blue Mode LCD	UP! TFT color LCD	
	y Colors, evels	Monochrome, 8 levels	UP! 65,536 colors (without blink)/ 16,384 colors (with blink)	
Display	Resolution	QVGA (320	x240 pixels)	
	l Cutout ions (mm)	156(W)x123.5(H)		
External Dimensions (mm)		167.5(W)x135(H)x59.5(D)	169.5(W)x137(H)x59.5(D)	
Touch Panel Type		An	Analog	
Momory	Application	6MB	UP! 8MB	
Memory	SRAM	320KB	128KB	
Backu	p Battery	Secondary Battery (Rech	argeable Lithium battery)	
Rated In	put Voltage	DC	24V	
Serial	COM1	D-Sub 9 pin(plug) RS-232C	
I/F	COM2	D-Sub 9 pin (plug) RS-422/485		
Ethei	rnet I/F	- NEW! - 10BASE-T/100BASE-TX		
CF Card I/F		~	- → <u>See 2.4.2</u>	
USB	Туре А	 ✓ 	V	
I/F	Type mini B	-	→ <u>See 2.3</u>	
Printer I/F USB (Type A)		Туре А)		

1.5 Specifications of ST-3301T and GP-4301T

		ST-3301T	GP-4301T
Disp	ојау Туре	TFT c	color LCD
_	ay Colors, .evels	256 colors	UP! 65,536 colors (without blink)/ 16,384 colors (with blink)
Display	Resolution	QVGA (32	0x240 pixels)
	el Cutout sions (mm)	156(W))x123.5(H)
	l Dimensions (mm)	167.5(W)x135(H)x59.5(D) 169.5(W)x137(H)x59.5(D)	
Touch	Panel Type	Analog	
Memory	Application	6MB	UP! 16MB
wernor y	SRAM	320KB	320KB
Backup Battery		Secondary Battery (Rechargeable Lithium battery)	NEW! Primary Battery (Replaceable Lithium battery) → <u>See 2.6</u>
Rated I	nput Voltage	D	C 24V
Serial	COM1	D-Sub 9 pin (plug) RS-232C	
I/F	COM2	D-Sub 9 pin (plug) RS-422/485	
Ethernet I/F - NEW! 10BASE-T/1		NEW! 10BASE-T/100BASE-TX	
SD	SD Card I/F - NEW! 🗸		NEW! 🗸
USB	Туре А	~	~
I/F	Type mini B	-	→ <u>See 2.3</u>
Printer I / F USB (Type A)		(Туре А)	

1.6 Specifications of ST-3301S/ST-3301B and GP-4301TW

		ST-3301S/B	GP-4301TW
Display	ST-3301S	STN color LCD	UP! TFT color LCD
Туре	ST-3301B	Monochrome Blue Mode LCD	
Display	ST-3301S	256 colors (without blink)/	UP!
Colors	31-33013	64 colors (with blink)	65,536 colors (without blink)/
COIDIS	ST-3301B	Monochrome, 8 levels	16,384 colors (with blink)
Display	Resolution	QVGA (320	x240 pixels)
	el Cutout sions (mm)	156(W)x123.5(H)	
External Dimensions (mm)		167.5(W)x135(H)x59.5(D)	169.5(W)x137(H)x59.5(D)
Touch	Panel Type	Resistive fi	Im (Analog)
Memory	Application	6MB	UP! 8MB
wernor y	SRAM	320KB	128KB
Backu	p Battery	Secondary Battery (Rech	argeable Lithium battery)
Rated In	nput Voltage	DC	24V
Serial	COM1	D-Sub 9 pin (plug) RS-232C	
I/F	COM2	D-Sub 9 pin (plug) RS-422/485 *1	
Ethernet I/F			NEW!
		-	10BASE-T/100BASE-TX
USB	Туре А	V	V
I/F	Type mini B	-	→ <u>See 2.3</u>
Printer I/F		USB (⁻	Гуре А)

*1: RS-485 is supported by Rev.B or later.

1.7 Specifications of ST-3302B and GP-4303T

		ST-3302B	GP-4303T
Disp	lay Туре	Monochrome Blue Mode LCD	UP! TFT color LCD
	ay Colors, evels	Monochrome, 8 levels	UP! 65,536 colors (without blink)/ 16,384 colors (with blink)
Display	Resolution	QVGA (320	x240 pixels)
	el Cutout sions (mm)	156(W)x	(123.5(H)
	Dimensions (mm)	167.5(W)x135(H)x59.5(D) 169.5(W)x137(H)x59.5(D)	
Touch	Panel Type	Analog	
Memory	Application	6MB	UP! 16MB
wernor y	SRAM	320KB	320KB
Backu	ıp Battery	Secondary Battery (Rechargeable Lithium battery)	NEW! Primary Battery (Replaceable Lithium battery) → <u>See 2.6</u>
Rated In	nput Voltage	DC	24V
Serial	COM1	D-Sub 9 pin (plug) RS-232C
I/F	COM2	D-Sub 9 pin (socket) RS-485 (for MPI only)	
Ethernet I/F		-	NEW! 10BASE-T/100BASE-TX
SD Card I/F		-	NEW! 🗸
USB	Туре А	~	V
I/F	Type mini B	-	→ <u>See 2.3</u>
Printer I / F USB (Type A)		Гуре А)	

Chapter 2 Compatibility of Hardware

2.1 Locations of connector

Connector locations on GP/ST-3300 series and GP4000 series are as follows:

Connector locations on GP-3300T/S/L, GP-3301S, ST-3301T and GP-4301T GP-3300T/S/L



GP-3301S



ST-3301T





Right

GP-4301T



	GP-3300T/S/L	GP-3301S	ST-3301T	GP-4301T	
1	Power Connector				
2	Serial I/F (COM1)				
3	Serial I/F (COM2)				
4	Ethernet I/F	-	- Ethernet I/F		
5	USB I/F (Type A)				
6		-		USB I/F (Type mini B)	
7		-		SD Card I/F	
8	CF Card I/F -			-	
9	Expansion Unit I/F -			-	

Connector locations on GP-3301L/3302B, ST-3301S/3301B and GP-4301TW GP-3301L/3302B



ST-3301S/3301B





GP-4301TW



Interface names

	GP-3301L/3302B	ST-3301S/3301B	GP-4301TW
1	Power Connector		
2		Serial I/F (COM1)	
3	Serial I/F (COM2)		
4		Ethernet I/F	
5	USB I/F (Type A)		
6	- USB I/F (Type mini E		
7	CF Card I/F -		
8	Expansion Unit I/F		-

Connector locations on ST-3302B and GP-4303T

ST-3302B



GP-4303T



Interface names

	ST-3302B	GP-4303T	
1	Power Connector		
2	Serial I/F (COM1)		
3	Serial I/F (COM2)		
4	-	Ethernet I/F	
5	USB I/F (Type A)		
6	-	USB I/F (Type mini B)	
7	-	SD Card I/F	

2.2 Display Colors (for GP-3300L/3301L/3302B and ST-3301B/3302B only)

The display type of GP-3300L/3301L/3302B and ST-3301B/3302B is a monochrome LCD, but GP4000 series has a TFT color LCD. After replacement, the black and white display changes to the color one.

When the display unit type setting is changed from the monochrome model to the color one on GP-Pro EX, the data may be displayed in colors except black and white depending on a setting. After changing the display unit type setting, please confirm the display colors of the drawing or the parts on the screens just in case.

2.3 Transfer cable

	Model	Connector Type	Connector on GP
Options	CA3-USBCB-01	Type A Type A	USB (Type A)
	ZC9USCBMB1	Type A Type mini B	USB (Type mini B)
Commercial Item	-		

To transfer screen data to GP4000 series, use a USB transfer cable or Ethernet. The USB cables that can be used for GP4000 series are as follows:

The same USB transfer cable (CA3-USBCB-01) as the one for GP/ST-3300 series can be used.

2.4 Interface

2.4.1 Serial Interface (except GP-3302B and ST-3301T/S/B)

The pin assignment and the shape of plug/socket connector of GP/ST-3300 series are different from those of GP4000.

To know the details about them, see [4.2 Shapes of COM ports] and [4.3 Signals of COM ports].

Because of it, the existing PLC connection cables cannot be used as they are. If you use the existing connection cables, see [<u>4.5 Cable Diagram at the time of</u> <u>replacement</u>].

2.4.2 CF Card Interface

GP4000 series is not equipped with a CF card slot. But a SD card slot (except GP-4301TW) and a USB interface are installed.

* When using a SD card with GP4000 series, please verify it supports the following specifications:

	File format	Maximum capacity
SD	FAT16	2GB
SDHC	FAT32	32GB

When the setting of the output destination folder is set to "CF Card" on GP-Pro EX, if you change the display unit type, the setting will automatically change to the one that uses a SD card.

To change the setting of the output destination folder, see [5.1 Changing the setting of the external media to use].

2.5 Peripheral units and options

2.5.1 Barcode reader connection

Like GP/ST-3300 series, GP4000 series allows you to connect a barcode reader on its USB interface (Type A) or its serial interface. For GP4000 series, however, a barcode reader cannot be connected to its serial interface. For the models GP4000 series supports, see [OtasukePro!]

(http://www.pro-face.com/otasuke/qa/3000/0056_connect_e.html).

2.5.2 Printer Connection

Like GP/ST-3300 series, GP4000 series allows you to connect a printer on its USB interface (Type A).

For the models GP4000 series supports, see [OtasukePro!]

(http://www.pro-face.com/otasuke/qa/3000/0056_connect_e.html).

2.5.3 Expansion Unit

GP4000 series is not equipped with an expansion unit interface. The expansion units (each kind of unit like CC-LINK Unit) for GP-3300 series cannot be used.

2.5.4 Isolation Unit (for GP-3300 series only)

RS-485 isolation unit for GP-3300 series (CA3-ISO485-01) cannot be used for GP4000 series. You can use the RS-232C isolation unit (CA3-ISO232-01) for GP4000 series instead.

2.6 Backup Battery (for GP-3300T/S/L, ST-3301T, and GP-3301S only)

Unlike GP/ST-3300 series, GP4000 series does not use rechargeable secondary batteries but replaceable primary ones. (For both a rechargeable type and a replaceable one, contents to be backed up are the same.)

When the time for replacement of backup batteries approaches, the message to urge you to replace the battery, "RAAA053: Running out of power in the backup battery. Please change the battery." appears. When the message appears, replace the battery referring to the GP4000 series hardware manual.

Replaceable Battery Model	
PFXZCBBT1	

2.7 Power Consumption

The power consumption of GP/ST-3300 series is different from that of GP4000 series.

GP3300T/S/L	26W or less	
GP-3301S/L	2000 OF less	
GP-3302B		
ST-3301T/S/B	18W or less	
ST-3302B		
GP-4301T/TW	10.5W or less	
GP-4303T	TO.5W OF Tess	

For the detailed electric specifications, see the hardware manual.

2.8 Materials/Colors of the body

The materials and the colors of GP/ST-3300 series and GP4000 series are as follows:

GP-3300 series		ST-3300 series GP4000 series		
Color	Silver	Light Gray		
Material	terial Aluminum alloy Resin Re		Resin with glass	

Chapter 3 Replacement Procedure

3.1 Work Flow



*1: This step is required if screen data is saved only in the GP unit, not in any other device.

3.2 Preparation

Requirements for	PC in which GP-Pro EX Transfer Tool is installed. *2		
receiving screen data	USB Transfer Cable (model: CA3-USBCB-01)		
from GP/ST-3300	* Possible to send/receive a screen via a CF card, a USB		
series *1	storage device, or Ethernet (for GP-3300T/S/L only).		
Requirements for	PC in which GP-Pro EX Ver.3.01 or later is installed.		
converting screen	Transfer Cable		
data of GP/ST-3300	(The following three types of cables are available)		
series and	A USB transfer cable (model: CA3-USBCB-01)		
transferring the	A USB data-transfer cable (model: ZC9USCBMB1)		
converted data to	 A commercial USB cable (USB Type A/mini B) 		
GP4000 series	* Possible to send/receive a screen via a SD card (for		
	GP-4301T only), a USB storage device, or Ethernet.		

*1: This step is required if screen data is saved only in the GP unit, not in any other device

*2: Please use the same version or later as or than that of the software used during creating screens on GP/ST-3300 series. If you don't know the version, we recommend you to use the newest version. For the newest version, you can download the transfer tool from our web site called [OtasukePro!] (http://www.pro-face.com/otasuke/download/freesoft/gpproex_transfer.htm)

3.3 Receive screen data from GP/ST-3300 series

You can transfer data to GP/ST-3300 series via

- A USB transfer cable (model: CA3-USBCB-01)
- A CF card/USB storage device
- Ethernet

But this section explains, as an example, how to receive screen data from GP/ST-3300 series using a USB transfer cable (model: CA3-USBCB-01).

If you have backed up screen data, this step is unnecessary, skip to the next section [3.4 Change the Display Unit Type].



(1) Connect your PC and GP/ST-3300 series with a USB transfer cable.

If the driver of the cable has not been installed on your PC yet, a dialog box will appear. Please follow the instructions.

NOTE

The "Hardware Installation" dialog box as shown below may appear during installing the USB driver depending on the security level of Windows® XP. Click [Continue Anyway] to start installing the driver. When installation is completed, click [Finish].



NOTE

If the following symptoms appear on Microsoft Windows® 7, go to updating "USB Data Transfer Driver" on [OtasukePro!] for download.

(http://www.pro-face.com/otasuke/download/freesoft/gpproex_transfer.htm)

- An error occurs when GP-Pro EX or Transfer Tool is installed
- An error occurs when data is transferred via a USB transfer cable (model: CA3-USBCB-01).

(2) Start the Transfer Tool of GP-Pro EX.

et Transfer Tool	_ D X
File (F) Transfer (T) Settings (S) Help (H)	
Send Project	Project Information 27 Select Project
Receive Project	Project File Name [Untitled2 pro] [Untitled2 pro] [Unitled2 Pro] [Unitled2 pro] [Display Unit Model :] Comment [I Data Data [12/272010 3:34 PM] Designer [Iverrichinoo] Passwood for send and receive
CF Card Connection	T Standard for send and receive
Armoy Loader	Transfer Information
Send Web site	Device [US8]
	Transfer Project [Automatic]
	Transfer system [Automatic]
	Close

(3) Make sure that the [Device] in the "Transfer Settings Information" is set to [USB]. If not, click the [Transfer Setting] button to open the "Transfer Setting" dialog box. Select [USB] in the Communication Port Settings field and click [OK].



(4) Start GP-Pro EX Transfer Tool and click the [Receive Project] button.



(5) Click [Receive Project], and the following dialog box will appear. Specify a place to save the received data in and a project file name, and then click [Save] to start transfer.

Save As	? 🗙
Savejn: 🔁 🖛 🔝	•
File <u>n</u> ame: St	ave
Save as type: PRX Files (*.prx)	ncel



(6) The following dialog box appears during transfer and you can check the communication status. (The display unit enters the Transferring mode and communication with the device such as a PLC is terminated.)

e/ Send Project			코미 저	
Depley Unit (CEPA to A)	Statue Transform	UDDIA to AP Connecting to dealogue units Connecting to dealogue units Passeword of onesk, comparise Passeword of onesk, comparise Passeword of onesk, comparise Passeword of onesk, comparise Connecting to the onesk Taurding to the onesk		Display Screen Internation Data transfer Please do NOT turn off the machine until complete.
			10K	

NOTE

 If you receive the project files that use CF card data such as Recipe Function (CSV data), the following dialog box will appear during transfer. Specify a place to save the CF card data in. Click [OK], and the [Receive Project] dialog box will return and transfer will be completed.

Browse For Folder	? 🗙
Select a destination CF card folder.	
🖃 🚞 Pro-face	~
🖃 🧰 GP-Pro EX 1.10	
🚞 backup	
🗉 🛅 CML	
🚞 Database	
🛅 FONT	
🚞 Fonts	
🗄 🧰 IODriver	
🚞 ja	
🚞 Keymap	~
Make New Folder OK C	ancel

- GP4000 series that is a replacement model is not equipped with a CF card slot. If the display unit type is changed to GP4000 series, the CF card setting will be replaced with the SD card setting automatically.
 To check or change the destination folder setting, see [5.1 Changing the setting of the external media to use].
- (7) When transfer is completed, the status displayed in the dialog box will change from [Transferring] to [Complete Transfer]. Click [Close] to close the dialog box.

Display Unit	Status	USB
49	Tanife conpt	Connectings to disclay unit. Starting partment direct. Personal di not at tup. Personal di not at tup. Deck posient. Starting to tarules muses. Transferring filmmare complete. Starting to tarules muses. Di andeming 1/0 diver. Di di not sende turb. Di di not sende tarito. Di di not sende tarito. Di di not sende tarito. Di salte di sende tarito. Starting to tarules diver. Di salte di sende tarito. Starting to tarules diver. Starting to tarules diver. Starting to tarules diver. Starting to tarules diver. Transferring tori complete. Starting to tarules diver. Transferring tori complete. Disconnecting time display unit. Completed disconnecting time display unit.

(8) Close the Transfer Tool.

3.4 Change the Display Unit Type

Open the received project file (*.prx) of GP/ST-3300 series on GP-Pro EX and change the display unit type to GP4000 series.

- (1) Open the received project file (*.prx) on GP-Pro EX.
- (2) Change the Display Unit type to the replacement model on [Display] in [System Settings] of GP-Pro EX.
- (3) Click [Project]->[Save As] and save the changed project data.

3.5 Transfer screen data to GP4000 series

Transfer the project file after display unit type change to GP4000 series. You can transfer data to GP4000 series via

- A USB transfer cable (model: CA3-USBCB-01)
- A USB data transfer cable (model: ZC9USCBMB1)
- A commercial USB cable (USB Type A/mini B)
- A USB storage device/SD card
- Ethernet

But this section explains, as an example, how to transfer screen data via a USB transfer cable (model: CA3-USBCB-01).



PC





USB transfer cable (CA3-USBCB-01)

GP

(1) Connect your PC and the GP unit of GP4000 series with a USB transfer cable. If the driver of the cable has not been installed on you PC, a dialog box will appear. Please follow the instructions.

NOTE

The "Hardware Installation" dialog box as follows may appear during installing the driver of a USB depending on the security level of Windows® XP. Click [Continue Anyway] to start installing the driver. When installation is completed, click [Finish].



NOTE

If the following symptoms appear on Microsoft Windows® 7, go to updating "USB Data Transfer Driver" on [OtasukePro!] for download.

(http://www.pro-face.com/otasuke/download/freesoft/gpproex_transfer.htm)

- An error occurs when GP-Pro EX or Transfer Tool is installed
- An error occurs when data is transferred via a USB transfer cable (model: CA3-USBCB-01).

(2) Turn on the power of GP4000 series. The "Initial Start Mode" screen will appear on the display unit. After transferring a project file once, this screen will not appear again.



(3) On the GP-Pro EX's State Toolbar, click the [Transfer Project] icon to open the Transfer Tool.

at Transfer Tool	
File (F) Transfer (T) Settings (S) Help (H)	
Send Project	Project Information 📁 Select Project
Receive Project	Project File Name [Unitiled2.pn] [Unitiled2.pn] [Display Unit Model :] Comment
Compare Project	0 Date [12/3/2010 3:34 PM]
Display Unit Information	Designer [kenichiroo]
CF Card Connection	Password for send and receive
Memory Loader	Transfer Information
Send Web site	Device [US8]
	Transfer Project [Automatic]
	Transfer system [Automatic]
	Close

To transfer a different project file, click the [Select Project] button and select a project file.

(4) Make sure that the [Device] in the "Transfer Settings Information" is set to [USB]. If not, click the [Transfer Setting] button to open the "Transfer Setting" dialog box. Select [USB] in the Communication Port Settings field and click [OK].

amsfer Settings	Site Settings
Communication	
C LAN	
C Modem	
C COM	

(5) Click [Send Project] to start transfer. When the following dialog box appears, click [Yes]. This dialog box doesn't appear when the same project file is sent again.

🔊 USB			×
?	Transferring all pr Is that OK?	ojects will be execu	ted.
	Yes	No	

(6) The following dialog box appears during transfer and you can check the communication status. (The display unit enters the Transferring mode and communication with the device such as a PLC is terminated.)



(7) When transfer is completed, the status displayed in the dialog box will change from [Transferring] to [Complete Transfer]. Click [Close] to close the dialog box.

Display Unit	Status	USB
159	Transfer conpt.	Connecting to disclay unit. Starling partmoot check. Password in not at up. Password in not at up. Deck pagest. Starling to brandler Rimmen. Turndening Rourtime complete. Starling to starlier Runkine. Turndening Rourtime complete. Starling to starlier Runkine. Did not send the I/O Diver. Did not send the I/O Diver. Did not send the I/O Diver. Did not send the I/O Diver. Starling to starlier Runkin. Starling to starlier Runk. Starling to starlier Runk. Starling to starlier Runk. Starling to starlier Runk. Turndening tord complete. Starling to starlier Runk. Turndening tord complete. Dicconnecting thom display unit. Completed disconnecting thom display unit. Turnder complete.

The display unit will be reset and a screen of the transferred project file will be displayed.

- (8) Close the Transfer Tool.
- (9) Click the [X] mark on top right of the screen or [Project]->[Exit] to close GP-Pro EX.

3.6 Differences of software

Some functions supported by GP/ST-3300 series are not supported by GP4000 series. For details of the supported parts and functions, refer to [Supported Featuers] of GP-Pro EX Reference Manual

(http://www.pro-face.com/otasuke/files/manual/gpproex/new/refer/gpproex.htm).

Chapter 4 Communication with Device/PLC

4.1 Driver list

More connectable drivers will be added.

For the devices/PLC each driver supports, see [Connectable Devices] (<u>http://www.pro-face.com/product/soft/gpproex/driver/driver.html</u>).
4.2 Shapes of COM ports

	GP-3300T/S/L GP-3301S/L	ST-3302B GP-4303T	GP-3302B ST-3301T/S/B	GP4000 series (except GP-4303T)
	D-Sub 9 pin (plug) RS-232C/422/485		D-Sub 9 pin (plug) RS-232C	
COM1	5 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		5 1 5 0 0 0 0 0 0 0 0 0 0 0 0 0	
	D-Sub 9 pin (socket) RS-422/485	D-Sub 9 pin (socket) RS-485 MPI	D-Sub (plu RS-422	g)
COM2	1 5 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 9 0 0000 0	5 1	9 6

NOTE

- If you use the connecting cable used for GP/ST-3300 series, refer to [<u>4.5 Cable</u>] <u>Diagram at the time of replacement</u>].
- When the both COM1 and COM2 ports on GP-3300 series have RS-422/485 setting, devices with RS-422/485 cannot be connected to the COM1 port after replacement with GP4000 series. See [4.5 Cable Diagram at the time of replacement] as a countermeasure for this.

4.3 Signals of COM ports

4.3.1 Signals of COM1

For GP-3300T/S/L, GP-3301S/L

RS-232C (plug)

Pin Connection	Pin	RS-232C		
	No.	Signal Name	Direction	Meaning
	1	CD	Input	Carrier Detect
(🔘)	2	RD(RXD)	Input	Receive Data
5 0 9	3	SD(TXD)	Output	Send Data
000	4	ER(DTR)	Output	Data Terminal Ready
1 6	5	SG	-	Signal Ground
\odot	6	DR(DSR)	Input	Data Set Ready
	7	RS(RTS)	Output	Request to Send
(GP unit side)	8	CS(CTS)	Input	Send possible
	9	CI(RI)/VCC	Input/-	Called Status Display +5V±5% Output 0.25A ^{*1}
	Shell	FG	-	Frame Ground (Common with SG)

*1: RI and VICC of Pin 9 are switched on the software.

VCC Output is not protected from overcurrent.

Please follow the current rating to avoid false operation or breakdown.

RS-422/485 (plug)

Pir	Connection	Pin	RS-422/RS-48	5	
		No.	Signal Name	Direction	Meaning
		1	RDA	Input	Receive Data A (+)
	\odot	2	RDB	Input	Receive Data B (-)
5	89	3	SDA	Output	Send Data A (+)
	00	4	ERA	Output	Data Terminal Ready A (+)
1	6	5	SG	-	Signal Ground
	l 🛛 🖉	6	CSB	Input	Send Possible B (-)
	Durait aida)	7	SDB	Output	Send Data B (-)
(G	P unit side)	8	CSA	Input	Send Possible A (+)
		9	ERB	Output	Data Terminal Ready B (-)
		Shell	FG	-	Frame Ground (Common with SG)

For GP-3302B, ST-3301T/S/B, ST-3302B

RS-232C (plug)

Pin	Connection	Pin	RS-232C		
		No.	Signal Name	Direction	Meaning
	_	1	CD	Input	Carrier Detect
(\odot	2	RD(RXD)	Input	Receive Data
5	[] 9	3	SD(TXD)	Output	Send Data
	000	4	ER(DTR)	Output	Data Terminal Ready
1	6	5	SG	-	Signal Ground
	\odot	6	DR(DSR)	Input	Data Set Ready
		7	RS(RTS)	Output	Request to Send
(GF	ounit side)	8	CS(CTS)	Input	Send possible
		9	CI(RI)/VCC	Input/-	Called Status Display +5V±5% Output 0.25A ^{*1}
		Shell	FG	-	Frame Ground (Common with SG)

*1: RI and VICC of Pin 9 are switched on the software.

VCC Output is not protected from overcurrent.

Please follow the current rating to avoid false operation or breakdown.

For GP4000 series

RS-232C (plug)

Pin Conne	ction	Pin	RS-232C		
		No.	Signal Name	Direction	Meaning
		1	CD	Input	Carrier Detect
]	2	RD(RXD)	Input	Receive Data
5	9	3	SD(TXD)	Output	Send Data
000		4	ER(DTR)	Output	Data Terminal Ready
1 6	6	5	SG	-	Signal Ground
0		6	DR(DSR)	Input	Data Set Ready
		7	RS(RTS)	Output	Request to Send
(GP unit si	ide)	8	CS(CTS)	Input	Send possible
		9	CI(RI)/VCC	Input/-	Called Status Display +5∨±5% Output 0.25A ^{*1}
		Shell	FG	-	Frame Ground (Common with SG)

*1: RI and VICC of Pin 9 are switched on the software.

VCC Output is not protected from overcurrent.

Please follow the current rating to avoid false operation or breakdown.

4.3.2 Signals of COM2

For GP-3300T/S/L, GP-3301S/L

RS-422/485 (socket)

Pin	Pin No.		RS422	2/RS485
Arrangement	111110.	Signal Name	Direction	Meaning
	1	TRMRX	-	Termination (Receiver side: 100Ω)
	2	RDA	Input	Receive Data A(+)
	3	SDA	Output	Send Data A(+)
1 6	4	RS(RTS)	Output	Request for Send
	5	SG	-	Signal Ground
5 6 9	6	VCC	-	+5V±5% Output 0.25A *1
l " Contra da co	7	RDB	Input	Receive DataB(-)
	8	SDB	Output	Send Data B(-)
(GP unit side)	9	TRMTX	-	Termination (Receiver side: 100Ω)
	Shell	FG	-	Frame Ground (Common with SG)

*1: VCC Output is not protected from overcurrent.

Please follow the current rating to avoid false operation or breakdown.

For GP-3302B, ST-3301T/S/B

RS-422/485 (plug) Pin Connection Pin RS-422/RS-485 No. Signal Name Direction Meaning RDA Input Receive Data A (+) 1 2 RDB Input Receive Data B (-) 5 00000 3 SDA Output Send Data A (+) 9 ERA Output Data Terminal Ready A (+) 4 6 1 5 SG Signal Ground 6 CSB Send Possible B (-) Input 7 SDB Output Send Data B (-) (GP unit side) 8 CSA Input Send Possible A (+) 9 Data Terminal Ready B (-) ERB Output Shell FG Frame Ground (Common _ with SG)

For ST-3302B

RS-485 MPI (socket)

Pin	Pin No.		RS485	(MPI only)
Arrangement	T III NO.	Signal Name	Direction	Meaning
	1	NC	-	-
	2	NC	-	-
Ø	3	LINE(+)	Input/ Output	LINE(+)
1 6	4	RS(RTS)	Output	Request to Send
00	5	SG	-	Signal Ground ^{*1}
5 9	6	5V	-	5V external output ^{*2 *3}
	7	NC	-	-
(female)	8	LINE(-)	Input/ Output	LINE(-)
	9	NC	-	-
	Shell	FG	-	Frame Ground ^{*1} (Common with SG)

- *1: The SG and FG terminals are isolated.
- *2: You can supply power to the Siemens PROFIBUS connector only. You cannot supply power to the device/PLC.

For GP4000 series (except GP-4303T)

RS-422/485 (plug)

Pin	Connection	Pin	RS-422/RS-48	5	
		No.	Signal Name	Direction	Meaning
		1	RDA	Input	Receive Data A (+)
	\odot	2	RDB	Input	Receive Data B (-)
5	8 9	3	SDA	Output	Send Data A (+)
	° °	4	ERA	Output	Data Terminal Ready A (+)
1	6	5	SG	-	Signal Ground
	\odot	6	CSB	Input	Send Possible B (-)
100		7	SDB	Output	Send Data B (-)
(G	P unit side)	8	CSA	Input	Send Possible A (+)
		9	ERB	Output	Data Terminal Ready B (-)
		Shell	FG	-	Frame Ground (Common with SG)

For GP-4303T

RS-485 (for MPI only) (socket)

Pin Connection	Pin	RS-485 (isolati	on)	
	No.	Signal Name	Direction	Meaning
	1	NC	-	no connection
	2	NC	-	no connection
	3	Line A	Input/Output	Data A (+)
1 6	4	RS(RTS)	Output	Request to Send
80	5	SG	-	Signal Ground
5 👸 9	6	VCC	-	+5V±5% External Output ⁽¹⁾
	7	NC	-	no connection
GP unit side	8	Line B	Input/Output	Data B (-)
	9	NC	-	no connection
	Shell	FG	-	Frame Ground ⁽²⁾ (Not connected with SG)

- *1: You can supply power to the Siemens PROFIBUS connector only. You cannot supply power to the device/PLC.
- *2: The SG and FG terminals are isolated.

4.4 Multilink Connection

For the communication drivers that support serial multi-link, see [Which drivers_support serial multilink communication?]

(<u>http://www.pro-face.com/otasuke/files/manual/gpproex/new/device/com_mlnk.ht</u> <u>m</u>).

4.5 Cable Diagram at the time of replacement

The connection cable for GP/ST-3300 series can be used for GP4000 series. But please note that there are precautions and restrictions as described below when replacing <u>GP-3300T/S/L and GP-3301S/L</u>.

When a RS-422/485 device is connected via the COM1 port, if GP-3300T/S/L or GP-3301S/L is replaced with GP4000 series, it will be connected via the COM2 port of GP4000 series. (The cable diagram can be still used.) Before GP4000 series is connected, be sure to change the port setting to COM2 on the Device/PLC setting. Also, please check the communication settings with GP-Pro EX Device/PLC Connection Manual just in case. (http://www.pro-face.com/otasuke/files/manual/gpproex/new/device/index.htm)



 The cable used for connection to GP-3300T/S/L or GP-3301S/L via COM2 can be used for GP4000 series only in the following case with a COM Port Conversion Adapter (CA3-ADPCOM-01) added.

IMPORTANT

The user-created cable for connection to GP-3300T/S/L or GP-3301S/L via COM2 can't be used for GP4000 series.

When an option cable manufactured by Digital is used: (A cable for a 2-port adapter, CA3-MDCB-11 and so on)



The connection cable for GP-3300T/S/L or GP-3301S/L can be used for GP4000 series.

When a terminal block conversion adapter (CA3-ADPTRM-01) is used:



The connection cable for GP-3300T/S/L or GP-3301S/L can be used for GP4000 series.

 When both the COM1 port and the COM2 port have the RS-422/485 setting, if GP-3300T/S/L or GP-3301S/L is replaced with GP4000 series, only the COM2 port can be used on GP4000 series for RS-422/485 connection.
 Using a USB/RS-422/485 Conversion Adapter (PFXZCBCBCVUSR41) allows you to use GP4000 series' USB interface as RS-422/485 serial interface for connection.

For more information, please refer to USB/RS-422/485 Conversion Adapter Installation Guide.

(http://www.pro-face.com/otasuke/download/manual/cgi/manual.cgi?mode=33 &cat=3)

IMPORTANT

When using USB/RS-422/485 Conversion Adapter (PFXZCBCBCVUSR41) with a Display unit, the external devices you can connect to its serial interface (RS-422/485) are limited. For more information, please refer to GP-Pro EX Device/PLC Connection Manual.

(<u>http://www.pro-face.com/otasuke/files/manual/gpproex/new/device/index.ht</u> <u>m</u>)

Chapter 5 Appendix

5.1 Changing the setting of the external media to use

If a CF card is used for GP/ST-3300 series, after the display unit type of the project file is changed to GP4000 series, "a CF card" is automatically replaced with "a SD card" for the external media setting.

(1) After conversion of the project file data, at GP-Pro EX Error Check,

if the message, "The project contains features that require a SD card. However, the selected display does not support SD cards so these features will not run." appears,

Error Cl	neck		
♥ \$	V 🖪		
Level	Error Nu	r Screen-L	Summany
Warning	1506		A feature that requires the SD card is enabled. However, as the current model does not support the SD card, this feature will not work
Error			No Error

<Cause>

The model without a SD card slot has the setting that uses a SD card.

->Solution 1

- (2) To use a USB storage device instead of a SD card->Solution 1
- (3) To check or change the SD card's data output destination folder setting
 -><u>Solution 2</u>

[Solution]

1. Change the SD card setting to the USB storage setting following the steps below.

<Procedure>

- i. Click [Project]->[Information]->[Destination Folder].
- ii. Uncheck "Enable SD Card" and check "Enable USB Storage.

SD Card Destination
Enable SD Card
SD Card Folder
C:¥Program Files¥Pro-face¥GP-Pro EX 3.0¥ Browse
USB Storage Destination
✓ Enable USB Storage
USB Storage Folder
C:¥Program Files¥Pro-face¥GP-Pro EX 3.0¥ Browse

iii. Click the [Browse] button and specify a destination folder.

SD Car	d Destination
E	nable SD Card
S	D Card Folder
	C:¥Program Files¥Pro-face¥GP-Pro EX 3.0¥ Browse
USB Ste	orage Destination
	orage Destination
V E	

- iv. Click [OK] to confirm the setting.
- v. Click [Project]->[Save] to save changes.
- vi. Check each function that uses the CF card and replace the setting of [SD Card] with the one of [USB Storage].

NOTE

To check each function setting of GP-Pro EX, refer to GP-Pro EX Reference Manual.

- 2. Check and change the destination folder setting following the steps below.
 - i. Click [Project]->[Information]->[Destination Folder].
 - ii. The current setting is displayed.

SD Card Destination	
Enable SD Card	
SD Card Folder	
C:¥Program Files¥Pro-face¥GP-Pro EX 3.0¥ Browse	
USB Storage Destination	
USB Storage Destination	

- iii. After changing it, click [OK] to confirm the setting.
- iv. Click [Project]->[Save] to save changes.