CHAPTER

GSOFT2 – GETTING STARTED

7

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GS10 Drive Configuration Software

GSoft2 is the configuration software for the Automation Direct DuraPULSE GS4, GS10, and GS20 family of AC drives. It is designed to allow you to connect a personal computer to the drive, and perform a variety of functions:

- Create new drive configurations
- Upload/download drive configurations
- Edit drive configurations
- Archive/store multiple drive configurations on your PC
- Trend drive operation parameters
- Tune the drive PID loop
- View real time key operating parameters
- Start/Stop drive and switch directions, provided drive is set up for remote operation
- View drive faults

GSoft2 includes an integral help file with software instructions. GSoft2 can be downloaded for free or purchased on USB card from AutomationDirect.com (search for GSoft2). Use version 2.0.0.6 or higher for use with GS10.

System Requirements



GSoft2 will run on PCs that meet the following requirements:

- Windows OS: <u>8</u>: 32 & 64 bit, <u>8.1</u>: 32 & 64 bit, <u>10</u>: 64 bit, <u>11</u>: 64 bit
- Edge or Chrome (for HTML help support)
- 32 Mb of available memory
- 10 Mb hard drive space
- Available USB port

INSTALLATION GUIDE

System Requirement Configuration

Connect the GS10 drive to a PC/Laptop computer by using the USB-485M, (USB A to RS-485 serial adapter). Connect the USB adapter into your PC USB slot and use the supplied RJ45 cable to connect the adapter to the GS10 port.

GS10 COMMUNICATION SETTINGS FOR GSOFT2 - QUICK REFERENCE

To connect the GS10 to GSoft2, the following communication settings are required:

Drive Parameter Configuration



Use the "CONNECT" button on the toolbar to connect the drive. P09.01 and P09.04 must be set to the values below for communications (these are the default values).

- P09.01 Comm Speed = 38.4 Kpbs.
- P09.04 Comm Protocol = 13 (8,N,2 RTU)

NOTE: These are the default values of the drive.

NOTE: If necessary, GSoft 2 will adjust parameters P09.01 and P09.04 to match the above settings if "Auto Connect" is used. See "Icon Functions" on page 7-8 for more details.

For Firmware Upgrade



Use the "VFD" button on the toolbar to update the firmware. P09.01 and P09.04 must be set to the values below BEFORE updating firmware.

- Set P09.01 Comm Speed = 38.4 Kpbs
 - Set P09.04- Comm Protocol = 6 (8,N,1-ASCII)

NOTE: Drive should remain powered on during FW upgrade.

Software Installation

Step 1: Download the installation file from AutomationDirect.com or place the GSoft2 USB into your PC. If Autoplay is not enabled, doubleclick Setup.msi to start the installation process.



Step 2: Proceed with installation. At the welcome dialogue box select NEXT to continue installation process.



Step 3: If GSoft2 was previously installed, the Change, repair, or remove installation window allows you to effect changes to your installation, repair corrupt files or fix other issues with the current installation. Should you choose, the GSoft2 file can be removed as well.

Sele	set the operation you wish to perform.
	Change GSoft2 has no independently selectable features.
	Repair Repairs errors in the most recent installation by fixing missing and corrupt files, shortcuts, and registry entries.
	Remove Removes GSoft2 from your computer.

Step 4: If this is a new installation, click "Install" to continue the installation process. Follow the prompts to complete software installation.

😸 GSoft2 Setup		23
Ready to install GSoft2	C	Ð
Click Install to begin the installation. Click Back to review or change any o installation settings. Click Cancel to exit the wizard.	fyour	
Back 🕅 Install	Cancel	

OPENING GSOFT2 SOFTWARE PROGRAM

GSoft2 includes an integral help file with software instructions.

GSoft2 offers the user a PC based software configuration tool for creating and editing a GS10 Drive configuration. The configuration tool provides access to GS10 Drive parameters in a table format. Each parameter can be adjusted for your specific drive application. Once the selected parameters have been changed, the file can be downloaded to the GS10 Drive as well as saved to your project folder for future use on other drives. Once created and saved, subsequent editing is done using the GSoft2 software.

Double click the GSoft2 shortcut to open the program; OR click in the search box in the lower left corner of Desktop and type GSoft2.



GSoft2 Graphic User Interface (GUI) will open. You will notice that only one menu command is in bold (Connect), while the others are grayed out. Some icons on the toolbar are initially grayed out as well. At this point, the GUI includes seven Icons that are available as shown in the screencap. "Connect" is bold as shown upper left.



Icons within the red rectangles below will be grayed out after successfully connecting to the drive. Menu Bar commands will now appear in bold text (available).

SOFTWARE FUNCTIONS

ICON APPEARANCE BEFORE CONNECTING TO DRIVE

Exit Connect	t Parameters	Key Pad	Scope	Monitor Screen	IP Config	VFD FW	Comm Card FW	EtherCat Card FW	Hel
		6			D				
ON APPEAR	RANCE AF	ter Co	NNECT	ING TO	Drive				

ICON FUNCTIONS



EXIT: Shuts down the GSoft2 software. (A pop-up "Are you sure" window will appear).

EtherCare



<u>CONNECT</u>: Opens Com Port dialog box (Same as "Connect" on the menu bar). This allows you to configure the settings to establish serial communication to your drive. If several COM ports are installed on your PC, you will need to go to Device Manager to determine which COM port is the correct one.

For GS10 connection to Gsoft2, the default communication settings are required:

- P09.01 Comm Speed = 38.4 Kpbs
- P09.04- Comm Protocol = 13 (8,N,2- RTU)

If the Comm settings are not at default values and "AUTO DETECT" is clicked, GSoft2 will change P09.01 and P09.04 to the default values in order to communicate with the drive. When "DISCONNECT" is clicked after configuration is done, Gsoft2 will change the settings back to the original values. If the software is disconnected from the drive by any other means (disconnected cable, closing the program,etc), P09.01 and P09.04 parameters will stay at default values. They will need to be adjusted manually if necessary.

- 1) Choose the COM port.
- 2) Press the "COM Test" to verify the connection (a green "OK" should appear)., If Red Fault appears, then press "Auto Detect".
- 3) <u>Click "CONNECT" to interface with the drive.</u>

Settings			1			
Protocol: Se	erial	•	Timeout :	500		
					(
VFD ID :	1		ASCII/RTU:	RTU	-	
COM Port :	COM3	•	Baud Rate :	4800	-	
			Data Bits :	7	•	
COM Test]		Parity :	NONE	•	
			Stop Bits :	2 Stop bits	•	
A + -	Detect	CONDECT				
Auto	Detect	CONNECT				



<u>PARAMETERS</u>: Opens GSoft2 drive parameters table. The Parameters screen allows the user to upload and download entire configurations to and from the drive. Individual parameters can be changed "live" as well. There is also the ability to Open and Save files on the PC's hard drive, and the ability to Compare parameter information to a drive's default values. See the online help file for more information.

🕎 Parameters										- [
Exit Bave New	Rating	Open	Read	Write All Com	Dare	Wizard Help					
- Drive - All Parameters O SYSTEM DAD AMETER	[FILE MENU	SET(Write i Curren	n Run or Sto t <mark>Drive Mod</mark>	p) STOP SET(W el : GS31-20P5 (230V 1p)	rite while 1. 0.5HP)	Stopped Only) REA	AD ONLY Refresh for	Current Drive '	Values		
1-BASIC PARAMETER 0	Selected	Pr. NO	Modbus	Description	Unit	Data	Defau	t Min	Max	Attribute	^
		00.00	0000h	Identity Code		303	0	0	65535	Read-Only	
		00.01	0001h	Rated Current	Amps	2.80	0.00	0.00	655.35	Read-Only	_
4-MULTI-SPEED 04		00.02	0002h	Parameter Reset		0	0	0	13	Writable	_
6-PROTECTION 06		00.03	0003h	Start up Display	-	0:Freq Setpoint	- 0	0	3	Writable	_
7-SPECIAL 07		00.04	0004h	User Display	-	3:DCBus Voltage	- 3	0	57	Writable	-
8-PID CONTROL 08		00.05	0005h	Gain Coeff Rslt		0.00	0.00	0.00	160.00	Writable	-
10-SPEED FEEDBACK 1		00.06	0006h	Firmware Version		9.51	9.51	0.00	655.35	Read-Only	-
- 11-ADVANCE SET 11		00.07	0007h	Password Decoder	-	0	0	0	65535	Writable	-
12-TENSION 12		00.08	00085	Password Input	-	0	0	0	65535	Writshle	-
		00.00	00001	D 1		0	0	•	(5535)	D 101	-
- 14-EXT IO/PROTECT 14 Selected Perspectare		00.09	ooo9h	Keservea			U	U	00000	Read-Only	_



<u>KEYPAD</u>: Opens an advanced software keypad for use with your drive. Several buttons will be grayed-out (ESC, MENU, and several other keys are non-functional).

Operational Instructions:

To enable the Jog (F1), RUN, FWD/REV, and STOP/RESET buttons and to allow changes to the drive's speed, please see the GSoft2 online help file (must set P00.20/P00.21 (remote) and P00.30/P00.31 (local) for the drive to accept commands from RS485).





SCOPE: The scope feature is not available on GS10 drives..



<u>IP Config</u>: Allows manual configuration of an optional Ethernet card's IP address. GSoft2 uses the serial USB connection to communicate to the GS10 Drive ethernet communication card. Gsoft2 does not communicate via ethernet.



<u>Comm Card FW</u>: Use when upgrading firmware to any newer GS4 Network card with J2 jumper or any GS10 Ethernet comm card. Please read the important "Firmware Upgrade Notes" on page 7–11. See the GSoft2 Helpfile for details on how to upgrade communication card firmware.

<u>VFD FW</u>: Use when upgrading GS drive firmware. Icon is "grayed out" and not accessible after drive connection has been initiated. Press "Disconnect" to resume functionality. Please read the important "Firmware Upgrade Notes" on page 7–11. See the GSoft2 Helpfile for details on how to upgrade firmware.

NOTE: 500mA is required from the USB port of the sending PC. If unsure of the available current supplied by the PC, please use a powered USB hub.

EtherCAT Card FW: The GS10 drive does not support use of an EtherCAT card.

<u>*Help*</u>: Use the icon to show the help file which provides detailed instructions on all features and detailed procedures.

TOOLS MENU

The following options can be accessed through the Tools menu rather than an icon on the toolbar.

- <u>GS4 Legacy Comm Card</u>: Access this option through the Tools drop down menu. Use this feature when upgrading the GS4 Legacy ethernet communication cards (no J2 jumper is on the card). Icon is "grayed out" and not accessible after drive connection has been initiated. Press "Disconnect" to resume functionality. This is not used with GS10.
- <u>GS4 KEYPAD FW</u>: Use when upgrading KEYPAD firmware. Icon is "grayed out" and not accessible after drive connection has been initiated. Press "Disconnect" to resume functionality. Please read the important "Firmware Upgrade Notes" below. See the GSoft2 Helpfile for details on how to upgrade keypad firmware.

FIRMWARE UPGRADE NOTES

When upgrading firmware, the drive should remain powered ON. Cycle power after upgrade is completed.

All unnecessary USB peripherals should be disconnected from the host PC; only the USB-485M should be connected.

The host PC must be connected to the RJ45 port of the GS10 via the USB-485M (or similar).

Follow the software's instructions to upgrade the GS10 firmware. More detailed firmware upgrade instructions are available in the GSoft2 online help file.

GSOFT2 HELP FILE NOTE

To get the most use out of GSoft2 for the GS10 AC Drive and to learn what powerful features and tools exist within GSoft2, we highly recommend that you use the internally available Help File. There are a couple of ways to access this Help File within the GSoft2 software:

• Provide the test of test

• Alternately, you can access specific topics within the Help File by clicking "?" marks within the GSoft2 software. These links bring up specific Help File information applicable to the particular GSoft2 topic.

Various data that exists within the User Manual also exists within the Help File, e.g., explanations of "how to" accomplish various tasks. Other information is found only within the Help File, such as more detailed information for using GSoft2 and for upgrading the GS10 drive firmware. The help File also contains detailed information concerning the GS10 AC drive parameters and information for understanding and using the PID process. Make use of the Help File, and the Help File will live up to its name.

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