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# **GS30 Drive Configuration Software**

GSoft2 is the configuration software for the Automation Direct DURAPulse family of 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 3.0.x.x or higher with GS30.

### 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>
- Browser such as Edge or Chrome (for HTML help support)
- 32 Mb of available memory
- 10 Mb hard drive space
- Available USB port (for USB Type A or C to USB Type B cable)

# INSTALLATION GUIDE

## System Requirement Configuration

Verify the GS30 drive connection to a PC/Laptop computer by connecting the PC's USB type A port to the GS30 drive's USB type B connector. The GS30 RS485 port is for connecting to an RS485 network only and can not be used to connect to GSoft2. See Chapter 5 for further information on GS30 drive communications.



#### Software Installation

Step 1: Download the installation file from <u>AutomationDirect.com</u> 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.

😸 GSoft2 Setup	
$\odot$	Welcome to the GSoft2 Setup Wizard
	The Setup Wizard allows you to change the way GSoft2 features are installed on your computer or to remove it from your computer. Click Next to continue or Cancel to exit the Setup Wizard.
	Back Next Cancel

Step 3: If GSoft2 was previously installed then 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.

😸 GSoft2 Setup		23
	or remove installation ion you wish to perform.	Ð
Chang GSoft2	e	
	r errors in the most recent installation by fixing missing and corrupt ortcuts, and registry entries.	
Remov	res GSoft2 from your computer.	
	Back Next Car	ncel

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

븅 GSoft2 Setup	
Ready to install GSoft2	Ð
Click Install to begin the installation. Click Back to review or change any installation settings. Click Cancel to exit the wizard.	ofyour
Back	Cancel

## **OPENING GSOFT2 SOFTWARE PROGRAM**

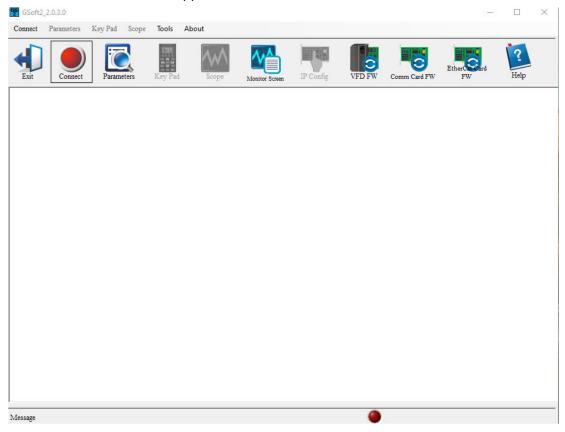
#### GSoft2 includes an integral help file with software instructions.

GSoft2 offers the user a PC based software configuration tool for creating and editing a GS30 Drive configuration. The configuration tool provides access to GS30 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 GS30 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).

GSoft2_2.	.0.3.0								_		×
Disconnect	Parameters	Key Pad So	cope Tools	About							
			1.154				(IN)	THE REAL PROPERTY OF	COLUMN T	10	
				$\sim$			0		EtherCarcard	?	
Exit	Disconnect	Parameters	Key Pad	Scope	Monitor Screen	IP Config	VFD FW	Comm Card FW	EtherCat Card FW	Help	

## Software Functions

ICON APPEARANCE BEFORE CONNECTING TO DRIVE

GSoft2	_2.0.3.0											$\times$
Connect	Parameters	Key Pad	Scope	Tools	About							
				1555			BREWENT .				10	
					M	<b>M</b> <sup>™</sup>		3	-0	Ether	1	
Exit	Connect	Parame	eters	Key Pad	Scope	Monitor Screen	IP Config	VFD FW	Comm Card FW	FW	Help	

### ICON APPEARANCE AFTER CONNECTING TO DRIVE

😴 GSoft2_2.	0.3.0								1		$\times$
Disconnect	Parameters	Key Pad Sc	ope Tools	About							
Exit	Disconnect	Parameters	Key Pad	Scope	Monitor Screen	IP Config	VFD FW	Comm Card FW	Ether Card FW	I Relp	

#### **ICON FUNCTIONS**



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



<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 GS30 it is not necessary to modify the communication settings (ASCII/RTU, Baud Rate, Data bits, etc.) for the drive when using USB (USB settings are hard-coded) or Ethernet connections. For RS485 connections, the AutoDetect feature will set the Baud, Data, Parity, and Stop bits.

### To Connect via USB

- 1) Select **USB** from the drop-down menu.
- 2) Verify that RTU is showing in the ASCII/RTI window selector.
- 3) Verify the VFD ID is correct. Default value on all drives is 1.
- 4) Select the COM Port your USB cable is connected to.

Settings Protocol:	JSB	•	Timeout :	500	
				_	
VFD ID :	1		ASCII/RTU:	RTU	•
COM Port :	COM3	•	Baud Rate :	4800	-
			Data Bits :	7	-
COM Test			Parity :	NONE	Ŧ
			Stop Bits :	2 Stop bits	Ŧ
A	Detect			ONNECT	

5) Click the **Connect** button.



6) When connected, the button will turn green and there will be an indicator in the lower right-hand corner of the screen.

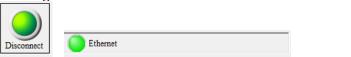


#### <u>To Connect via Ethernet</u>

- 1) Select **Ethernet** from the drop-down menu.
- 2) In the Network box, select the Ethernet card your cable is plugged in to.
- 3) Verify your PC and the Drives IP addresses are correct. All Ethernet cards are default addressed 192.168.1.10.
- 4) Click the **Connect** button.

Settings Protocol:	Ethernet - Timeout : 500
Network :	Ethernet:Intel(R) Ethernet Connection (16) I219-LM
Status	[
PC IP :	192.168.1.250 v port : 23906
DRV IP :	192 . 168 . 1 . 10
	Auto Detect CONNECT

5) When connected, the button will turn green and there will be an indicator in the lower right-hand corner of the screen.



#### To Connect via RS485

- 1) Select **Serial** from the drop-down menu.
- 2) Verify the VFD ID is correct. Default value on all drives is 1.
- 3) Select the COM Port your USB converter is connected to.

Settings					
Protocol: S	erial	-	Timeout :	500	
					6
VFD ID :	1		ASCII/RTU:	RTU	•
COM Port :	COM3	-	Baud Rate :	4800	-
			Data Bits :	7	-
COM Test			Parity :	NONE	-
			Stop Bits :	2 Stop bits	•
		_			
Auto	Detect		C	ONNECT	

- 4) Click **AutoDetect**.
- 5) After AutoDetect is complete, click COM Test to verify settings (a green **OK** should appear). If Red Fault appears, then double check your connections at the PC and the drive.
- 6) Click the **Connect** button.

Settings				
Protocol:	Serial	Timeout :	500	
VFD ID :	1	ASCII/RTU:	RTU	•
COM Port :	COM5 •	Baud Rate :	19200	-
		Data Bits :	8	•
COM Te	oK	Parity :	NONE	-
,		Stop Bits :	1 Stop bits	•
A	uto Detect		CONNECT	

7) When connected, the button will turn green and there will be an indicator in the lower right-hand corner of the screen.





<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 Save New	Rating	Jopen Open	Read	Write All Com	Dare	Wizard Help						
Drive	RUN	SET(Write is	n Run or Sto	p) STOP SET(W	rite while	Stopped Only)	AD O	NLY				
- All Parameters	[FILE MENU			el : GS31-20P5 (230V 1pl					rent Drive V	/alues		
	Selected	Pr. NO	Modbus	Description	Unit	Data		Default	Min	Max	Attribute	
- 2-DIGITAL IN/OUT 02		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	_
		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	0008h	Password Input		0		0	0	65535	Writable	-
- 13-MACRO 13 - 14-EXT IO/PROTECT 14		00.09	0009h	Reserved		0		0	0	65535	Read-Only	
Salastad Daramatara		00.09	000911	ICESCI VEG			1000	v	V	05555	Read-Only	



KEYPAD: 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: Opens a functional graphic interface for testing and viewing selected drive parameter data values (See the GSoft2 online helpfile for further detailed description).

Scope						10			10	
Ext Record	Parameters Sav	re File Load File	JPG Scr	een Zoom Al	Zoom In	Zoom Out Recovery	Key Pad	Relp		
00000 0000 0000 000 000 000 000 000 00	20000 30000	40000 50000	60000 70000	80000 90000	) 100000	10000 120000 13	0000 140000	150000 160000	170000 180000	190000 200
with encompation         GS30           ype:         GS30           wpp:         9,51           W(hp):         0,5HP           kate Voltage:         230V           kate Current:         2,8A           tatus of Drive            PUN         JOG           STOP            Emor Code:         0           Ne remo soccured	1101	Address Frequency Comma Output frequency ( Output current (A rr DC_bus (Vdc) I/STOP(Cmd) 0	and (F • U16 D Hz) • U16 D	• 1 • 1	Δ Y 0 0 0 0 0 0 0 0 0 0 0 0 0	20.0000 ∆ Time Sec 0.0000	DI/DO Channe DI Addr. 2210 DO Addr. 2211			



IP Config: Allows manual configuration of an optional Ethernet card's IP address. GSoft2 uses the serial USB connection to communicate to the GS30 Drive ethernet communication card. Gsoft2 does not communicate via ethernet.



Comm Card FW: Use when upgrading firmware to any newer GS4 Network card with J2 jumper or any GS30 Ethernet comm card. Please read the important "Firmware Upgrade Notes" on page 7–12. 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 7–12*. 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.



<u>EtherCAT Card FW</u>: Use when upgrading EtherCAT card firmware. Icon is active regardless of drive connection status. Please read the important "Firmware Upgrade Notes" on <u>page</u> <u>7–12</u>. See the GSoft2 Helpfile for details on how to upgrade firmware.



<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 GS30.
- <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 drive firmware, the drive should be disconnected from all power sources (incoming AC power and control-level DC power). Power is required for EIP and EtherCAT card firmware updates.



All unnecessary USB peripherals should be disconnected from the host PC; Especially any USB to serial converters (USB-485M, USB-RS232, etc.) (drivers may conflict with the USB FW upgrade driver).



The host PC must be connected to the upgrade port of the GS30 via a standard USB A-to-B cable (USB-CBL-AB6 or similar).

Once the PC is connected to the GS30, the drive will be recognized as a USB serial device COM port. Open Device Manager to determine which port number has been assigned.

Follow the software's instructions to upgrade the GS30 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 GS30 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:

• E The easiest way to access the Help File information is to click the Help (Help File) icon in the far right of the Toolbox above the viewing pain.



• Alternately, you can access specific topics within the Help File by clicking "?" marks within the GSoft2 software. Those 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 GS30 drive firmware. The help File also contains detailed information concerning the GS30 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.