



Powered by Possibility



Watlow Dashboard Setup and Basics

Feb 2020 v0.1

About Watlow Dashboard

Watlow Dashboard is a program for commissioning and running Watlow product. It will interact with all Watlow products but has screens targeted specifically for RMZ and PowerGlide.

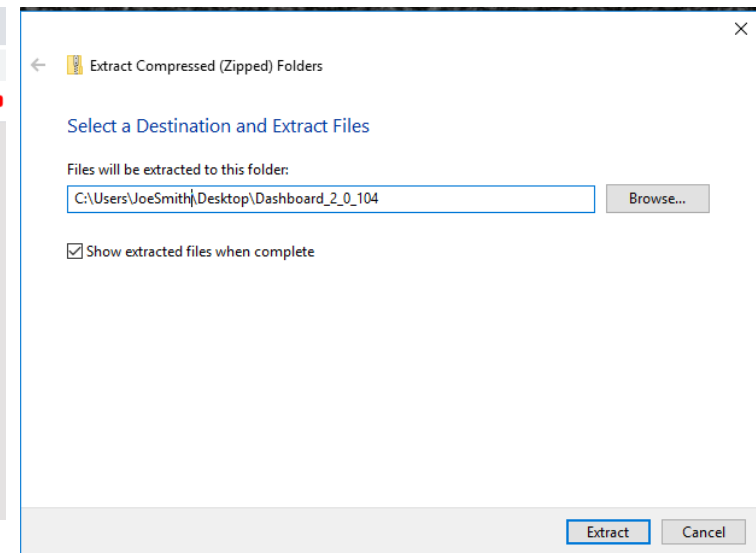
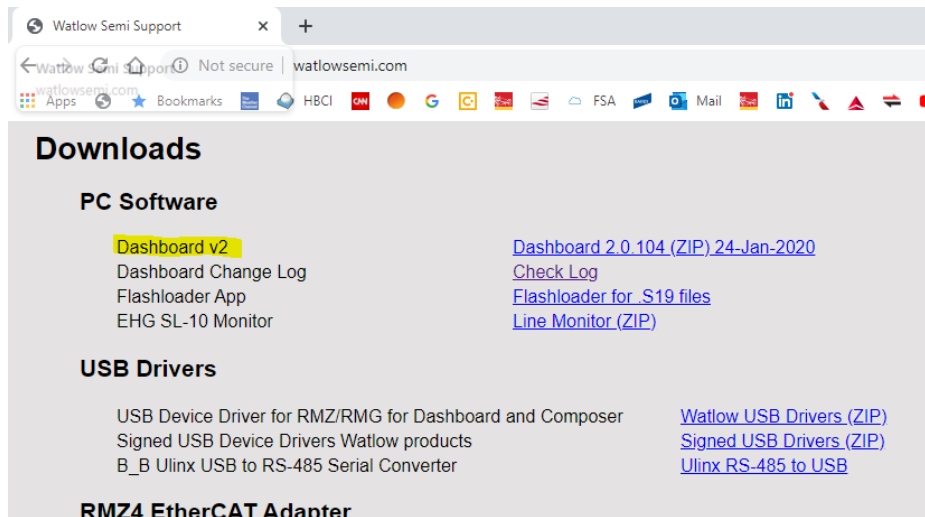
The PowerGlide features allow access and monitoring of the ATS performance and one screen graphs as well as a continuous data log of the runtime parameters.

The RMZ features are targeting around mapping its logic slots to the other RM modules in the system.

Downloading and Unzipping Dashboard



















The Dashboard program is available on line at www.watlowsemi.com. It is delivered in a ZIP format and is about 5Mbyte.

- Download the zip file then unzip it (right click -> Extract All..) to your desired location.
- The program does not install itself, it can run directly from its directory.
- .NET framework 4.0 or later is needed on the PC
- It does not access the registry.
- Multiple version can exist in separate directories.



Running Dashboard

In the unzipped directory, click Watlow Dashboard.exe to run it. You can send a shortcut to your desktop or taskbar too.

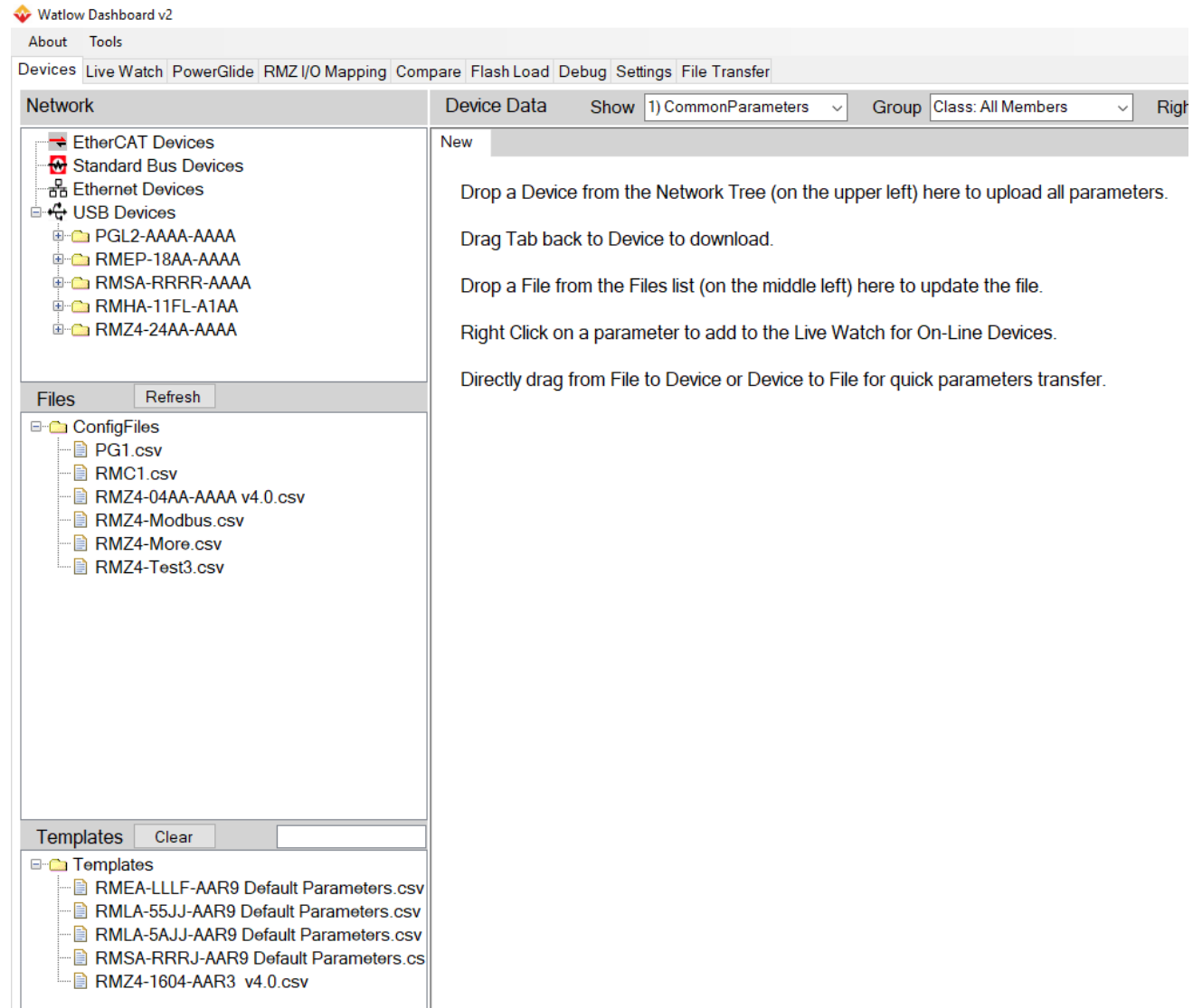
 SerialLink.dll	9/11/2019 8:33 AM	Application extens...	40 KB
 SerialLink64.dll	9/11/2019 8:33 AM	Application extens...	46 KB
 Settings.txt	11/11/2019 12:53 ...	Text Document	1 KB
 Test.prm	9/11/2019 8:33 AM	PRM File	0 KB
 UsbLink.dll	9/11/2019 8:33 AM	Application extens...	82 KB
 UsbLink64.dll	9/11/2019 8:33 AM	Application extens...	102 KB
 Watbus Connection.dll	9/11/2019 8:33 AM	Application extens...	114 KB
 Watbus Connection.XML	9/11/2019 8:33 AM	XML Document	45 KB
 Watbus.dll	9/11/2019 8:33 AM	Application extens...	20 KB
 Watlow Dashboard.exe	1/24/2020 4:07 PM	Application	3,001 KB
 Watlow Dashboard.exe.config	10/7/2019 3:48 PM	XML Configuratio...	1 KB
 Watlow Dashboard.pdb	1/24/2020 4:07 PM	Program Debug D...	1,878 KB
 Watlow Dashboard.vshost.exe	1/22/2020 9:45 AM	Application	23 KB
 Watlow Dashboard.vshost.exe.config	10/7/2019 3:48 PM	XML Configuratio...	1 KB
 Watlow Dashboard.vshost.exe.manifest	4/11/2018 6:35 PM	MANIFEST File	1 KB
 WatlowENI.xml	9/11/2019 8:33 AM	XML Document	20 KB
 WatlowRMZ.xml	9/11/2019 8:33 AM	XML Document	617 KB
 wpcap.dll	9/11/2019 8:33 AM	Application extens...	362 KB

Opening Screen

The **Network** pane display the devices found on each network.

The **Files** pane shows configuration files that have been saved on this PC. These can be save-from and loaded-to the devices in the network pane. The files can be edited off-line too.

The **Templates** are configuration files ready for offline development based on default parameter sets.



Setting up the Communications

The screenshot shows the 'Settings' window with the following configuration:

Item	Value
Serial Coms	
Use Serial	False
Serial Port	COM3
EtherCAT	
Use EtherCAT	False
EtherCAT ENI File	RMZ_2_0_ENI.xml
EtherCAT Port	ASIX AX88772B USB2.0 to Fast Ethernet Adapter #4 (Missing)
Ethernet	
Use Ethernet	True
Ethernet Port	(192.168.0.100) RMA PLUS (Missing)
USB	
Use USB	True
USB Port	1: POWERGLIDE SN: 10224982
Files	
Config	/ConfigFiles
Logging	/Datalogs
Logging Interval	1000
Parameter Auto-Save	True

Callout 1 (Serial Coms): If you need to use serial communication, set the port number here.

Callout 2 (Serial Coms): Set this to True if you need to use a serial converter. If you **don't need** a serial converter, set this to **False**. That will speed up the startup time during device discovery.

Callout 3 (Ethernet): This enables connection over Ethernet. Make sure the PC's Ethernet port matches the subnet, usually a 192.168.0.xxx IP address.

Callout 4 (USB): Having USB enabled is usually fine.

Buttons: About, Tools, Devices, Live Watch, PowerGlide, RMZ I/O Mapping, Compare, Flash Load, Debug, **Settings**, File Transfer, Save Settings

Set the desired communications methods here. After changing a value, close Dashboard and restart the program to have the new policy in affect during the device discovery phase that occurs on startup.

- USB requires installation of the Watlow USB driver.
- Serial usually requires a driver for the USB to serial port on the PC.
- Ethernet does not require a driver, just a IP address on the network of the Watlow device.

Drivers

USB Driver

If you are accessing your controller directly via USB you will need a driver.

Products with direct USB support: RMZ, RMG, PowerGlide, RMAP support USB.

When the Watlow device is first plugged into the PC it will indicate it needs a driver with a yellow exclamation point. Select "I will locate the driver myself". Browse to the USBDrivers directory in the Dashboard folder. See the next page for details.

Name	Date modified	Type	Size
Calibration	1/22/2020 9:49 AM	File folder	
ConfigFiles	1/22/2020 9:49 AM	File folder	
Datalogs	1/22/2020 9:50 AM	File folder	
DeviceData	1/22/2020 9:49 AM	File folder	
Documentation	9/11/2019 8:33 AM	File folder	
ENI_Files	1/22/2020 9:49 AM	File folder	
PedDataLogs	1/22/2020 9:49 AM	File folder	
Templates	1/22/2020 9:50 AM	File folder	
USBDrivers	1/22/2020 9:49 AM	File folder	
AssemblyFile.csv	9/11/2019 8:33 AM	Microsoft Excel C...	6 KB
CommonTools.dll	9/11/2019 8:33 AM	Application extens...	128 KB
devcfg.xml	9/11/2019 8:33 AM	XML Document	1,322 KB
EcMaster.dll	9/11/2019 8:33 AM	Application extens...	640 KB
EcMasterDotNet.DLL	9/11/2019 8:33 AM	Application extens...	320 KB
emIIPC.dll	9/11/2019 8:33 AM	Application extens...	84 KB
EthernetNodes.txt	9/11/2019 8:33 AM	Text Document	1 KB

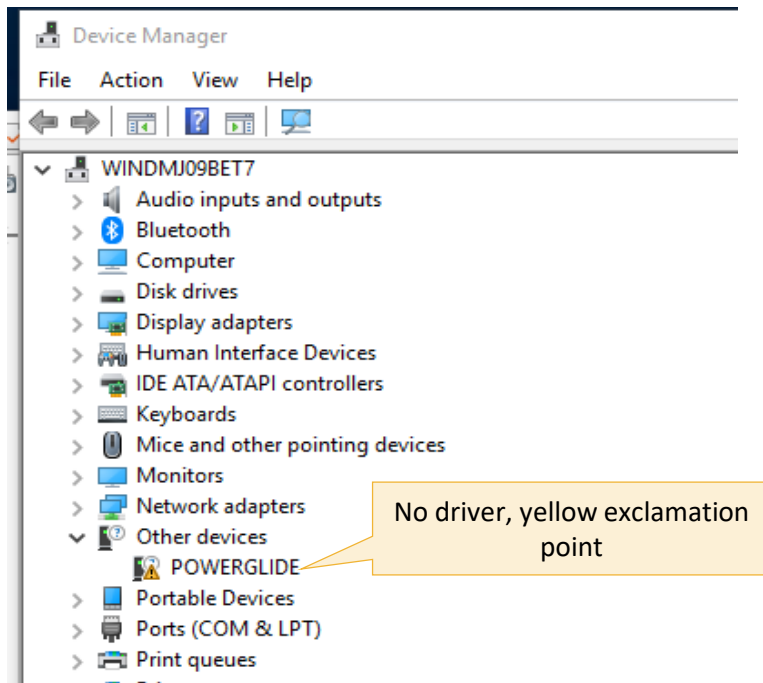
Serial Driver

For products without a USB port (RMT, RMH, RMS, RML, RMEP) there are 2 options:

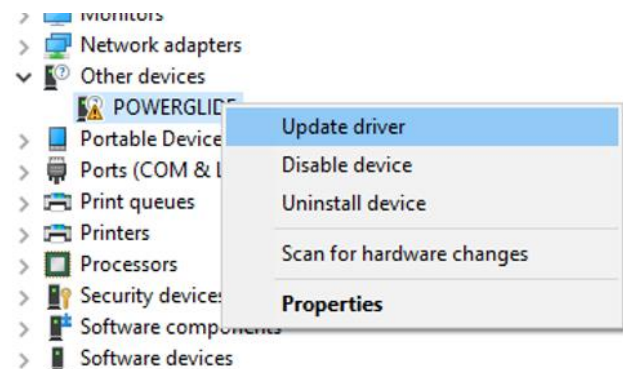
1. Put one of the devices listed above on the backplane with the device and tunnel through that USB device to the non-USB device. Dashboard will discover these devices.
2. Connect to the device with a USB to RS-485 converter. This will be much slower.

USB Driver Installation

- Plug the powered device into a USB port on the PC.
- You will either get a popup asking for a driver or go to **Control Panel >Device Manager**
- Find the Watlow device with the exclamation point.
- We will update that driver
- Once installed, all Watlow USB devices and USB programs will function via USB.



Right Click "Update Driver"



USB Driver Installation 2

Update Drivers - POWERGLIDE

How do you want to search for drivers?

- Search automatically for updated driver software
Windows will search your computer and the Internet for the latest driver software for your device, unless you've disabled this feature in your device installation settings.
- Browse my computer for driver software
Locate and install driver software manually.

Choose to browse yourself

Update Drivers - POWERGLIDE

Browse for drivers on your computer

Search for drivers in this location:

C:\Users\winkiosk\Desktop\Dashboard_2_0_105\USBDrivers

☒ Include subfolders

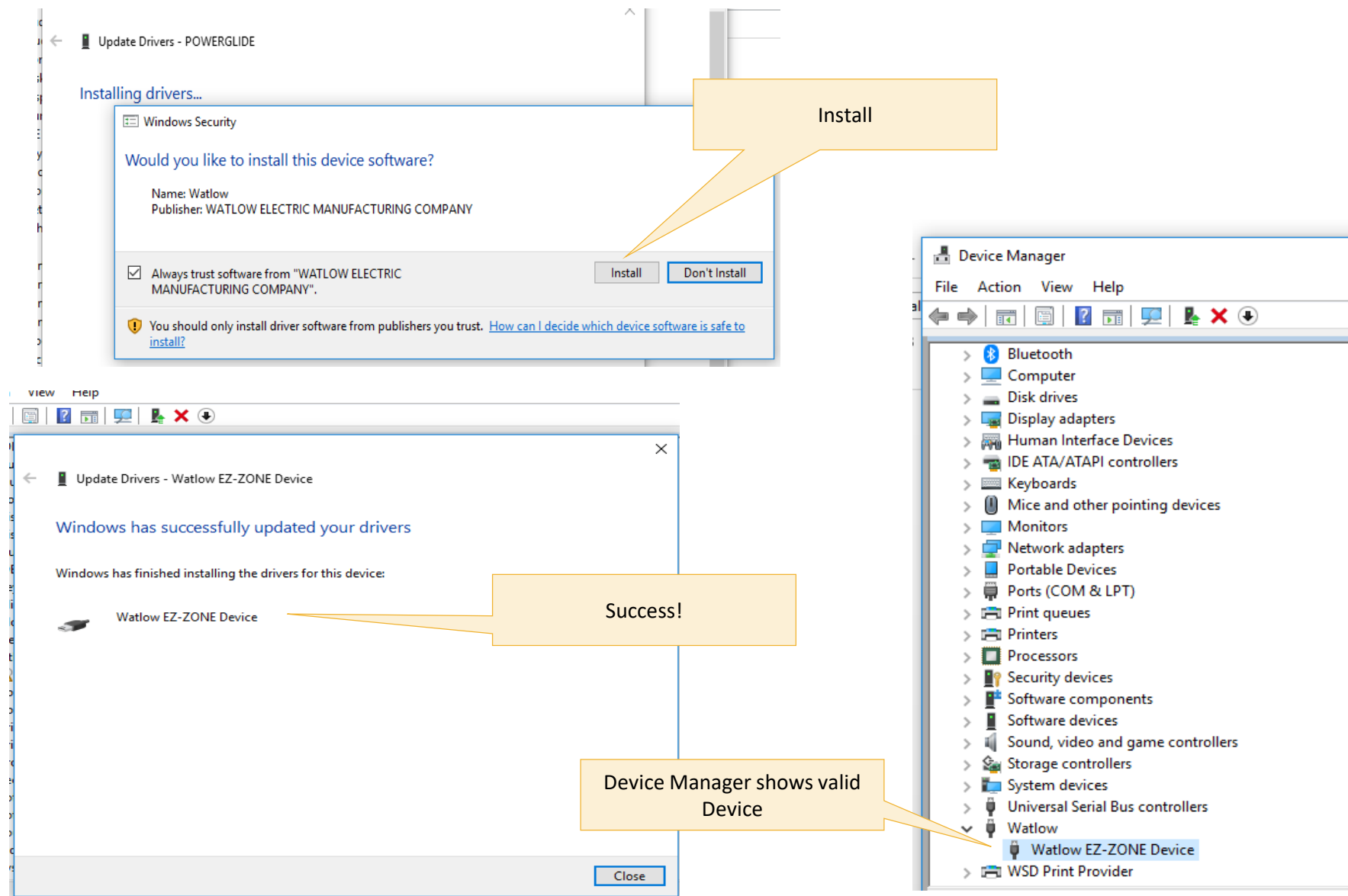
→ Let me pick from a list of available drivers on my computer
This list will show available drivers compatible with the device, and all drivers in the same category as the device.

Continue

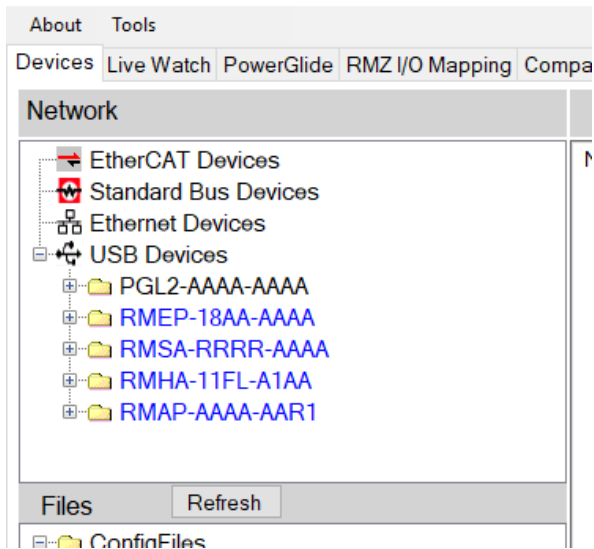
Next Cancel

Browse to the USBDrivers directory in the Dashboard Directory

USB Driver Installation 3

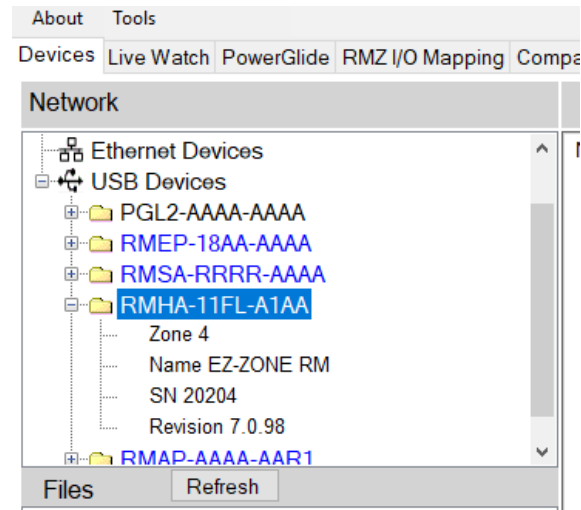


Discovered Devices



Devices discovered when the program is started on a specific network are shown under that network heating. Device that come on line later will not de discovered.

- Black devices are directly on the end of the wire.
- Blue devices are connected via the black device then through Watbus.



Expanding a device shows its zone/address, user set name, serial number, and firmware revision.

Busses disabled in the Settings tab will not discover devices connected on that port.

Access the complete parameter set of a product

Network Pane:

- EtherCAT Devices
- Standard Bus Devices
- Ethernet Devices
- USB Devices
- PGL2-AAAA-AAAA
- MEP-18AA-AAAA
- MSA-RRRR-AAAA
- MA-11FL-A1AA
- RMZ-AAA-AAAA
- RMAP-AAV-AR1

Files Pane:

- ConfigFiles
- PG1.csv
- RMC1.csv
- RMZ4-04AA-AAAA v4.0.csv
- RMZ4-Modbus.csv
- RMZ4-More.csv
- RMZ4-Test3.csv

Templates Pane:

- Templates
- RMEA-LLLF-AAR9 Default Parameters.csv
- RMLA-55JJ-AAR9 Default Parameters.csv

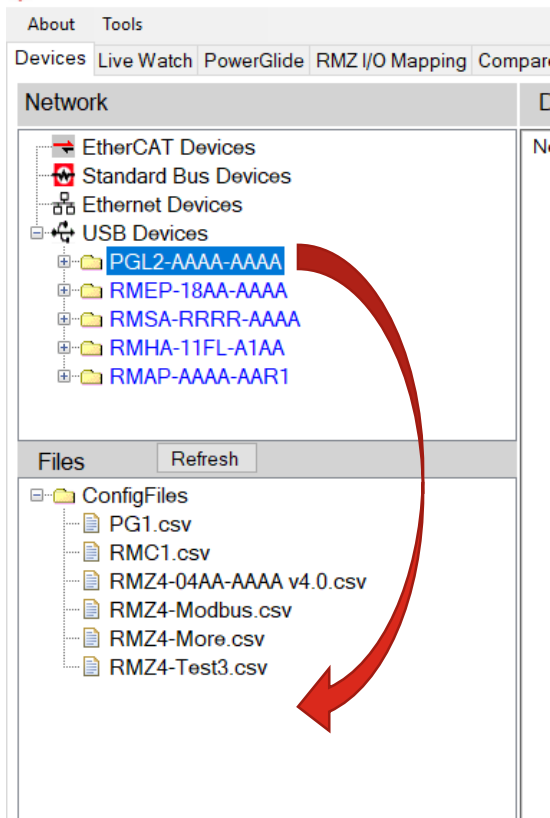
Device Data Pane:

New PGL2-AAAA-AAAA_10224982

Parameter	Value	Enumeration	Access	DataType	Class	Instance	Member	COE Index	SubIndex	Saveable
Device Info 1										
Hardware ID	147		R	LONG	1 0x01	1	1 0x01	0x1018	0x01	True
Software ID	1		R	LONG	1 0x01	1	2 0x02	0x1018	0x02	True
Major Version	0		R	LONG	1 0x01	1	3 0x03	0x1018	0x03	True
Minor Version	3		R	LONG	1 0x01	1	4 0x04	0x1018	0x04	True
Build Number	19		R	LONG	1 0x01	1	5 0x05	0x1018	0x05	True
Branch Number	0		R	LONG	1 0x01	1	6 0x06	0x1018	0x06	True
Serial Number	10224982		R	LONG	1 0x01	1	7 0x07	0x1018	0x07	True
Model Number	PGL2-AAAA-AAAA		R	STRING	1 0x01	1	9 0x09	0x1018	0x09	True
Device Name	POWERGLIDE		RW	STRING	1 0x01	1	11 0x0B	0x1018	0x0B	True
Firmware Revision	0.03.19.00		R	STRING	1 0x01	1	17 0x11	0x1018	0x11	True
Serial Number String	10224982		R	STRING	1 0x01	1	32 0x20	0x1018	0x20	False
Device Info 2										
Device Info 3										
Variables										
Display										
Analog Input										
Limit										
PV Math										
Logic										
Real Time Clock										
Fast Digital Out										
Limit Digital Out										
Standard Bus										
Module Limit										
Volume										
Power Delivery										
Model_PID										
RtoT										
Set Point Scaling										
Protection										
ATS										
Metrology										
ECAT 2000 Inputs										
ECAT 4003 Finger Prints										

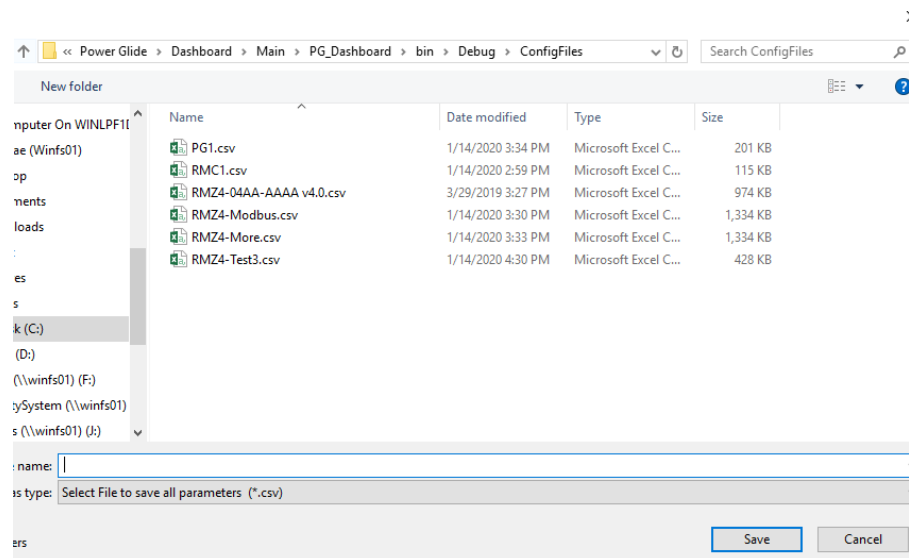
Drag the product icon from the Network Pane to the Device Data pane. A new tab will be added and all the features and their associated parameters will be loaded from the device. These can be viewed and changed.

Capturing a Configuration

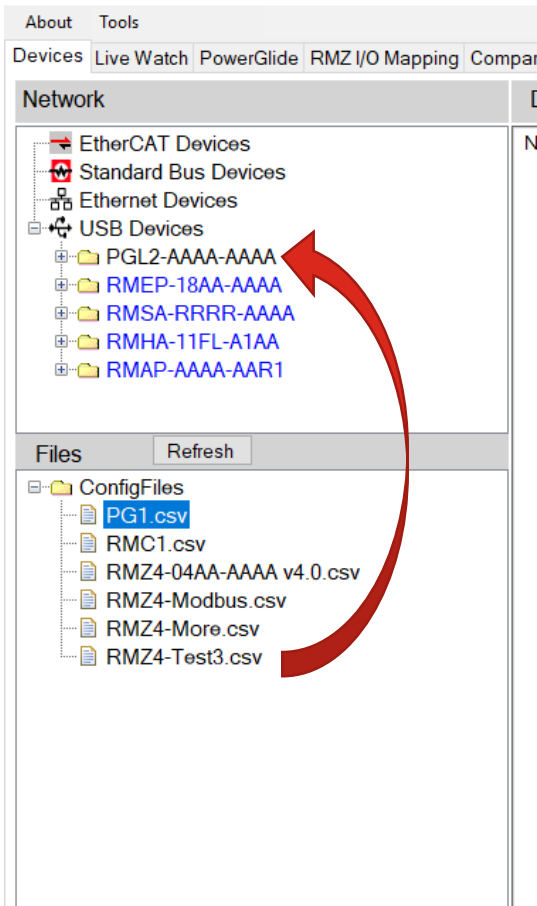


All the parameters from a device can be saved to a file. It will be in a CSV format and viewable in Excel.

- Drag the device from the Network pane to the Files pane.
- Enter the name for the file.
- The parameters will appear in a new Device Data tab as they are brought from the device into Dashboard.



Restoring a Configuration



All the parameters from a device can be saved to a file. It will be in a CSV format and viewable in Excel.

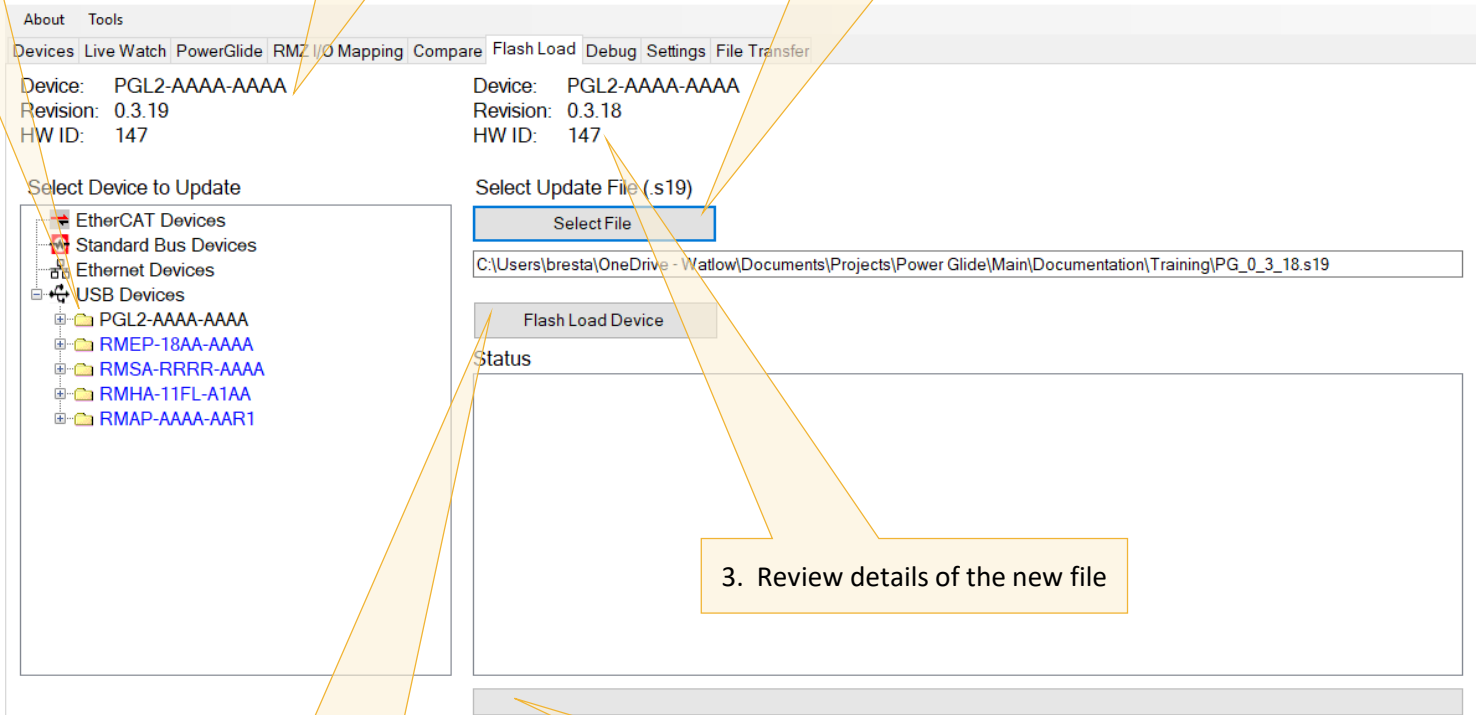
- Drag the file from the files tab.
- Drop it on the Device you want them loaded with these parameters.
- The parameters will appear in a new Device Data tab as a off-line data set then sent to the device.

Loading New Firmware

1. Select device for new firmware

See details about the selected device

2. Select new firmware file.
These are *.S19 files



4. Click "Flash Load Device"

3. Review details of the new file

5. Progress bar will advance during download. Over USB or Ethernet this should take about 30s.