

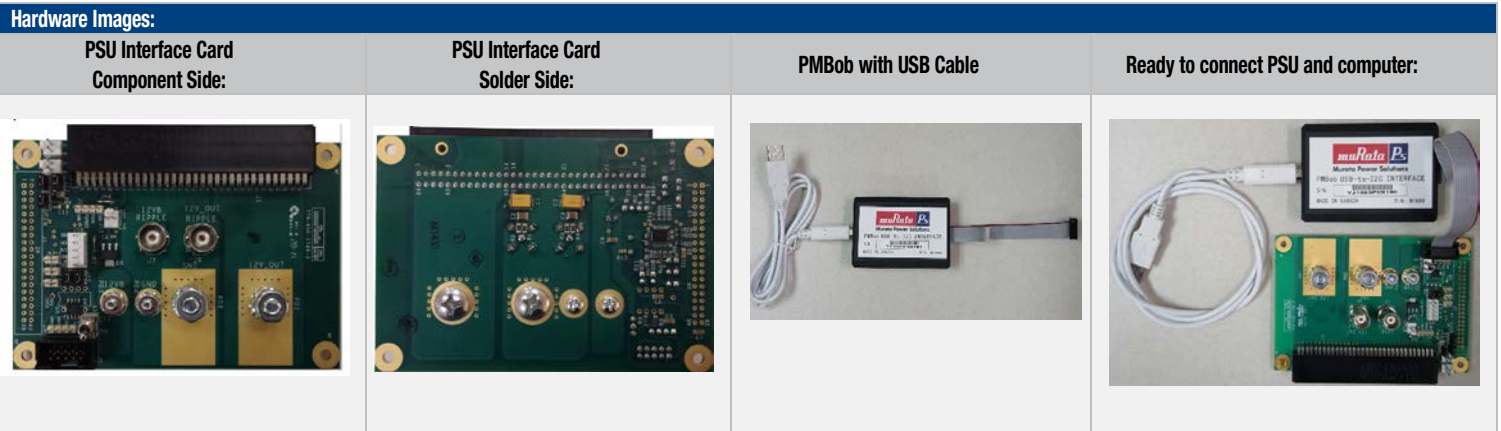
**Scope:**

This application note explains how to set up Murata's **D1U86P-W-1600-12-HxxDC series** power supplies using a Windows™ based computer with some additional hardware for PMBus™ communication.

Reference Documentation:		
Document	Description	Link
D1U86P-W-1600-12-HBxDC	Datasheet, Power Supply	<a href="http://www.murata-ps.com/datasheet?http://www.murata-ps.com/data/acdcsupplies/d1u86p-w-1600-12-hbxdc.pdf">http://www.murata-ps.com/datasheet?http://www.murata-ps.com/data/acdcsupplies/d1u86p-w-1600-12-hbxdc.pdf</a>
ACAN-50	Application Note, Interface Connection Card	<a href="http://power.murata.com/datasheet?/data/apnotes/acan-50.pdf">http://power.murata.com/datasheet?/data/apnotes/acan-50.pdf</a>
ACAN-51	Application Note, PMBus™ Communication Protocol	<a href="http://power.murata.com/datasheet?/data/apnotes/acan-51.pdf">http://power.murata.com/datasheet?/data/apnotes/acan-51.pdf</a>

Required Hardware (See images below):				
Item	Description	MFG	QTY	
D1U86P-12-CONC <sup>1</sup>	PSU Connector Card; refer to ACAN-50 for application note as required:	Murata Power Solutions Inc.	1	
PMBob P/N 77902017881 <sup>1</sup>	PMBob I2C/USB to PSU connector card adapter board, available from:	Murata Power Solutions Inc.	1	
Aardvark I2C/SPI Host Adapter and required drivers	Alternative to Murata Power Solutions Inc. PMBob, Totalphase P/N 779020178811 - Link: <a href="http://www.totalphase.com/products/aardvark-i2cspi/">http://www.totalphase.com/products/aardvark-i2cspi/</a>	Totalphase	1	
Windows operating system based computer				

<sup>1</sup> consult factory for availability



Required Software and drivers for Windows:	
Description	Link
GUI for Murata Power Solutions Inc. <b>D1U86P-x-1600-12-HxxDC series</b> , filename: "tg1728i2cCntlPnlV290" (subject to change)	Contact Murata Power Solutions Inc.
<sup>2</sup> National Instruments "LabVIEW™ Run-Time Engine 2013"	<a href="http://www.ni.com/download/labview-run-time-engine-2013/4061/en/">http://www.ni.com/download/labview-run-time-engine-2013/4061/en/</a>
National Instruments "NI Visa"	<a href="http://www.ni.com/download/ni-visa-run-time-engine-15.5/5847/en/">http://www.ni.com/download/ni-visa-run-time-engine-15.5/5847/en/</a>
PMBob drivers (Murata Power Solutions Inc. Murata Power Solutions Inc.)	Contact Murata Power Solutions Inc.

<sup>2</sup> labVIEW™ is a trademark of National Instruments. This application note is independent of National Instruments, which is not affiliated with Murata Power Solutions Inc., and does not authorize, sponsor, endorse or otherwise approve this application note.

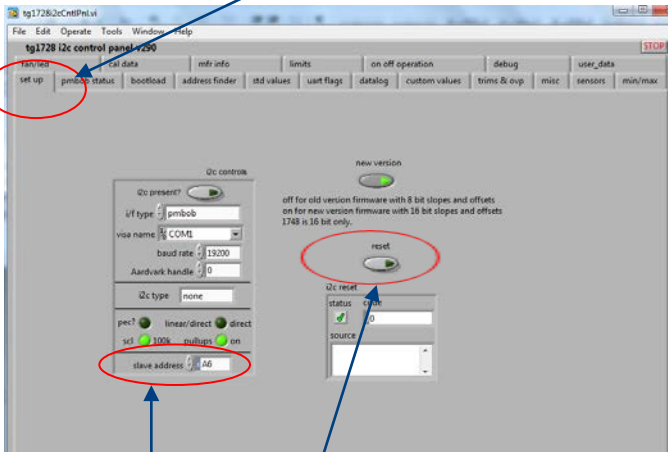
**Setting up the software and hardware:**

1. Install National Instruments **LabVIEW Run-Time Engine 2013** “LVRTE2013std\_downloader.exe”  
<http://www.ni.com/download/labview-run-time-engine-2013/4061/en/>
2. Install NI VISA “NIVISA1550runtime.exe”  
<http://www.ni.com/download/ni-visa-run-time-engine-15.5/5847/en/>
3. Install PMBob drivers, provided by Murata Power Solutions Inc. by running

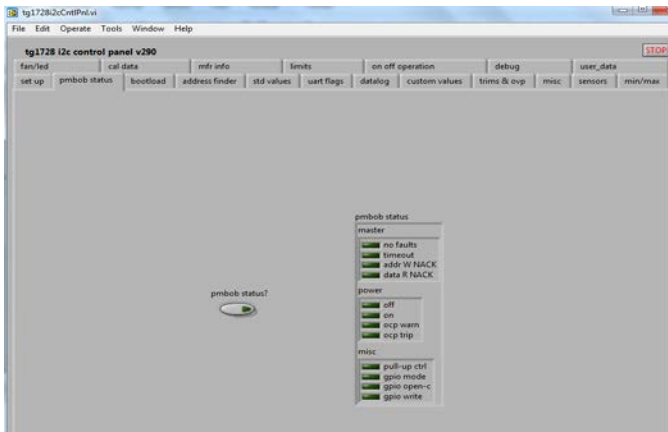


Finally:

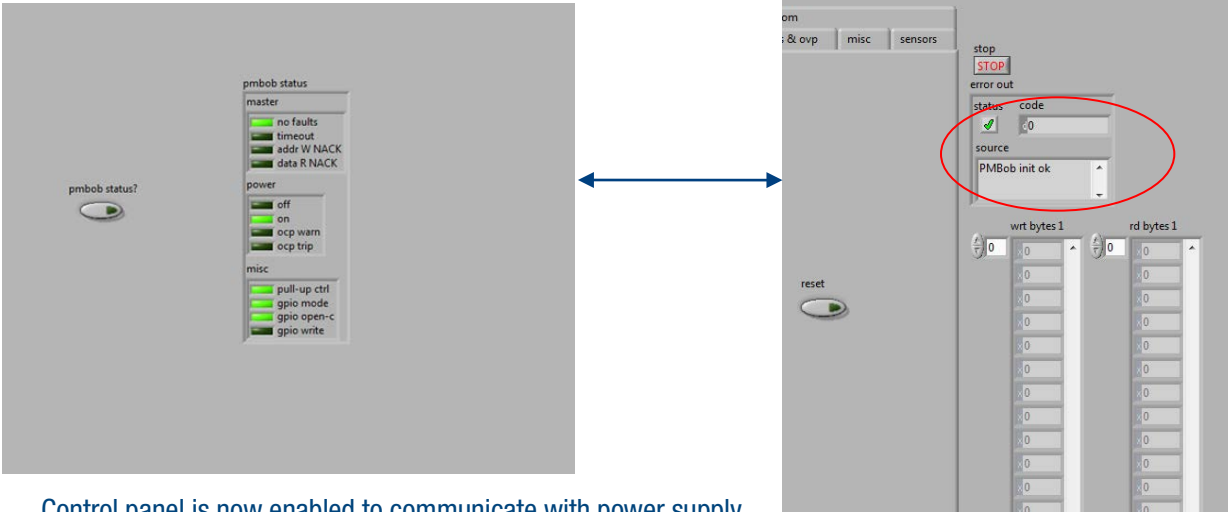
4. Start the Murata Power Solutions Inc. GUI / control panel and select the “set-up” tab:



5. Click the rest button  
Source Box should now look like this
6. Ensure slave address matches address finder tab. See note 10.
7. Select the “PMBob Status” Tab:

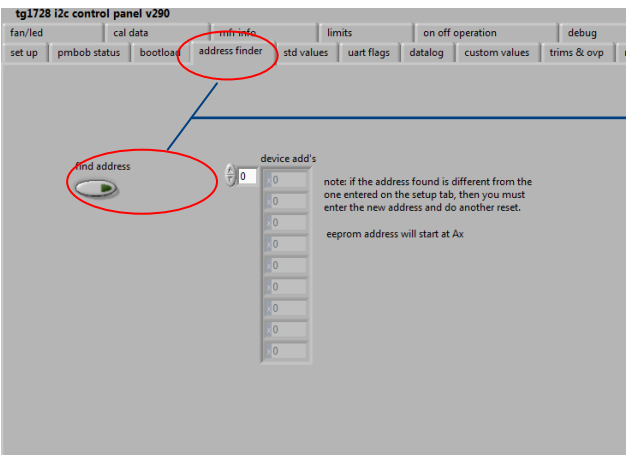


8. Click the “pmbob status?” button. Should now look like this:



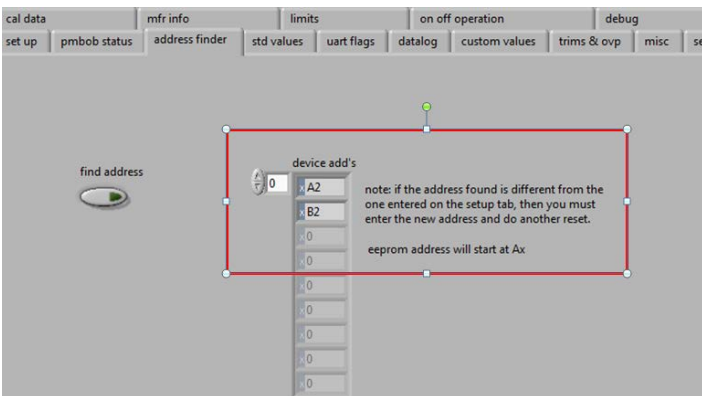
Control panel is now enabled to communicate with power supply.

9. Addressing:

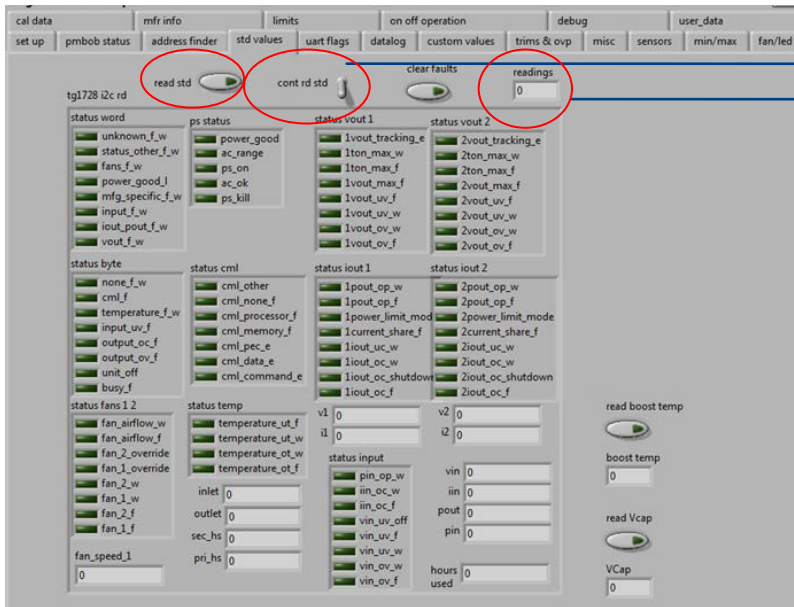


The addresses of all devices on the bus will be listed in the “device add’s” array. Make note of the Bx address (that is the address of the microcontroller, and the values could be between B0 to BE) and go back to the “set up” tab to compare against the address in the “slave address” field.

10. Confirm Slave address “Bx” matches per Note 6:



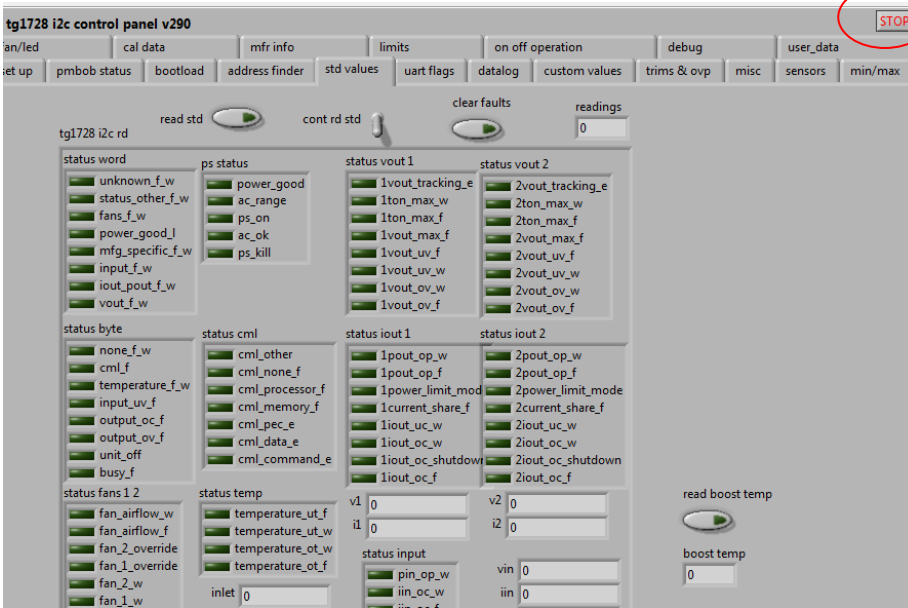
11. “std values” Tab contains the main view for returned results and status of the power supply parameters.



Parameters can be read continuously by clicking toggle switch + “read std”  
 Counts as each reading takes place

Pressing “read std” will display a one-time read of the data received from the unit. If continuous monitoring is needed, flip up “cont rd std” switch and press again “read std” button.  
 All the fields will be updated as the data is received from the unit, the “read std” button will not rebound and the number of read will be counted in the “readings” field. To stop the communication, either flip down “cont rd std” switch or press again “read std” button.

12. Exiting the application:



In order to close the application, first press the “STOP” button, then close the window. By pressing the button, the communication between the PC and your I2C interface (either PMBob or Aardvark) will be properly terminated; otherwise there might be issues trying to establish the communication again next time and a hardware reset of the I2C interface might be necessary, by cycling the power.

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 ISO 9001 and 14001 REGISTERED



**This product is subject to the following operating requirements and the Life and Safety Critical Application Sales Policy:**  
 Refer to: <http://www.murata-ps.com/requirements/>

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