



# Quarterly Newsletter

## Winter 2016

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### ***Introduction***

The PMBus™ protocol has enabled the electronics industry to standardize communications to their power conversion circuits. Controlling, configuring, and monitoring of ac-dc power supplies, isolated dc converters (“bricks”), and non-isolated point-of-load (POL) converters has proliferated across the power supply industry as our member companies take advantage of the standardization. We thank you for your past and continued support.

Of course, companies are in business to generate revenue. So from our member companies’ perspective, success is measured in sales of PMBus-enabled products to OEMs. This is the equipment that manufacturers sell to the end user, whether it be server and storage systems, medical devices, industrial controls or other electronics-enabled machinery.

First, a little history: The original idea of a standardized digital power management protocol, soon deemed PMBus, was conceived in 2004. Several power supply manufacturers and IC suppliers collaborated together as the original promoters of PMBus. With business and technical persons from these contributors, the Special Interest

Group (SIG) was created, and the original PMBus specification was developed and released in March 2005. The specification continues to be driven by the System Management Interface Forum (SMIF), which is an organization of volunteers from our membership companies.

The new AVSBus™ addition in Part III of the latest PMBus revision is creating a lot of interest with board-level system designers. It enables real-time, dynamic control of high-power, high-speed, complex digital logic devices like ASICs, FPGAs, memory and processors with multi-rail voltage requirements. We are confident that these capabilities will gain support in data center and other computing applications, and spread to other industry segments. This will serve to accelerate broader adoption of PMBus 1.3, which will in turn increase demand for PMBus-compliant power conversion solutions.

### ***Membership Updates***

Please welcome our two newest PMBus adopters, TDK-Lambda and Excelsys, who have started off 2016 by becoming members of SMIF. While they have only recently joined PMBus, both now offer compliant power conversion products and supporting material, and plan to increase their offerings in the future. A recent flurry of M&A activity has seen some of our members combine. The 34 SMIF members we have are committed and becoming more active!

As most members are aware, SMIF has been making a concerted effort to reconnect with our membership base. We have been



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updating our database for technical and business contacts, as well as making sure that non-members do not abuse our trademarks. While the annual fees are a nominal amount, they are critical to supporting SMIF initiatives to increase the visibility of PMBus and develop support material so as to drive broader adoption across system OEMs.

In November of last year the new SMIF board of directors elected to make changes to the 10 year old membership policies. Future annual membership renewal invoices will be issued at the end of October, and will have net 60 days payment terms, which is more in line with today's financial practices of our member companies. Additionally agreed was a two-step increase of the past \$2400 annual membership fees in order to fund increasing SMIF initiatives. The first increase to \$2700 took effect for the 2016 year, and will increase to \$3000 beginning in 2017. Membership advantages include the right to use the PMBus logo in your company's marketing collateral.

### *Website Updates*

The [pmbus.org News](http://pmbus.org/News) page is kept up-to-date with the most recent information including real time postings of events, members' activities and other information. We need your help, and encourage you to send us your company's PMBus related product updates, press releases and other relevant information. We will help to 'put you in the news'! The membership logo display has also been revised to include ALL member company logos.

With the increase of compliant product offerings, SMIF has recently made updates to the Products page of our website. We have added new categories and subcategories to enrich the user experience. Now, in addition to products, members can display all of their support materials and tools, including videos, articles, presentations and other items related to PMBus-compliant products. The User Guide for making product entries and changes is being revised so that it will be---well, more useful and self-explanatory. You will be alerted once the new User Guide is available. Until then, feel free to contact us if you need any assistance.

We are also working with our website designer to improve the functionality of the Product page and other features of the website. As you may have noticed, at the present time the Featured Product and graphics displays are not working properly. Thank you for your patience while we resolve these issues, and of course, let us know if you find any other anomalies.

### *Promotional Activities*

The aspect of visibility regarding PMBus cannot be minimized. It is imperative to increase and maintain our presence in the industry, through use of the media, at trade shows and exhibitions, and within the membership and OEMs. To that end, we have recently undertaken a number of actions, one of which is this quarterly newsletter.

Consistent press coverage of PMBus is part of our media plan. The goal is to have



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PMBus in the news every 1-2 months. We want to capitalize on the contributions being made by our members and supporters. To that end, SMIF issued press releases in January and February to highlight PMBus activities at the upcoming APEC 2016 convention in Long Beach. The first was for Bob White's (Embedded Power Labs) [Seminar](#) which reviews 2-wire SMBus communications and AVSBus. The second was for Michael Jones (Linear Tech) and Travis Summerlin's (TI) [Industry Session](#) covering Linux support and ZONE protocols, respectively.

In addition to press releases of related activities, SMIF will also produce technical articles for media publication. These are based on ideas, presentations, application notes and other materials generated by our members. Our first article, *An Introduction to AVSBus*, has been generated from a presentation by Bob White at last November's IBM Power Symposium. It is being finalized now and should be published in the near future. We strongly encourage everyone's input into this process. So please send any suggestions that you may have.

### Upcoming Events

March 20-24 brings APEC 2016 in Long Beach, CA, the home of the Queen Mary II. Continuing with our themed promotional giveaway collectables, we will be distributing stress-release cruise ship squeezies branded with the AVSBus logo. PMBus has also signed on as a Silver Level Sponsor. We are now prominently listed on the APEC home page and our logo will be displayed during the plenary session along



**Don't miss the PMBus™ boat!**

with the other sponsors. We have also worked with the APEC exhibition organizer to distribute several thousand PMBus-branded folio notebooks throughout the event. We plan to have a booth next year at APEC 2017.

**OEM Meeting.** The SMIF board would like to convene an "invitation-only" meeting between our members and system OEMs. The last time such an event occurred was in Dallas back at the inception of PMBus. We envision a 2-3 day meeting between our members and approximately 100 OEM representatives to exchange thoughts and ideas to help drive (or cruise...) PMBus adoption and usefulness to the next level. Given the massive scope and ambition of the event, careful planning is required. So the timing of the meeting could be no earlier than the end of the year or early in 2017. The board is asking you to have discussions within your company and amongst your fellow members, and submit ideas, topics and other input regarding goals and organization for the meeting. With your help we would like to finalize the agenda and timing before our next quarterly newsletter at the end of May.



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### FAQ

The newsletter's *Frequently Asked Question* section includes a response given to an email inquiry submitted by an OEM.

**Question:** *Can we use the SMBus QUICK commands in a PMBus system?*

**Answer:** *In principle yes, but with one major caution. The SMBus QUICK commands are intended for very simple devices. For a QUICK command, the master sends the 7-bit address followed by the R/W# bit. The slave acknowledges (ACKs) and the master ends the command with a STOP condition. The value of the R/W# bit is the command and is generally used to set the device to one of two states. For example, R/W# = 0 might mean "Turn On" while R/W# = 1 might mean "Turn Off".*

*The caution comes about in more complicated systems. It is common in systems that use the PMBus for the system host or master to enumerate or discover devices on the bus by polling each address. The master sends the 7-bit address and the R/W# bit. The master then checks if a device acknowledges (ACKs) or does not acknowledge (NACK) and ends the transaction with a STOP condition. If a device ACKs, the master knows that there is a compliant slave converter device at that address.*

*The problem is that this discovery process is exactly the same as a SMBus QUICK command. A slave device would have no way of knowing the difference between a master that is simply discovering devices on the bus and being sent a QUICK command. So if a PMBus device supports SMBus QUICK commands, the system designer*

*must make sure that the system master never uses the simple polling technique above to discover devices on the bus.*

Have a question about the PMBus or SMBus specifications? The System Management Forum provides free support. Send your question to [techquestions@smiforum.org](mailto:techquestions@smiforum.org) and a PMBus or SMBus consultant will respond.

### Other Items

Please remember to use the TM symbol when referencing PMBus, AVSBus or using the logos in data sheets, press releases or other written material. It does not have to be done for every occurrence, but should be included in any title or blurb and with the first usage in the main text for articles. Since the specifications themselves are public and available for free to anyone, proper usage of the name and logo is important in order to retain our rights. Please encourage your company's marketing communications department to collaborate with SMIF whenever there are publications or questions.

### Contacts:

Membership inquires: [admin@smiforum.org](mailto:admin@smiforum.org)

Tech help: [techquestions@smiforum.org](mailto:techquestions@smiforum.org)

General: [questions@smiforum.org](mailto:questions@smiforum.org)

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