PMBus Quarterly Newsletter

SUMMER 2016

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Introduction

The PMBus Specification Working Group (WG) met in Denver on July 7 & 8. One of the major purposes of the session was to kick-start work on the Application Profile for DC/DC Converters. The profiles define the standard PMBus requirements and functionality which are recommended for a compliant product. Once completed in the coming months, it will complement the existing application profiles for AC/DC server power and hot-swap controllers. These documents and other technical support items can be download under the *Specifications* tab of the PMBus website.

If you are interested in joining the Working Group or have questions or inputs, please contact us by sending an email to techquestions@smiforum.org

SMIF is issuing a 'Call for Papers' to all of our members for APEC 2017. We are organizing an Industry Session focused on PMBus and encourage your participation. The requirement is a twenty-minute technical presentation around any PMBus related topic. If you are interested, just send the paper title and a brief description to us at info@pmbus.org. The presentation slots are limited—so contact us quickly to reserve your space.

Membership Update

In case you missed their press release, we would like to welcome FDK Corporation as a new member of the PMBus consortium. With headquarters in Tokyo, Japan, FDK is a global electronic component and battery manufacturer. Their PMBus-compliant product offerings include isolated DC-DC converters as well as non-isolated Point-of-Load modules. You can view the details on the Products page of the PMBus website by clicking FDK.

Our adopter's membership count is now up to 36, with several other companies in the process of serious consideration. We would like to refer other potentially interested parties to download and review the PMBus Organization Overview for a detailed description of the System Management Interface Forum and the many benefits. Or, if you have questions send an email to admin@smiforum.org to get an immediate response.

New Product Announcements

As an additional benefit to our members, beginning with this newsletter we will include any new PMBus-compliant products released by our members. In order to have your new products included, just send an email with the subject line "new product(s)" and the details to admin@smiforum.org. Then watch this space for updates.

FDK Corporation has released two new PMBus-compliant DC-DC converters. The

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FPFD12SR70100NA 100A digital Point-of-Load converter features a 5-12V input voltage range, programmable 0.7-2.0V output and is housed in a very small footprint, low profile SMT package. The KD Series 100W isolated 1/16th brick converter features a 36-60V input range with single outputs of 3.3V, 6V, 12V and 18V and a dynamically programmable output voltage trim range of -50% to +20%.

Website Updates

We continue to strive to improve the PMBus website to keep it relevant and useful. As mentioned in previous newsletters, our goal is to make the website a one-stop-shop for "all things PMBus". To this end we have recently created two new items under the *Resources* section.

The first new item is the *FAQ (Frequently Asked Questions)* page, which can be viewed by clicking here. The questions and answers are a compilation of those that SMIF's technical advisors and other members have addressed over the years. For ease of use the various Q&A's have been sorted and grouped into the following four categories:

- *General PMBus support*
- *PMBus technical operations*
- *SMBus related*
- *General/other.*

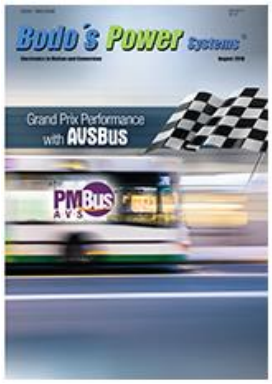
The second new resource is the *Tools* page and can be viewed by clicking here. It shows a variety of third-party universal tools that are available to systems OEMs for developing, testing and debugging their equipment designs that utilize PMBus-compliant power supplies and ICs. Included in the list are bus monitors, analyzers and drivers. Disclaimer: SMIF does not endorse, support or validate third-party support products, nor do we claim that it is a comprehensive list. Please send any suggested additions, or questions, regarding the Tools listings to techquestions@smiforum.org

Our members have been active in adding new entries to their dedicated Products page. At the end of August there were 203 compliant products and/or associated support items. We are now up to 20 member companies with products with products included in the *Products* section of the website.

Also, check out the "Featured Product" and graphics display function. For an example you can click on the product page for our newest member by clicking here on FDK. All members are encouraged to contact us if you would like to designate or add a Featured Product to your page. Please send your requests to admin@simforum.org.

Promotional Activities

PMBus was featured on the cover of August's publication of *Bodo's Power* magazine. Featured was a very informative three-page article "Introduction to the AVSBus" authored by Bob White of Embedded Power Labs. For those of you who may have missed it, you can



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download the pdf version from the News section of the website by clicking here.

Are You Feeling Lucky? SMIF is conducting a raffle giveaway of two Full Conference badges for next year's APEC 2017. The full registration passes, with a value of up to $1175 each, will be awarded to two lucky entrants. The Full Registration

allows you to attend all Technical Sessions, Seminars, the Social Event (and of course, the Exhibition Floor) and gives a discount for advanced purchase of the Conference Proceedings.

To sign up for a chance to win, just go to the home page of the PMBus website and register by answering a few easy questions regarding your PMBus activities. But you must hurry and enter, because the first drawing is only two weeks away in mid-September. The second drawing will follow in mid-November. You only have to enter once in order to be eligible for both drawings, and only one entry is allowed for each email address. The two winners will be contacted directly by SMIF.

Upcoming Events

APEC 2017. PMBus is a Silver Level Sponsor of next March 26-30 exhibition in Tampa, Florida. Be sure to visit us at Booth 1832 to view multiple system demonstrations of PMBus enabled products.

2017 PMBus Customer Day & Expo. While we are still a year away, planning activities are ramping up for next year's "invitation-only" two-day summer exposition in Dallas. Planned are PMBus-enabled system presentations, system and product demonstrations, reviews and 'how to' sessions. We also expect displays from a growing number of third-party suppliers of universal PMBus support tools.

Invitations are not yet in the mail, but we plan to invite both present and potential OEM system implementers from the communications, medical and industrial applications market segments. Our goal is to confirm and align future directions, expectations and requirements for PMBus. We still remain very much open to any suggestions or feedback that you may have.

FAQ

The newsletter's *Frequently Asked Question* section includes a selected question which has been received along with the detailed answer.

Question: *What is the PMBus CONTROL signal and how do I use it?*

Answer: *The CONTROL signal is a hardwired on/off signal. The signal name "control" was chosen because many power supply manufacturers were already using signal names like ENABLE or REMOTE ON/OFF.*

The CONTROL signal can be configured to be active high (CONTROL pulled high to start the converter) or active low (CONTROL pulled low to start the converter) by using the ON_OFF_CONFIG command.

One use of the CONTROL signal is as an emergency off signal. Under normal conditions, the converter

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would be turned on and off over the bus using the OPERATION command. In the case of a system fault requiring the system to be powered down immediately, the CONTROL signal could be set to the "Not Run" or "Off" value to cause all converters to turn off or start their power down sequence immediately.

Another use of the CONTROL signal is to synchronize power up (or power down) sequencing. First, startup delay time and output voltage rise time of all the converters in the system are configured using the TON_DELAY and TON_RISE commands. Then the converters are configured to start when the CONTROL signal is asserted (active high or low as configured with the ON_OFF_CONFIG command). Asserting the CONTROL signal provides a simultaneous "Start" signal to the converters.

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

Other Items

The PMBus logo is a registered trademark of SMIF. PMBus adopters who are SMIF members in good standing are allowed free, unlimited commercial use of the PMBus name and logo. 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.

Please remember to use the ™ symbol when referencing PMBus and AVSBus 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. The logo graphics for web postings and hi-res print can be downloaded from the resources section of the PMBus website.

Contacts:

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