

**FPKD-USBADAP01**

**USB-PMBus Adapter Manual**

1/16 Brick DC-DC Power module

KD Series (Full digital)

**USB-PMBus™ Communication**

**Interface adaptor**

**User's manual**

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**FPKD-USBADAP01**

**USB-PMBus Adapter Manual**

1 Product overview ..... 2

2 Specification of USB-PMBus communication interface adaptor..... 2

3 Packing contents..... 2

4 E.g. connection..... 2

5 Description of connector connection ..... 3

    5.1 USB connector..... 3

    5.2 PMBus connection cable..... 3

6 LED lamp ..... 3

    6.1 POWER lamp ..... 3

    6.2 Access lamp ..... 3

7 Handling method ..... 4

    7.1 Install of the software driver etc. .... 4

    7.2 Connection..... 4

    7.3 Digital brick power module evaluation program (GUI)..... 5

8 Exception clause ..... 5

# FPKD-USBADAP01

# USB-PMBus Adapter Manual

## 1 Product overview

This product is a USB to PMBus communication interface transformation adaptor, which can be used to control digital brick power module from a PC.

## 2 Specifications of USB-PMBus communication interface adaptor

**Table 1 List of characteristic**

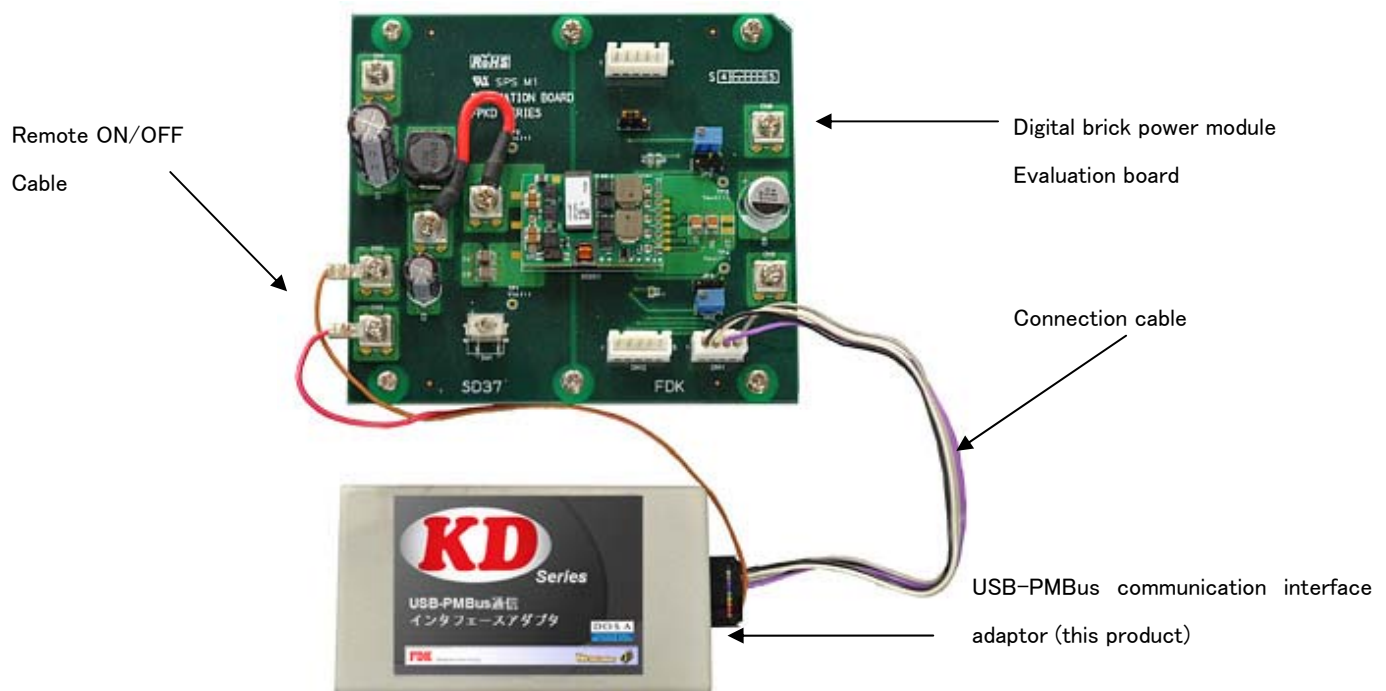
Power	USB bus powered
Microcomputer	PIC18F24K50T-I/SS(Microchip)
Pull up voltage of PMBus	3.3V typ (supplied from build-in adaptor's LDO)
Interface	USB (for PC connection)/PMBus (for digital brick power module connection)

## 3 Packing contents

- ① Main USB-PMBus communication interface adaptor
- ② Cable which connect USB-PMBus communication interface adaptor and Evaluation board

※USB cable is not attached in this product.

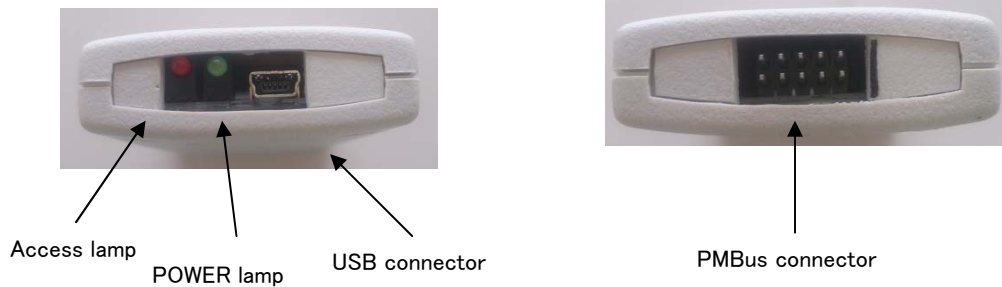
## 4 E.g. connection



**Figure 1 connection image**

# FPKD-USBADAP01

# USB-PMBus Adapter Manual



**Figure 2 Connector**

## 5 Description of connector

### 5.1 USB connector

Connector which connect to the USB port of PC. Connector is USB mini B receptacle. Please connect the USB cable to mini B plug cable.

### 5.2 PMBus connection cable

Connector is for the serial communication between a digital brick power module evaluation board and the PMBus. Please use the supplied cable with correct connector orientation as shown in the Figure 1.

No.	Signal name	Function
1※1	PGND	Power ground(connect to the GND of input power of digital brick power module)
2※1	PSONOFF	Remote ON/OFF(connect to the ON_OFF pin of digital brick power module)
7	GND	Signal ground
8※2	SMBALERT	SMBus alert
9	SCL	PMBus clock signal output pin
10	SDA	PMBus data signal inout pin

※1 no need to be connected if not using this adaptor to control Remote ON/OFF of digital brick power module

※2 Depends on the connected digital brick power module

## 6 LED lamp

### 6.1 POWER lamp

Connect to PC via USB cable, POWER lamp (Green) will light up since power on to this adaptor.

### 6.2 Access lamp

Access lamp (red) will blink during communication is good with a PC. Connection error or communication error might occur whenever you try to communicate during the lamp is continuously OFF or ON.

**FPKD-USBADAP01****USB-PMBus Adapter Manual**

## 7 Handling method

## 7.1 Installation of the software driver etc.

- It is necessary to install the USB driver before using this adaptor.
- This driver is only tested for operation with 32/64 bits OS of Windows ~~XP~~/Vista/7. So please used a PC with the supported OS. ~~Please note that 64bit version is not supported.~~
- Installed of Microsoft .NET Framework4.0 or above-mentioned version is necessary too. (Microsoft Web site <http://www.microsoft.com/ja-jp/net/netfx4/download.aspx> )

## 7.2 Connection

- ① Please connect the adaptor to a PC by using a USB cable.  
※USB cable is not attached in this product
- ② As shown in the Figure1, please connect the PMBus interface connector of the adaptor with the PMBus interface connector 4pins on the evaluation board of digital brick power module by the attached cable.
- ③ As shown in the Figure1, please connect the Remote ON/OFF control connection from the same PMBus interface connector of the adaptor with the CN2 (INPUT-) and CN3 (ON/OFF) on the evaluation board of digital brick power module

※No need to be connected if not using this adaptor to control Remote ON/OFF of the digital brick power module

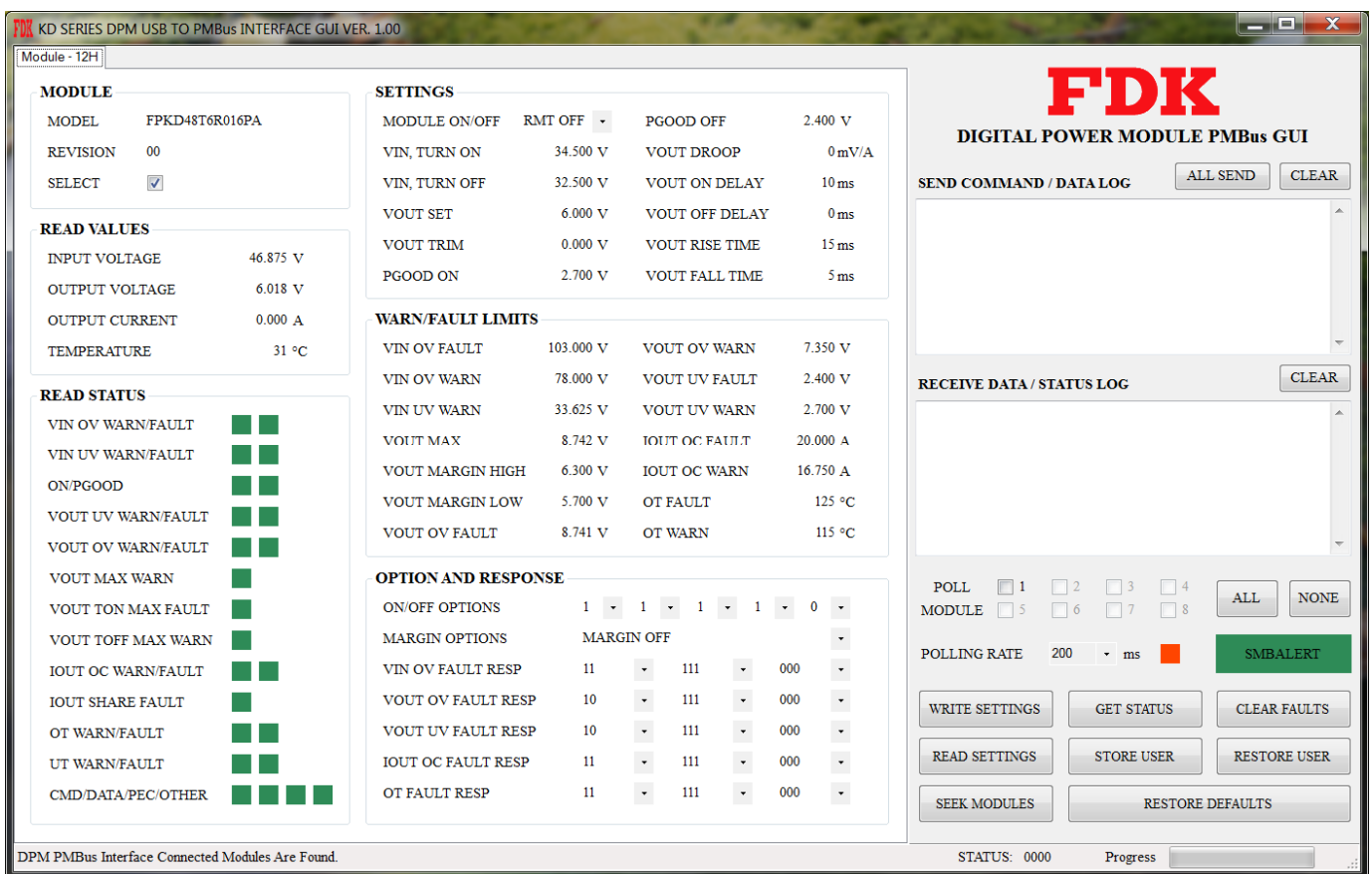
# FPKD-USBADAP01

# USB-PMBus Adapter Manual

## 7.3 Digital brick power module evaluation program (GUI)

- Program (GUI) is provided for the PC, which can be used to control the digital brick power module.
- This driver is only tested for operation with 32/64 bits OS of Windows ~~XP~~/Vista/7. So please used a PC with the supported OS.
- An installation file for installing this software is provided.  
(File is different for 32bit version and a 64bit version. How to obtain please contact the sales representative)

View of Digital brick power module evaluation program (GUI)



## 8 Exception clause

The adaptor, software driver and software tools are developed only to evaluated digital brick power module. The software tools may periodical be updated and in some situation it may not be the latest version. FDK does not guarantee the accuracy and safety of any information and also FDK does not take any responsibility for any damages resulting from the use of this product and software tools.