Intel Enpirion EM2COMIF User Guide

1 Introduction to EM2COMIF

The Intel Enpirion dongle (EM2CONIF) is to support interaction between the Internal Enpirion Digital Power Configurator and supported Digital Modules. The dongle interfaces between a USB port on a host computer to an Intel Enpirion Digital Power Module mounted on a printed circuit board. The dongle communicates from the host computer to a standard 10-pin header connected to the Digital module. You can use the dongle to iteratively read-back or download configuration data to a module during prototyping or debug though the GUI.

1.1 Supported Devices and Host Systems

You can use the EM2COMIF with supported Intel® ENPIRION Digital Power Modules and host systems using Intel® ENPIRION Digital Power Configurator

Table 2.   Supported Devices and Host Systems

Digital Modules	Host operating System
EM21xx series EM22xx series	Windows

2 Specifications for EM2COMIF

The EM2COMIF dongle has a universal USB connector that plugs into the PC USB port, and a female connector that plugs into a male header on the device board. This section shows the hardware components, their dimensions, and lists the pins, operating conditions and power requirements.

2.1 Block Diagram and Dimension

Figure 2.   Dimension of the EM2COMIF

Applies to Rev. B

All Dimensions are in millimeters.
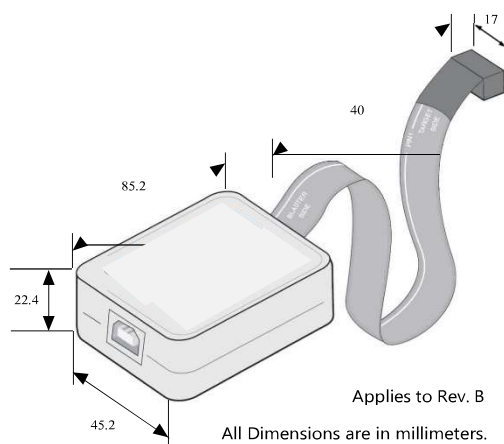
2.2 Cable-to-Board Connection

The EM2COMIF has a 10-pin female connector, which plugs into a 10-pin male header on the device board. The male header consists of two rows of five pins, which are connected to the programming or configuration pins of the device. The PIN 1 side of the header is indicated through a color s stripe on the ribbon cable.

A 10-pin surface mount header can be used for the download cable. However, Intel® recommends using a through-hole connector in the event of the repeated insertions and removals.

Figure 3. Connectors and Dimensions
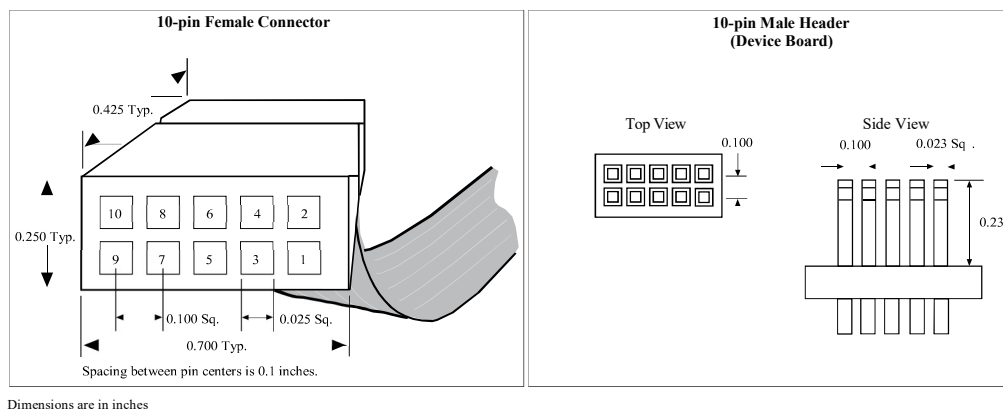
2.3 Pin Description

The following table lists the pins of the EM2COMIF female plug and describes their functions.

Table 3. Signal Names of the EM2COMIF Female Plug

Pin	Signal Name	Description
1	GND	Signal ground.
2	SCL	PMBus Clock signal.
3	GND	Signal ground.
4	SDA	PMBus Data signal.
5	GND	Signal ground.
6	SALERT	Supports interaction with GUI on SALERT pin for Evaluation Boards. (Not required for PMBus communications)
7	POK	Supports interaction with GUI on POK pin for Evaluation Boards. (Not required for PMBus communications)
8	Control	Supports interaction with GUI on Control pin for Evaluation Boards. (Not required for PMBus communications)
9	Not used	Not used - Do not connect to anything
10	Not used	Not used - Do not connect to anything

The EM2CONIF is powered through the USB 5V supply. The SCL, SDA & SALERT pins are pulled up internally to a 3.3V supply via 4.7kΩ resistors. A pull-down resistor of 4.7kΩ is connected internally between the POK and ground. A pull-down resistor of 4.7kΩ is also connected internally between the Control pin and ground.

For PMBus communications only three pins are required to be connected, SCL, SDA and a ground pin.

3 Using the EM2COMIF

To start using the EM2COMIF, you must install the Intel Enpirion Digital Power Configurator on your system.

To program or configure a module device, connect the host system to the device board using the EM2COMIF and the GUI should then connect automatically. Please refer to the INTEL Enpirion Digital Power Configurator for further information.

For PMBus communications only three pins are required to be connected, SCL, SDA and a ground pin.

4 Regulatory Compliance

FCC Class A User Information

The Class A Product: Intel® Enpirion dongle (EM2CONIF) comply with Part 15 of the FCC Rules. Operation is subject to the following two conditions.

1. This device many not cause harmful interference.

2. This device must accept the interference received, including interference that cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CAUTION: If the device is changed or modified without permission from Intel, the user may void his or her authority to operate the equipment.

VCCI Class A Statement

この装置は、クラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。 VCCI－A

BSMI Class A Statement

警告使用者:
此為甲類資訊技術設備，於居住環境中使用時，
可能會造成射頻擾動，在此種情況下，使用者會
被要求採取某些適當的對策。

KCC Notice Class A (Republic of Korea Only)

A급 기기 (업무용 방송통신기기) **CLASS A device** (commercial broadcasting and communication equipment)	이 기기는 업무용(A급)으로 전자파적합등록을 한 기기이오니 판매자 또는 사용자는 이 점을 주의하시기 바라며, 가정외의 지역에서 사용하는 것을 목적으로 합니다. This device has been approved by EMC registration. Distributors or users pay attention to this point. This device is usually aimed to be used in other area except at home.

Manufacturer Declaration European Community

Manufacturer Declaration

Hereby, Intel Corporation declares that the equipment type Intel Enpirion dongle (EM2CONIF) is in compliance with Directives 2014/30/EU, 2014/35/EU and 2011/65/EU.

The full text of the EU declaration of conformity is available at the following internet address with a search for the model number:

https://www-ssl.intel.com/content/www/us/en/declaration-of-conformity/cprs-doc/homepage.html

End-of-Life / Product Recycling

Product recycling and end-of-life take-back systems and requirements vary by country.

Contact the retailer or distributor of this product for information about product recycling and/or take-back.

Ecology Markings

5 Revision History for EM2CONIF User Guide

Date	Version	Changes
May 2018	1.0	1. Initial Revision