

M-G32EV041

Data Sheet

USB Evaluation Cable Interface Board for EPSON IMU/ Accelerometer

■ OVERVIEW

This IMU/ Accelerometer USB evaluation Cable Interface board is used to control EPSON / IMU(M-G320/M-G354/M-G364/M-G365/M-G370/M-G220) and Accelerometer /M-A352 from PC by way of USB. The preliminary evaluation of our IMU/ Accelerometer is facilitated by using this IMU/ Accelerometer USB evaluation Cable Interface board.

■ BLOCK DIAGRAM

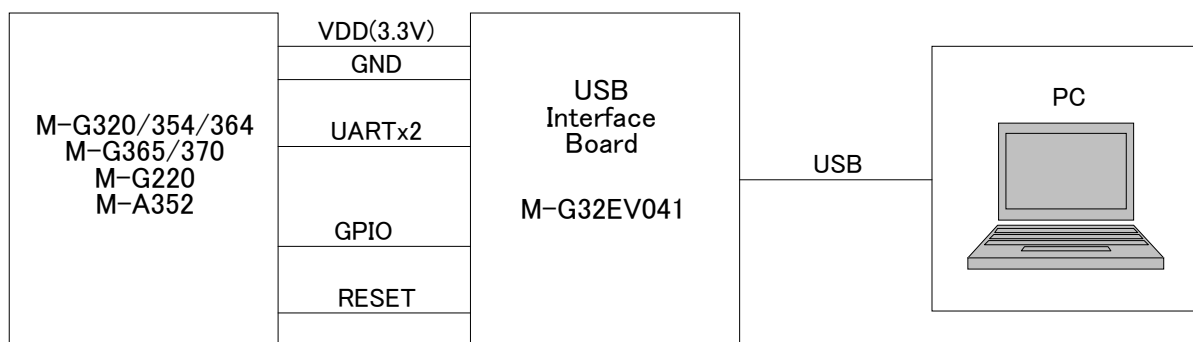


Fig1. Block Diagram

■ RECOMMENDED OPERATING CONDITION

Microsoft Windows7/ 8.1/ 10 (64bit) are supported when the USB interface of the USB Evaluation Cable is connected to the PC. Other hardware connection or software environments are not tested by Epson.

Table1. Recommended Operating Condition

Support OS	Windows 7/ 8.1/ 10 (64bit)
USB Specification	1.1 / 2.0
Operation Temperature	-20~+70°C

Distributed by:



OUTLINE DIMENSIONS AND PIN LAYOUT

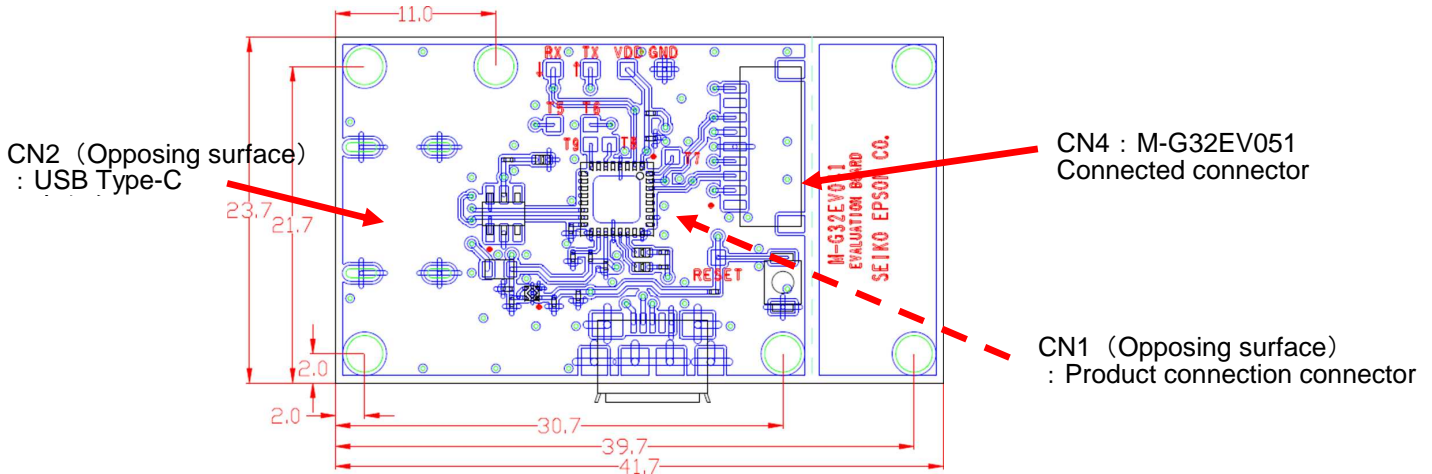


Fig2. Board Outline Dimensions (millimeters)

PIN FUNCTION

Table2. CN1 Pin Function Description

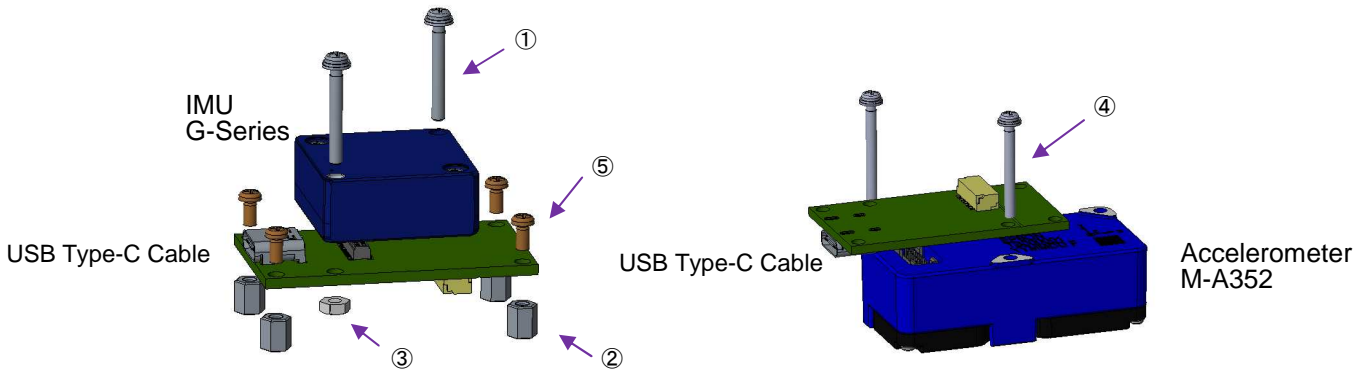
Pin No.	Mnemonic	Type ^{*1}	Description
1	SCLK	I	SPI Serial Clock
2	SDO	O	SPI Data Output
5	SDI	I	SPI Data Input
6	/CS	I	SPI Chip Select
7	SOUT	O	UART Data Output
9	SIN	I	UART Data Input
13	DRDY (GPIO1)	I/O	Data Ready (General Purpose I/O1)
14	GPIO2 (EXT)	I/O	General Purpose I/O2 (External Trigger Input or External Counter Reset Input)
16	/RST	I	Reset
10,11,12	VCC	S	Power Supply 3.3V
3,4,8,15	GND	S	Ground
17,18,19,20	NC		

*) Please refer to the product-specific documentation about details of each terminal.

Table3. CN4 Pin Function Description

Pin No.	Mnemonic	Type ^{*1}	Description
1	NC		
2	DRDY (GPIO1)	I/O	Data Ready (General Purpose I/O1)
3	SIN	I	UART Data Input
4	SOUT	O	UART Data Output
5	GND	S	Ground
6	VCC	S	Power Supply 3.3V
7	GPIO2 (EXT)	I/O	General Purpose I/O2 (External Trigger Input or External Counter Reset Input)
8	NC		
9	/RST	I	Reset

■ INSTALLATION INSTRUCTION



(1) IMU-G-Series – USB evaluation board connection (2) Accelerometer – USB evaluation board connection

Fig3. IMU Installation

■ BUNDLED PARTS

Table4. Bundled Parts List

Product Number	Product Name	Specifications	Quantity
①	Sems Screw for IMU	M2 L=8mm	2
②	Nut	Hex Nut M2	2
③	Sems Screw for Accelerometer	M2 L=25mm	3
④	Spacer	M2 L=5mm	4
⑤	Screw	M2 L=4	4

■ SOFTWARE REQUIREMENT

FTDI Driver

If the driver software (USB Serial Converter, USB Serial Port (COMx)) is requested when the USB Evaluation Cable is connected, install the driver using either of the following two methods.

- Update the driver via Windows Device Manager. (Automatic Update over the Internet is recommended.)
- Access the FTDI website (<http://www.ftdichip.com/Drivers/VCP.htm>) and download the appropriate driver for the OS.

■ IMU LOGGER SOFTWARE

The IMU logger software is provided for use with the USB Evaluation Cable and USB Evaluation Cable Interface Boards to allow easy evaluation of the Epson IMUs. For information about the IMU logger software, contact our representatives.

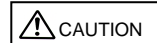
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Software & Manuals Download Website:

http://global.epson.com/products_and_drivers/sensing_system/technical_info/evaluation_tools/

■ IMPORTANT NOTES OF USE



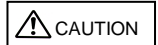
- Please read the caution sheet that is bundled before use.
- This "USB Evaluation Cable Interface Board" communicates with IMU/ Accelerometer through the USB Cable(Type-C). Please refer to the list in the 'Supported Devices' section to determine the supported IMU/ Accelerometer model.
- Please ensure that the IMU/ Accelerometer & USB Evaluation Cable Interface Board is properly connected before inserting or removing the USB cable.
- Do not insert or remove the USB cable immediately after connecting.
- The IMU/ Accelerometer & USB Evaluation Cable Interface Board can be easily moved by the USB cable resulting in possible damage by the impact. Please take precaution to prevent impact by restraining the IMU/ Accelerometer & USB Evaluation Cable Interface Board.
- When removing the IMU/ Accelerometer from USB Evaluation Cable Interface Board, do not remove the IMU/ Accelerometer casing assembly bonded-screws. Removing the IMU/ Accelerometer casing assembly bonded-screws will void the product warranty.

■ PRODUCT NUMBER AND ORDER INFORMATION

Please order using the following number.

Order Number	Product Number	Comment
E92E609041	M-G32EV041	USB Evaluation Cable Interface Board

Evaluation Board/Kit and Development Tool Important Notice



1. This evaluation board/kit or development tool is designed for engineering evaluation, demonstration, or development purposes only. Do not use it for any other purposes. The conformance test for this product in accordance with European EMC regulations and United States FCC regulations has not been conducted.
2. This evaluation board/kit or development tool is intended for use by electronics engineers and is not a consumer product. Malfunction by the electrical noise may result from usage depending on your environment. The user should ensure it is used in a safe and proper manner.
3. Seiko Epson does not assume any responsibility or liability of any kind from damage and/or fire caused by the use of this evaluation board/kit or development tool. The user should cease using this evaluation board/kit or development tool if any abnormal issue occurs even during proper and safe usage.
4. When disposing of this evaluation board/kit or development tool, discard in accordance with domestic law concerning disposal.
5. The parts used for this evaluation board/kit or development tool may be changed without notice.
6. Do not allow heaters, human body or metal parts to contact the non-insulated parts of this evaluation board/kit or development tool.
7. Do not allow the human body or metal parts to contact any openings of this evaluation board/kit or development tool.
8. Do not allow excessive stress on mounted components, board wiring, and electric wire of this evaluation board/kit or development tool.
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