M-G32EV031

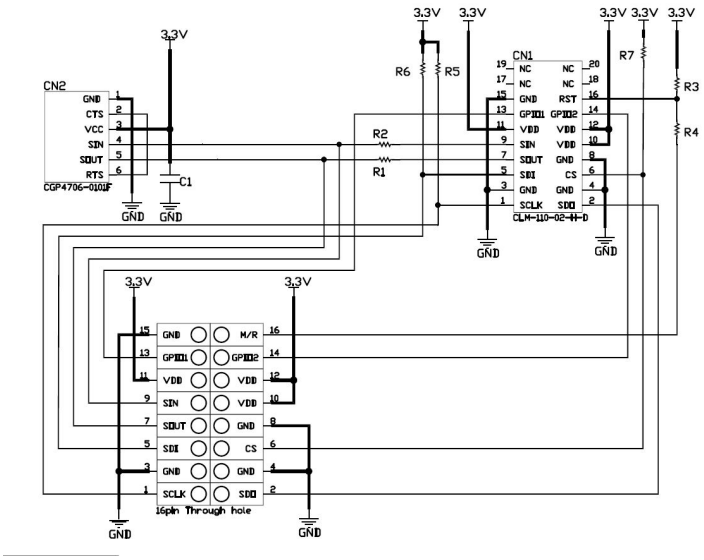
EPSON

Data Sheet
Breakout Board for EPSON IMU

■ OVERVIEW

Breakout Board is designed to convert the 1mm pitch connector of the Epson IMU to a 2.54mm pitch connector.

■CIRCUIT



This is the default board setting:

・R3（10k ohm）mounted

・R4 (0ohm) not mounted

To Control CN1 RST Signal by Through Hole M/R pin 16.

・Please remove R3（10k ohm）

・Please mount resistor R4 (0ohm)

＊chip size = 1.0 x 0.5 [mm]

Fig1.Breakout Board Circuit Diagram

■ OUTLINE DIMENSIONS AND PIN LAYOUT

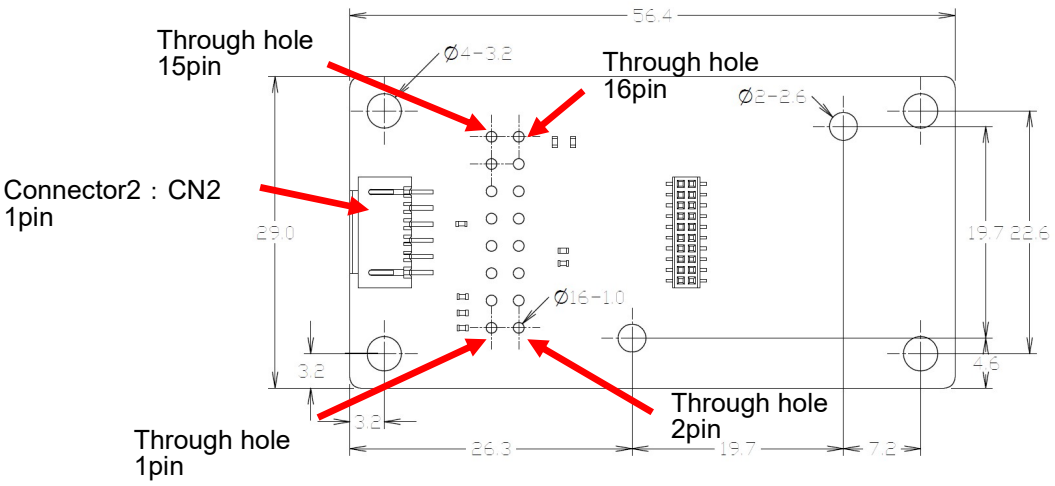


Fig2. Board Outline Dimensions (millimeters)

■ PIN FUNCTION

Table1. Though-hole Pinout Description

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

*1) Pin Type I: Input, O: Output, I/O: Input/Output, S: Supply
*2) Connect either SPI or UART but not both. Connecting both SPI and UART at the same time may result in malfunction of the device.
Regarding unused pins, please connect unused input pins to VCC through resistor.
*3) Regarding pin function selection, please refer to the **DRDY_ON** at register MSC_CTRL[0x02(W1)],bit[2]
*4) Regarding pin function selection, please refer to the **EXT_SEL** at register MSC_CTRL[0x02(W1)],bit[7:6]
*5) If the /RST pin is not used, keep the pin at High (VCC) voltage level.
Note) All input pins have weak pull up resistors inside the IMU.

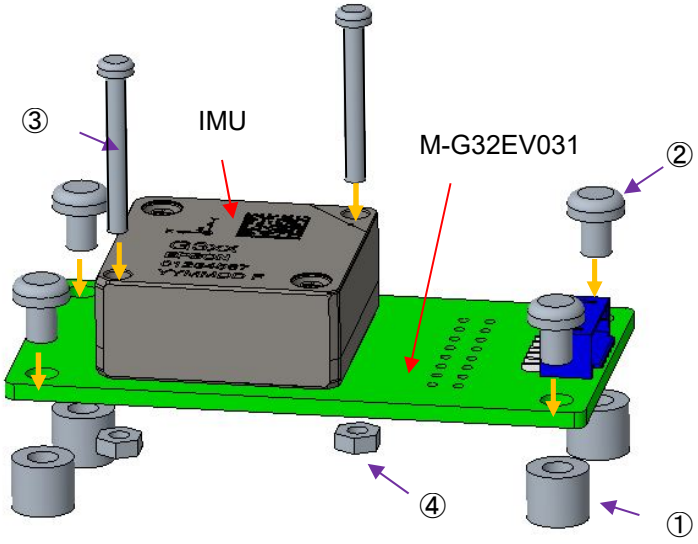
Table2. Pin Function Description (CN2)

Pin	Mnemonic	Type*1	Description
1	GND	S	Ground
2	CTS	I	RESERVED /DO NOT USE
3	VCC	S	Power Supply 3.3V

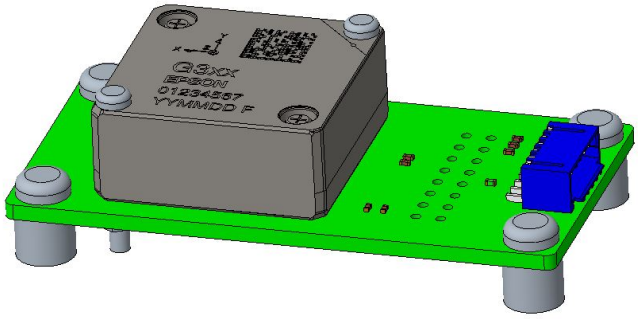
Pin	Mnemonic	Type*1	Description
4	SIN	I	UART Data Input
5	SOUT	O	UART Data Output
6	RTS	O	RESERVED /DO NOT USE

*1) Pin Type I :Input, O :Output, I/O :Input/Output, S :Supply

■ INSTALLATION INSTRUCTION



(1) Assembling Instruction



(2) Connecting Instruction

Fig3. IMU Installation

■ BUNDLED PARTS

Table3. Bundled Parts List

Product Number	Product Name	Specifications	Quantity
①	Spacer	M3-5 Stainless	4
②	Screw	M3-4 Stainless	4

Product Number	Product Name	Specifications	Quantity
③	Sems Screw	Sems M2-16 Stainless	2
④	Nut	Hex Nut M2 Stainless	2

■ IMPORTANT NOTES OF USE

⚠ CAUTION

- Please read the caution sheet that is bundled before use.
- When removing the IMU, do not remove the IMU casing assembly bonded-screws. Removing the IMU 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
X2H000021000100	M-G32EV031	Breakout Board

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https://global.epson.com/products_and_drivers/sensing_system/contact/

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