Chipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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USBDEVELKIT DEVELOPMENT KIT V3

- **USB interface**
- **Back auxiliary connector for external sensors**
- **RoHS-compatible & Pb-free**
- **Flash software upgradeable through USB**

- **Software compatible with windows 7 / XP**
- **Recording software**

DESCRIPTION

The USB demonstration kit provides easy to use hardware and software for evaluation of MEAS pressure sensor.
The software allows basic graphing and logging of the row and calibrated pressure and temperature as well as altitude data.
The software interface also shows the sensor calibration words and provides tunable averaging of the measured data.

FEATURE

- **Supply voltage from USB**
- **Graphing and data logging software**
- **Fast measurement rate up to ~25 samples/s**

- **Demonstrator for future products**
- **Sample board for each sensors**
- **0°C to +50°C operation temperature**

PACKAGE CONTENT

- **1 USB developer key**
- **Samples boards on request.**
- **1 Software driver and manual on Compact Disk CD**

USBDEVELKIT DEVELOPMENT KIT V3

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Conditions	Min	Max	Unit	Notes
Supply voltage	USBVDD	Ta = 25 ^{o}C	-0.3	6.0	V	
Storage temperature	T_S		-20	+85	^{o}C	1

NOTE

1)   Storage and operation in an environment of dry and non-corrosive gases.

RECOMMANDED OPERATION CONDITIONS

(Ta = 25°C, VDD = 3.0 V unless noted otherwise)

Parameter	Symbol	Conditions	Min.	Typ.	Max	Unit
Supply voltage	VDDUSB			5.0		V
Supply current, Active Idle	I_{Active} I_{Idle}	VDD = 5.0 V		13.5 4		mA mA
Update speed.		Actual 25 Hz performance may vary with time and computer	1		25	Hz
Operating temperature range	T		0	+25	+50	°C
Internal Self Test Key	P_error			+/-5		mBar

FUNCTION

GENERAL
The USB DEVEL module is meant for evaluation of new and future pressure sensor modules from MEAS Switzerland Sàrl.
The module and software will allow the user to see the raw and calibration data read from the sensor as well the calculated pressure and altitude derived from those data.

HUMIDITY, WATER PROTECTION
The USB DEMO module case does not provide special water protection.

LIGHT SENSITIVITY
The USB DEMO module should provide adequate light protection for most indoor and outdoor lightning situations.

ESD PRECAUTIONS
Some ESD suppressor diodes help protect against the risks due to electrostatic discharges on the USB port connectors up to 2kV direct discharge.

USBDEVELKIT DEVELOPMENT KIT V3

PIN CONFIGURATION

On the back of the USB module PCB an auxiliary connector with the following pin configuration can be found. It is normally used for in factory flash programming or to attach the sensor.
A MEC1-108-02-F-D-EM2 connector from SAMTEC (www.samtec.com) is soldered in place.
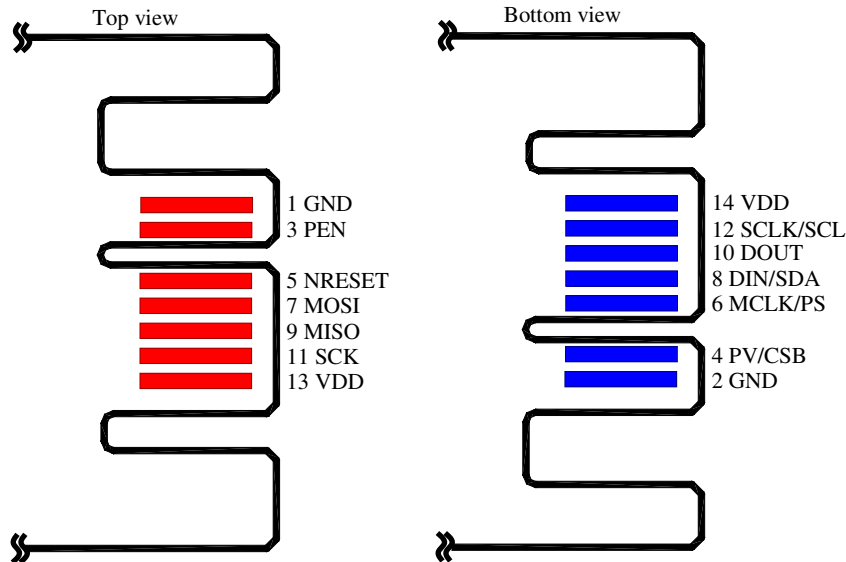Use the "PCB Internal connection" to access to these pins though the connector.

Fig. 1: Pin configuration of USB module back connector

Pin Name	Pin	Type	Function
User interface			
GND	2	G	Ground
PV/CSB	4	N	Negative programming voltage (1) / Chip Select
MCLK/PS	6	I	Master clock (32.768 kHz) / Protocol select
DIN/SDI/SDA	8	I	Serial data input for external sensor
SDO/-/DOUT	10	O	Serial data output for external sensor
SCLK/SCL	12	I	Serial data clock for external sensor
VDD	14	P	Positive supply voltage 3.3 volts from USB module
Manufacturer reserved interface			
GND	1	G	Ground
PEN	3	I	Programming enable (1)
NRESET	5	I	Reset input active low for microcontroller
MOSI	7	O/I	SPI output of microcontroller / external programming pin
MISO	9	I/O	SPI Input of microcontroller / external programming pin
SCK	11	O	SPI clock
VDD	13	P	Positive supply voltage 3.3 volts from USB module

NOTE

1)   Pin 3 (PV) and PIN 4 (PEN) are only used by the manufacturer for test and should not be connected.
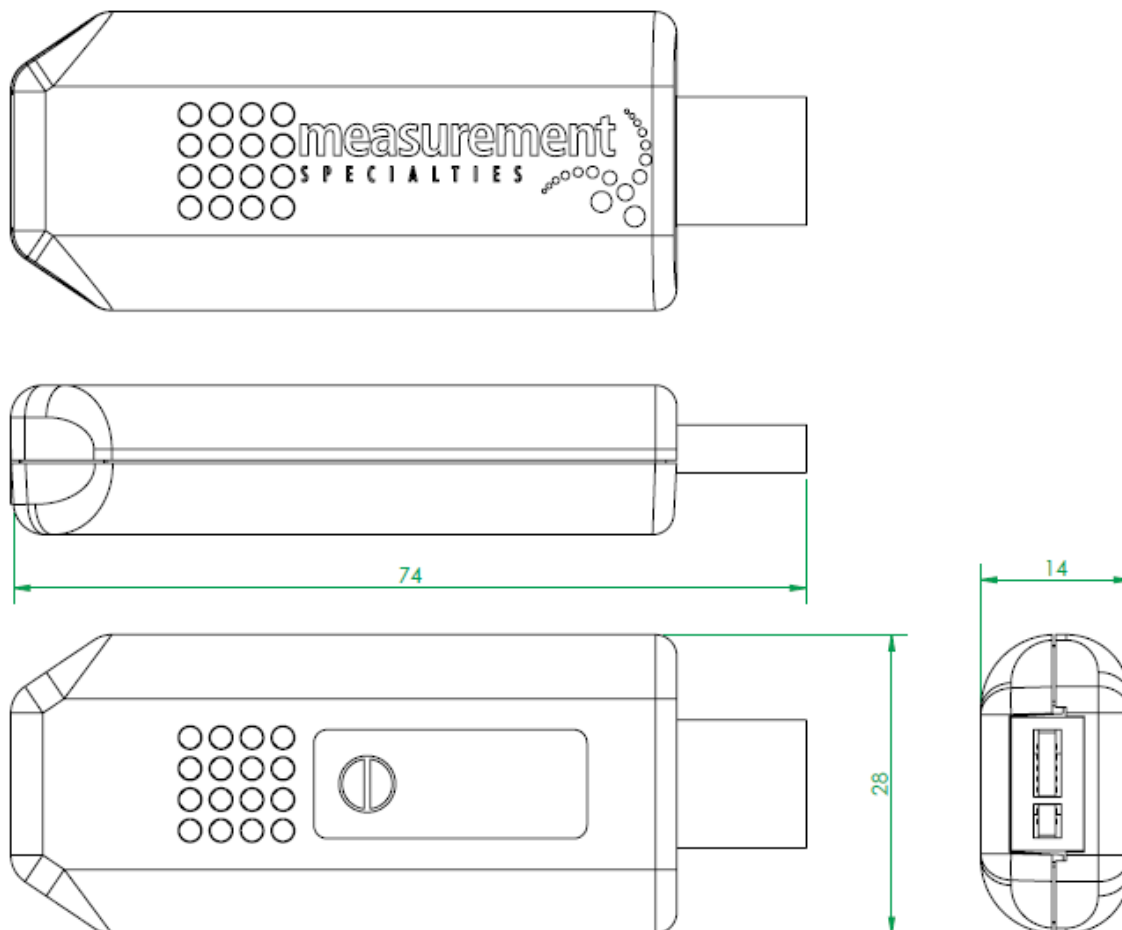
USBDEVELKIT DEVELOPMENT KIT V3

FUNCTIONAL BLOC DIAGRAM

Figure 1: Block diagram of USB DEVEL KIT

DEVICE PACKAGE OUTLINES

USBDEVELKIT DEVELOPMENT KIT V3

ORDERING INFORMATION

Product	Part Number / Art. Number
USB DEVELOPMENT KIT	PROTO-USBDEVELKIT
PCB Internal connection	PROTO-PCBDEVELBRD

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