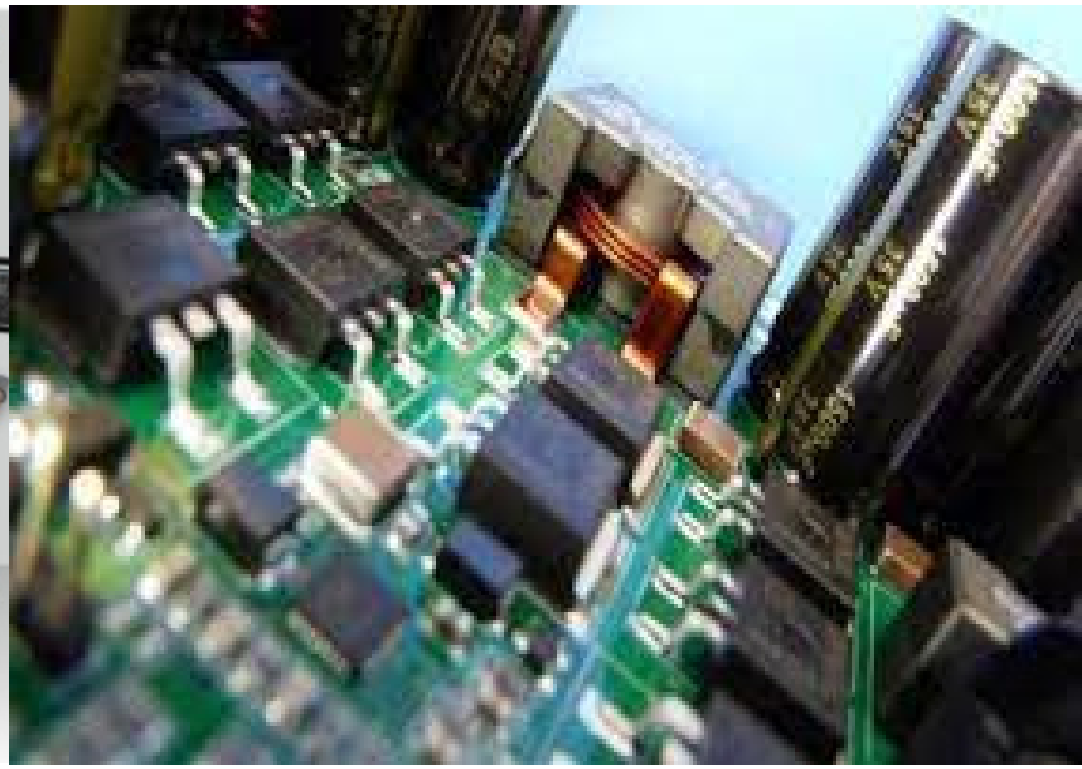
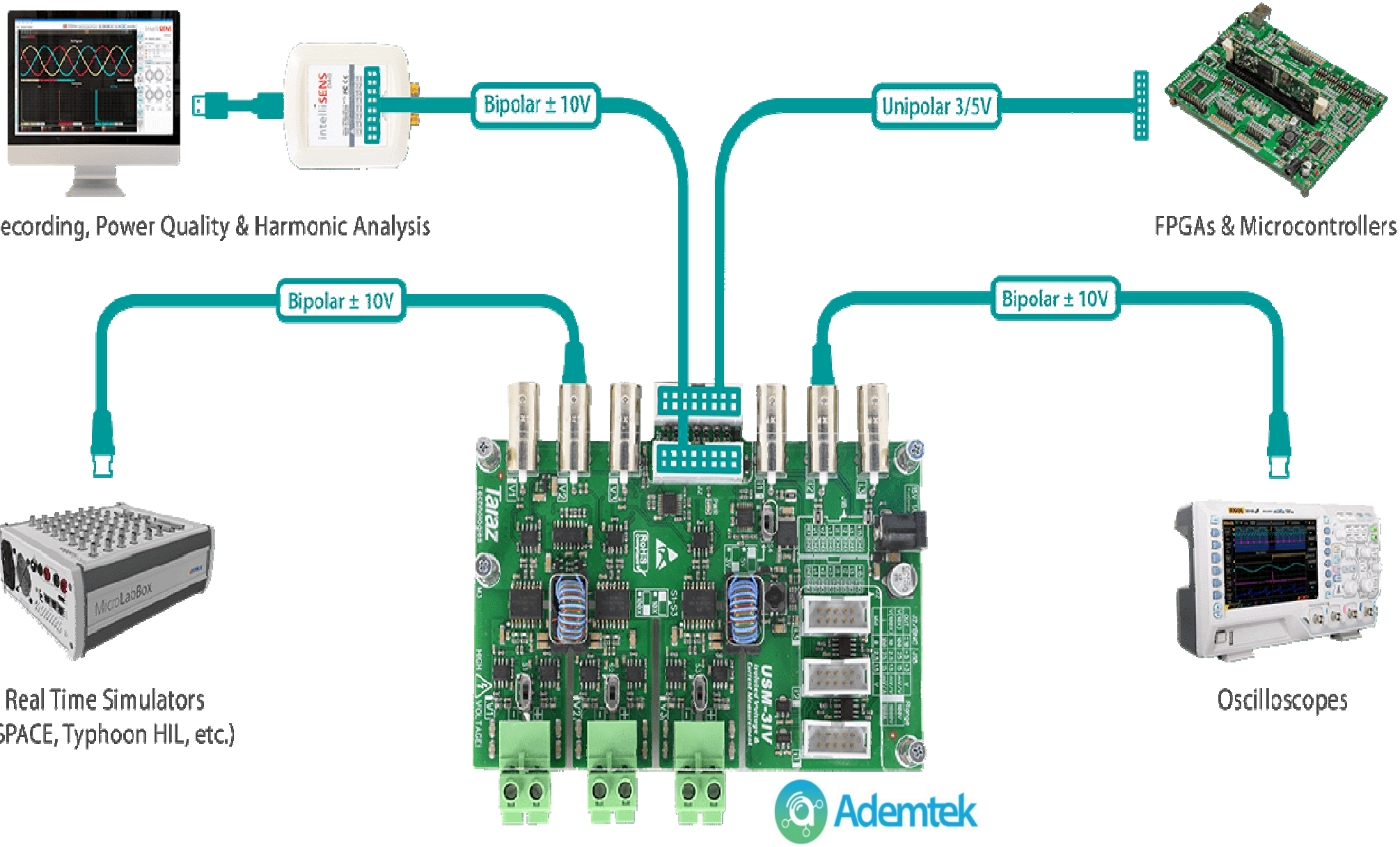
Power Electronics Measurement Modules



Ademtek provides custom power electronics hardware solutions to universities and research institutions, reducing their development time and R&D Cost. Our hardware is customized to interface directly with the controller of your choice giving you a ready to use solution directly out of the box. With professional wiring and build quality to reduce failure and safety hazards. If you are working on a research project or setting up a power electronics lab, our solutions will suit your needs perfectly.

Universal Connectivity Measurement Board (model:adum-3vi)



Isolated Voltage & Current Sensor Module

Universal Connectivity Measurement Board (Continued…)

Applications

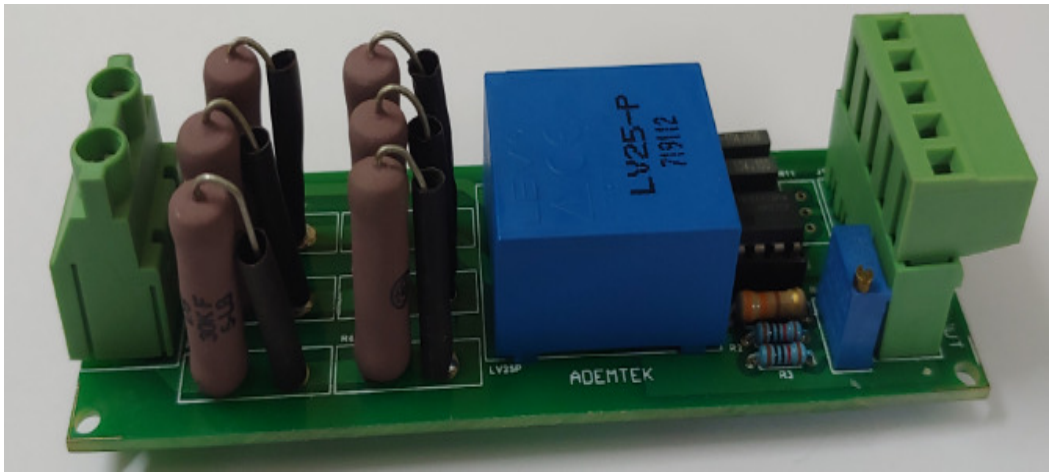
- Feedback of Power Electronics Inverters & Converters
- Feedback for Real-Time Simulators
- Motor Drives Monitoring
- 3 Phase Systems Monitoring

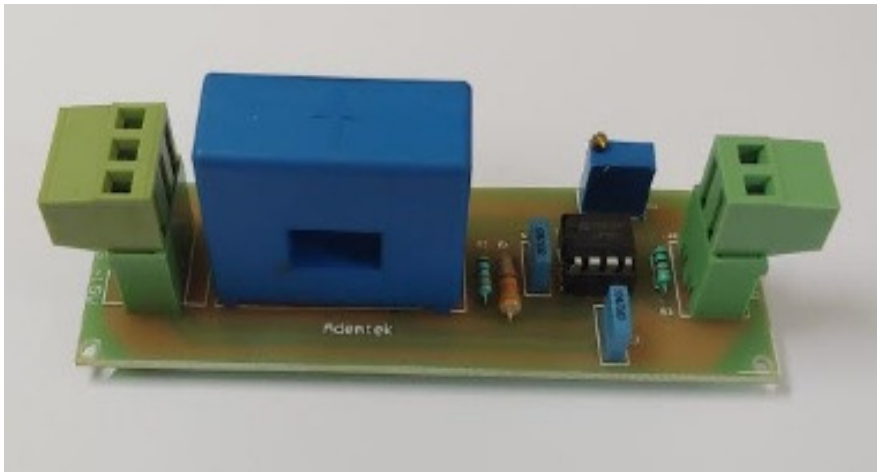
Features

- Selectable 10X (±100V) & 100X (±1000V) Voltage Ranges
- ±100A Current Sensing Range
- Bipolar ±10V BNC Output for Oscilloscope & dSPACE
- Selectable 3V/5V Unipolar Output for FPGA & DSP
- Isolated 100kHz Voltage & 200kHz Current Bandwidth

Model:adum-3vi is a fully isolated, universal connectivity and high bandwidth sensor module with 3 voltage and 3 current channels. It can measure up to ±1000V at 100kHz and ±100A at 200kHz with 10X/100X selectable range for voltage measurement. Moreover, this isolated voltage & current sensor module can be connected simultaneously to multiple equipment and controllers through Bipolar ±10V BNC and IDC Outputs for Oscilloscope & Real-Time Simulators, such as, dSPACE, Opal-RT & Typhoon HIL as well as Selectable 3V/5V Unipolar Output for FPGA & DSP controllers, thus, providing you with an all in one measurement system for monitoring and control of power electronics in a compact form factor

Hall Effect Voltage and Current transducer Module (HALVOLV25P, HALCULA25P)





Features:

Ademtek Signal conditioner using

- LEM Voltage transducer
- Model LV 20-XX, LV 25-XX,

Specification:

- Input: 0-500V/10-1500V AC/DC
- Output: 0-5V DC
- Power supply required: +15V, 0V, -15V

Features:

Ademtek Signal conditioner using

- LEM Current transducer
- Models LA25-P, LA100-P

Specification:

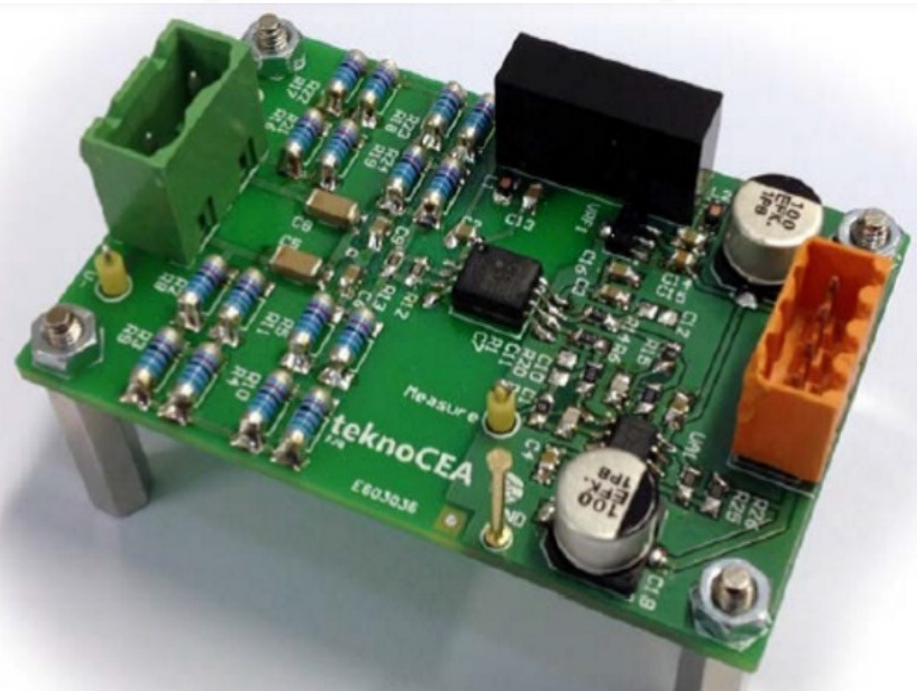
Input:0-25A,0-50A, 0-100A AC/DC

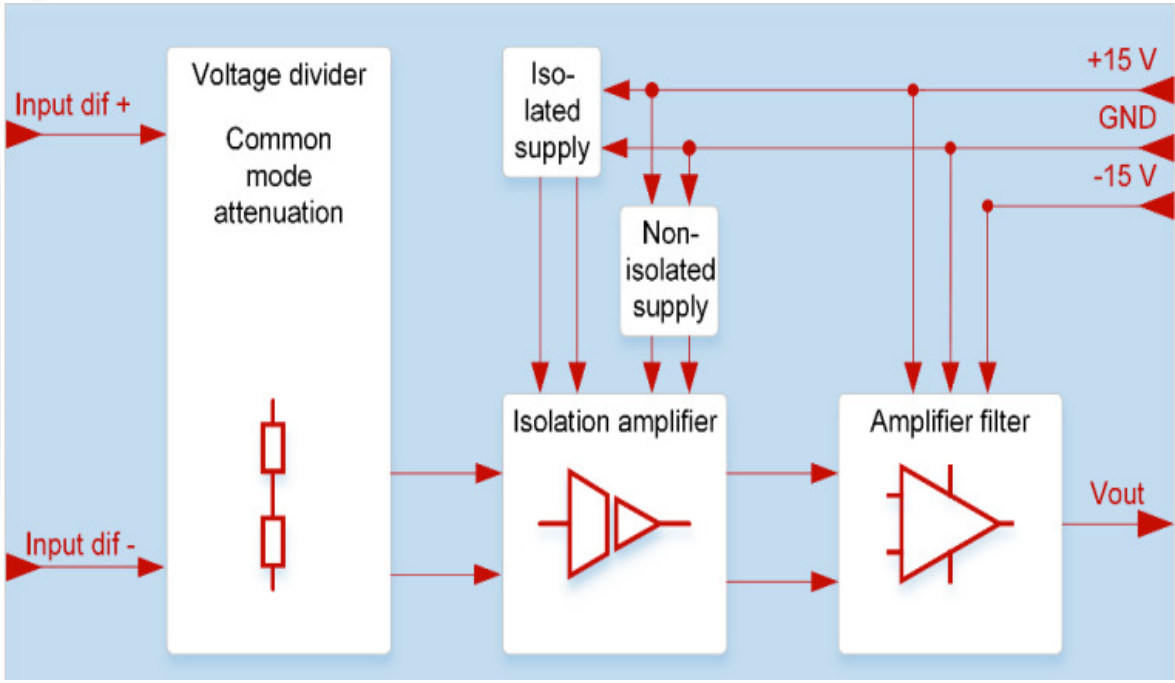
Output: 0-5V DC

Power supply required: +15V, 0V, -15V

Ademtek

Optical isolated bipolar voltage sensor (GISOV103V)



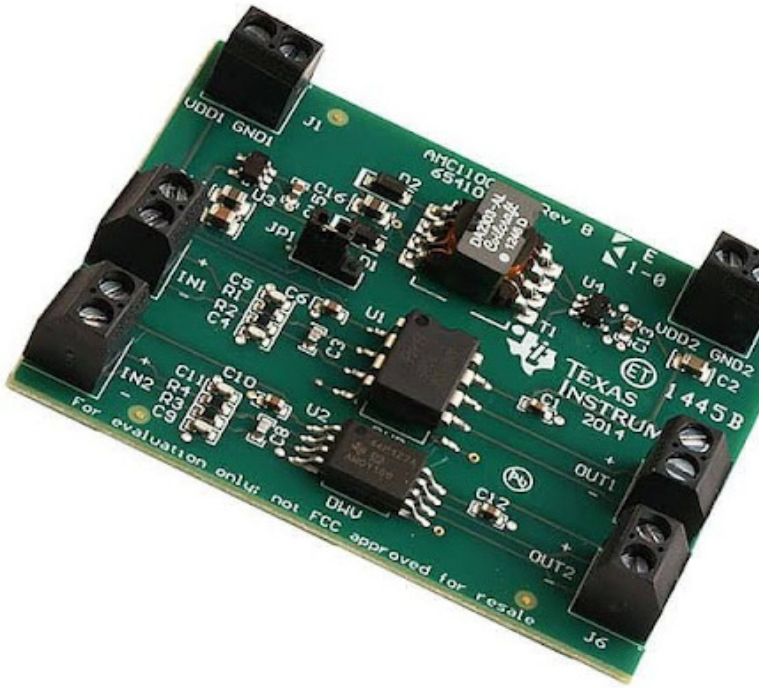


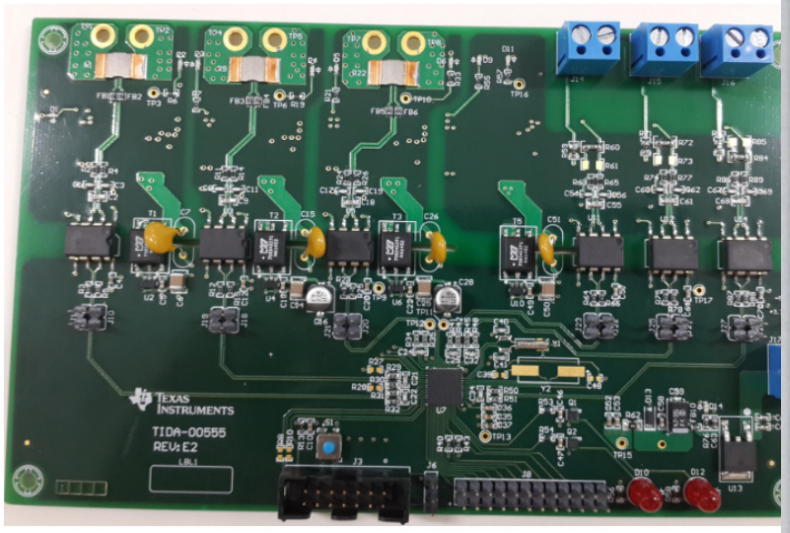
The Voltage sensor uses the optically isolated voltage amplifier ACPL-C79B from Avago Technologies. A voltage divider at the input stage is used to attenuate the voltage level to the input levels of the chip. At the output, a filtering and scaling circuit is implemented

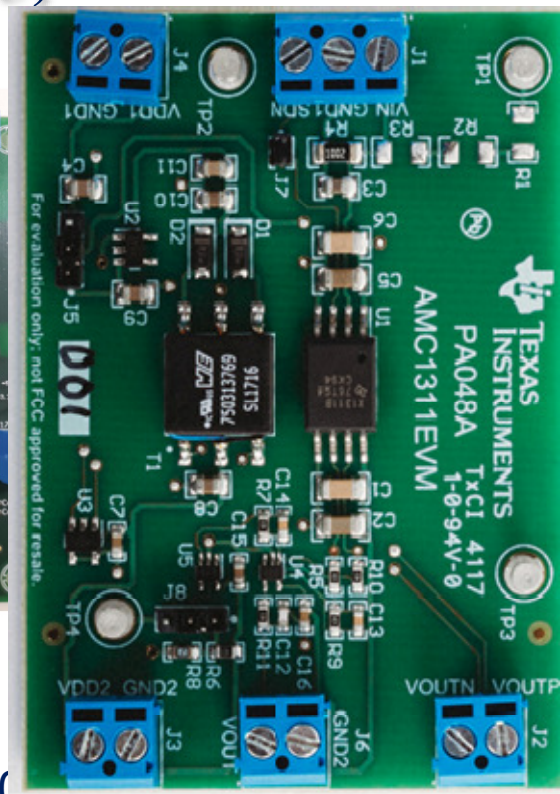
Features:

- 1000V Isolated Bipolar Voltage sensor.
- It has fully differential optical isolation barrier with excellent linearity and dynamic performance up to 200 kHz.
- It is used to sense AC (50-60 Hz) or DC voltage from switching converters
- Input and out put ranges are settable.
- By default ± 1000 V input voltage range and ± 10 V output voltage range with a 100 kHz bandwidth

Optical isolated bipolar voltage sensor (GISOVI103)





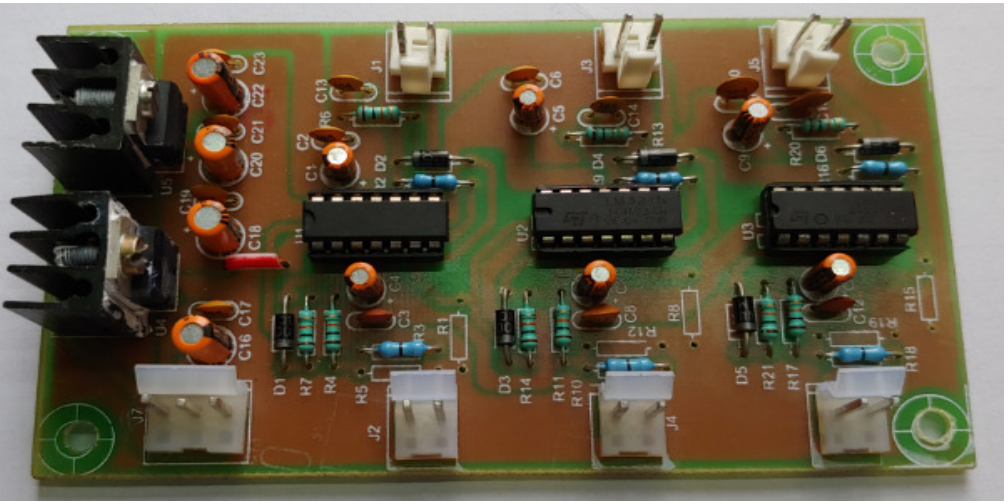


The Voltage sensor uses the optically isolated voltage amplifier AMC110[illegible] from Texas Instrumens. A voltage divider at the input stage is used to attenuate the voltage level to the input levels of the chip. At the output, a filtering and scaling circuit is implemented

Features:

- 1000V Isolated Bipolar Voltage sensor.
- It has fully differential optical isolation barrier with excellent linearity and dynamic performance up to 200 kHz.
- It is used to sense AC (50-60 Hz) or DC voltage from switching converters
- Input and out put ranges are settable.
- By default ± 1000 V input voltage range and ± 10 V output voltage range with a 100 kHz bandwidth

3Phase Voltage/Current Sensing Module(AC-DC Precision Rectifier) Sensor Power Supplies



ADPTV, ADCTC

Features:

Ademtek Signal conditioner using

- Current Transformer transducer
- Voltage Transformer transducer

Specification:

Input:0-25A, 0-50A AC/DC

Output: 0-5V DC

Power supply required: +15V, 0V, -15V

ADPS15D

Specification:

Input:0-230VAC

Output: +/-5V, 1A, +/-8V, 1A , +/-12V, 1A

+/-15V, 1A

Features:

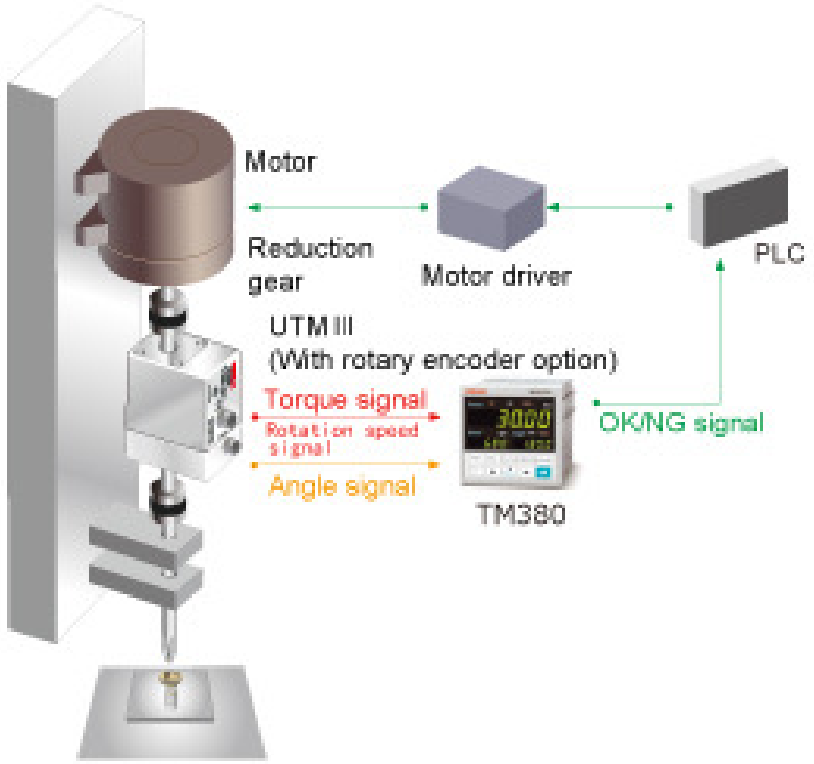
Step-down transformer to down the voltage

Heat sink to manage the thermal

LED indication for voltages

Ademtek

Torque monitor



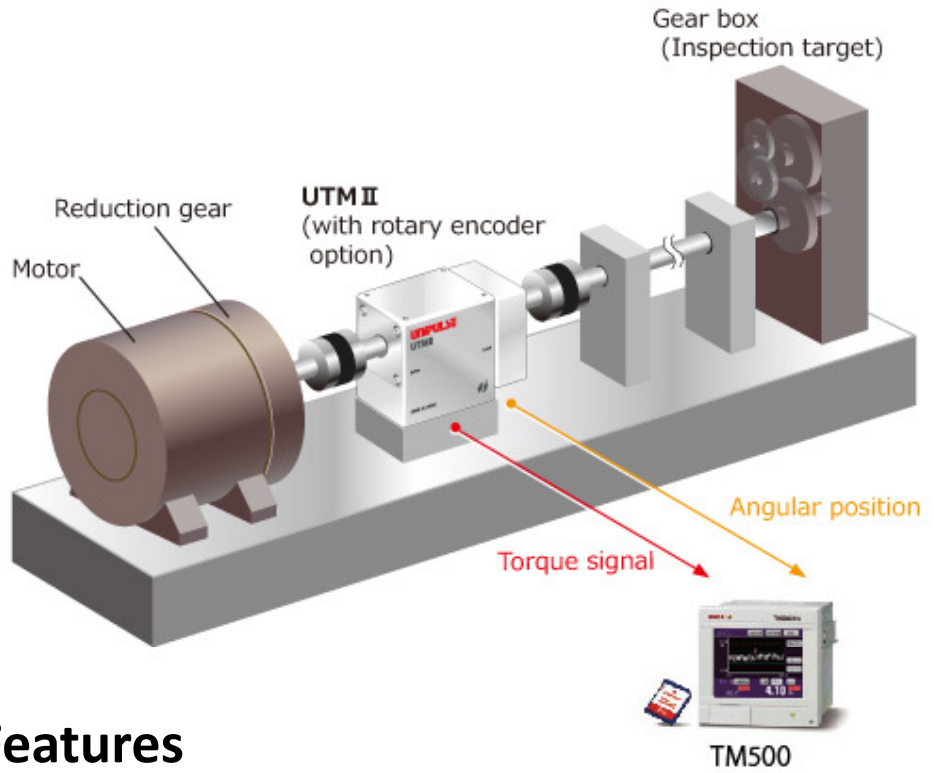
Features

■ Torque, rotation speed and power are displayed simultaneously.
■ Hold function (Sample, Peak, Valley, P-P, Average)
■ Upper/lower comparators function (ALM HI, HI, OK, LO, ALM LO)
■ Equipped with data memory function (Torque, rotation speed, power, the latest 30 items are recorded)
*1 RS-485 interface
*2 Power(W) = 2πxTorque(Nm)xRotation speed(rpm)/60

Specifications

Sensor input for torque
Pulse input for rotation speed
Display section
External I/O section

Torque monitor and Data logger



Features

■ Torque monitor

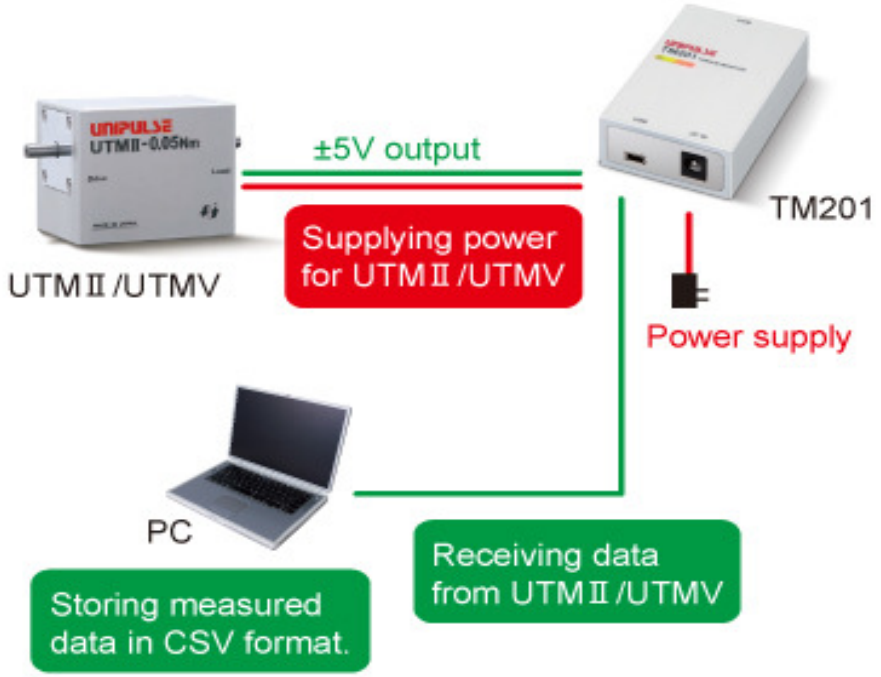
■ Waveform display of torque variation against angles

■ Suitable for low-speed rotation and direct-acting applications

■ Hold function

■ Upper/lower limit of displacement against initial torque can be compared

■ Save measurement data and setting values in an SD card



Features

▪Variations of torque, rpm, and power can be monitored and saved on PC.

▪Maximum, minimum, and average value can be displayed.

▪Measurement (numeric) data is automatically saved in CSV format

Application software for USB interface

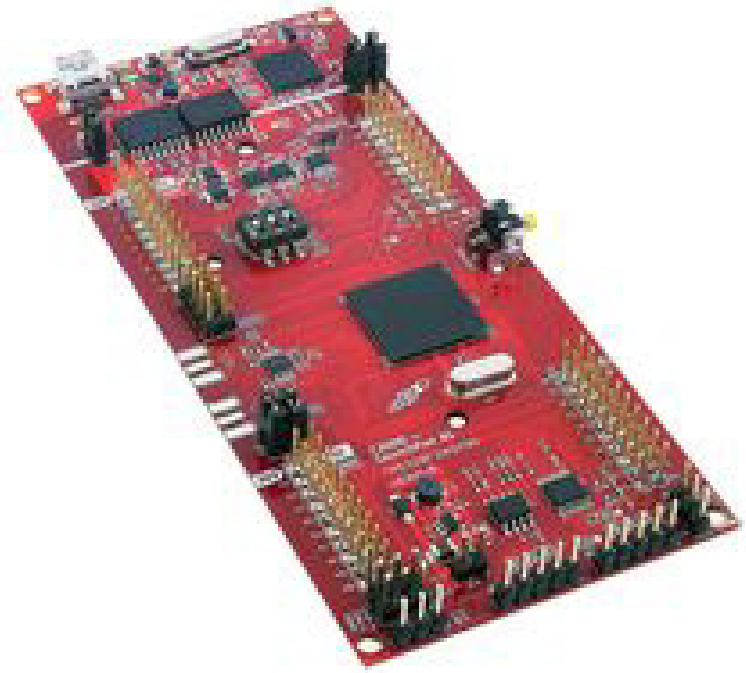
▪Display real-time data sent torque sensor via USB0

▪Torque, rotation speed, power and time in the graph can be specified by cross-lines.

TMS320F28379D Launchpad Development Kit

Hardware features

USB connected isolated XDS100v2 JTAG debug probe
for real-time debug and flash programming
4x 20-pin headers/connectors
Programmable buttons and LEDs
TMS320F28379D :200 MHz dual C28xCPUs and dual CLAs, 1 MB Flash, 16-bit or 12-bit ADCs, comparators, 12-bit DACs, delta-sigma sinc filters, HRPWMs, eCAPs, eQEPs, CANs and more
C2000 Delfino™ MCU position manager-ready TMS320F28379D MCU capable of interfacing to absolute encoders as well as resolvers and SINCOS transducers
Supports two BoosterPack™ Plug-in Modules
Two encoder interface connectors
Isolated CAN transceiver connector
Hardware files are in C2000Ware at boards\LaunchPads\LAUNCHXL_F28379D

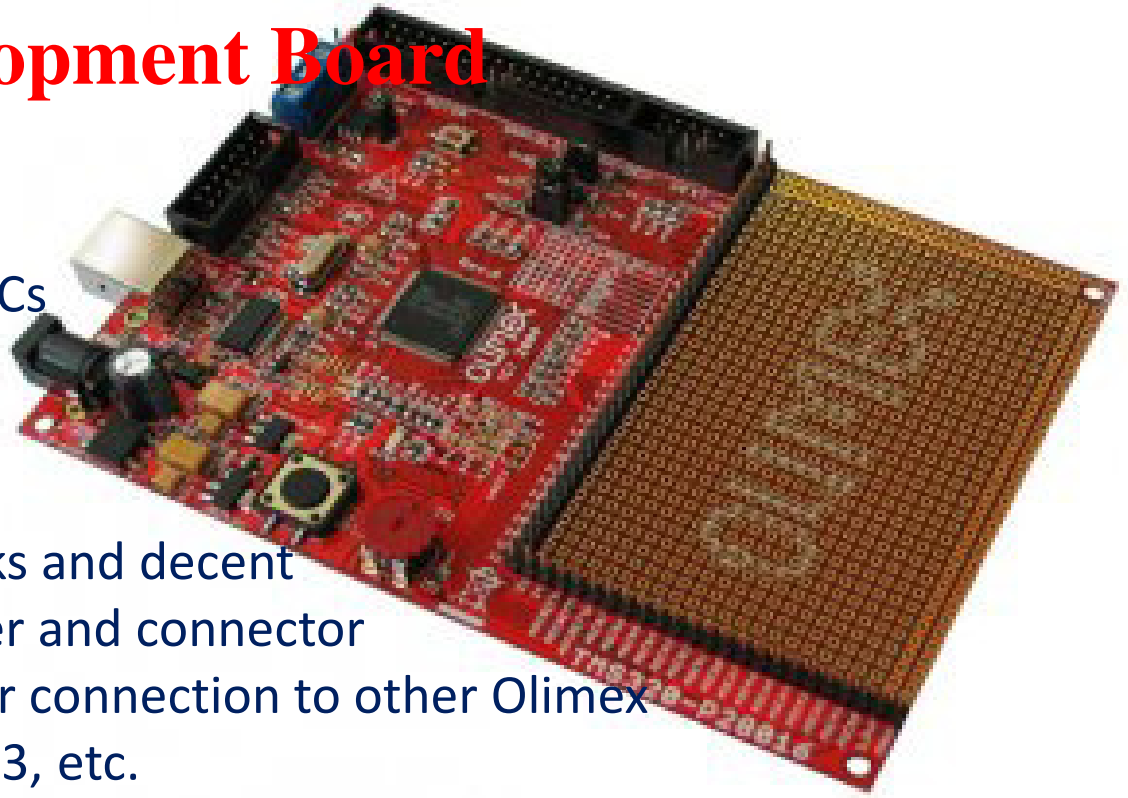


Software features

Free download of Code Composer Studio™ IDE
Free download of C2000Ware for device drivers and example
- DesignDRIVE platform support
- powerSUITE software support

MathWorks Embedded target support
solidThinking Embed support

TMS320F28x DSP Development Board



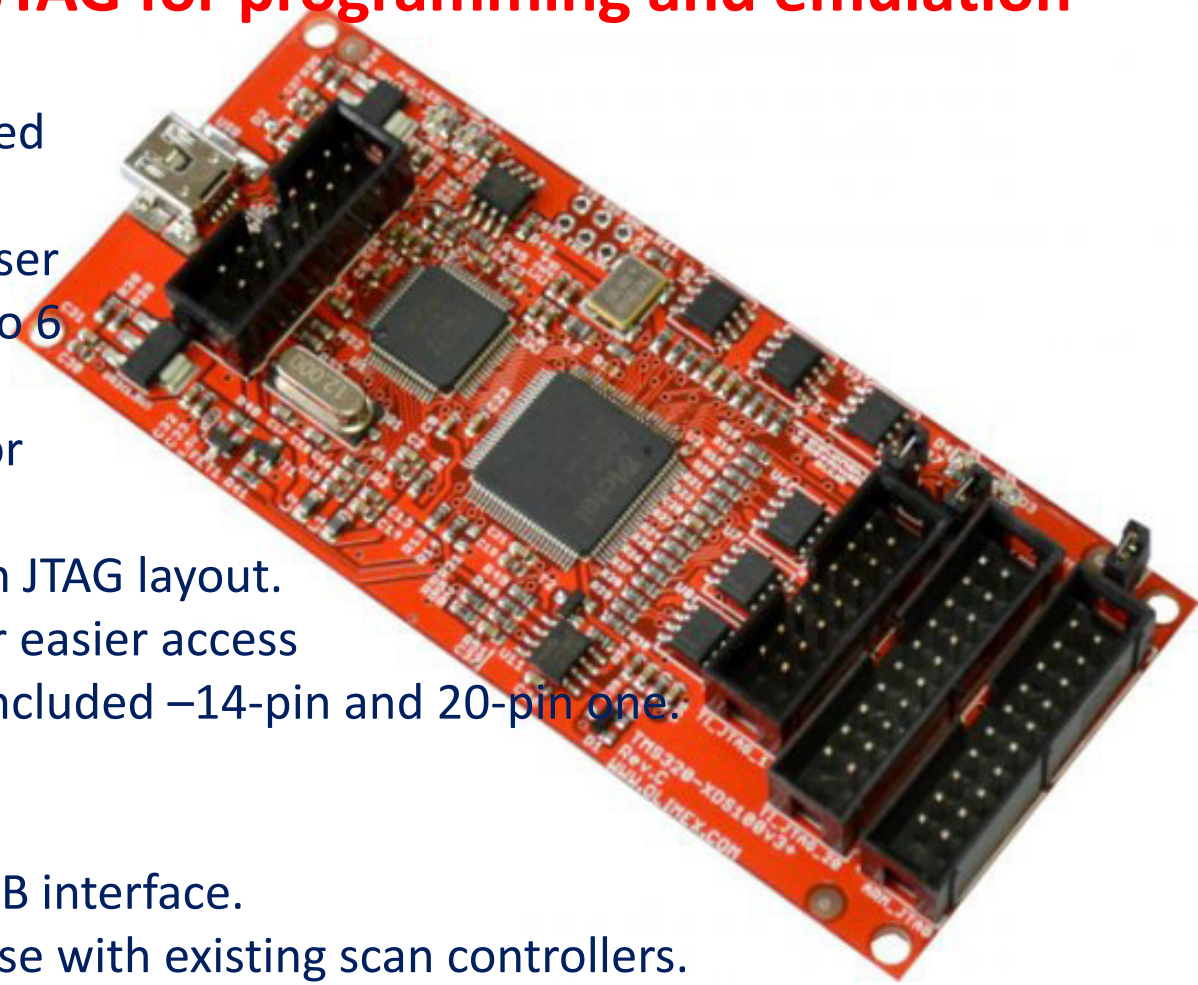
FEATURES

- MCU: **TMS320F28016** 32KB Flash, 12 KB RAM, 3.75 MPSP 2 x 8 channel ADCs , 8 PWM, CAN, SPI, RS232, I2C
- JTAG connector
- USB-to-RS232 converter allow easy to power board and to connect to notebooks and decent computers without RS232 port CAN driver and connector
- UEXT connector with SPI, RS232, I2C for connection to other Olimex modules as MOD-NRF24Lx, MOD-MP3, etc.
- MOTOR control connector (for add on modules with ADC, PWM, Interrupt signals available)
- Trimmer potentiometer connected to Analog input
- User button, Power supply LED, User status LED
- RST button
- External power supply jack for AC or DC power supply

Voltage regulator + power supply filtering capacitor

- Extension headers for each uC pin
- Prototype area with 0.1" step, Vcc + GND bus
- PCB: FR-4, 1.5 mm (0,062"), green soldermask, white silkscreen component print
- Dimensions: 100x80 mm (3.9x3.15")

DSP / ARM high speed USB JTAG for programming and emulation

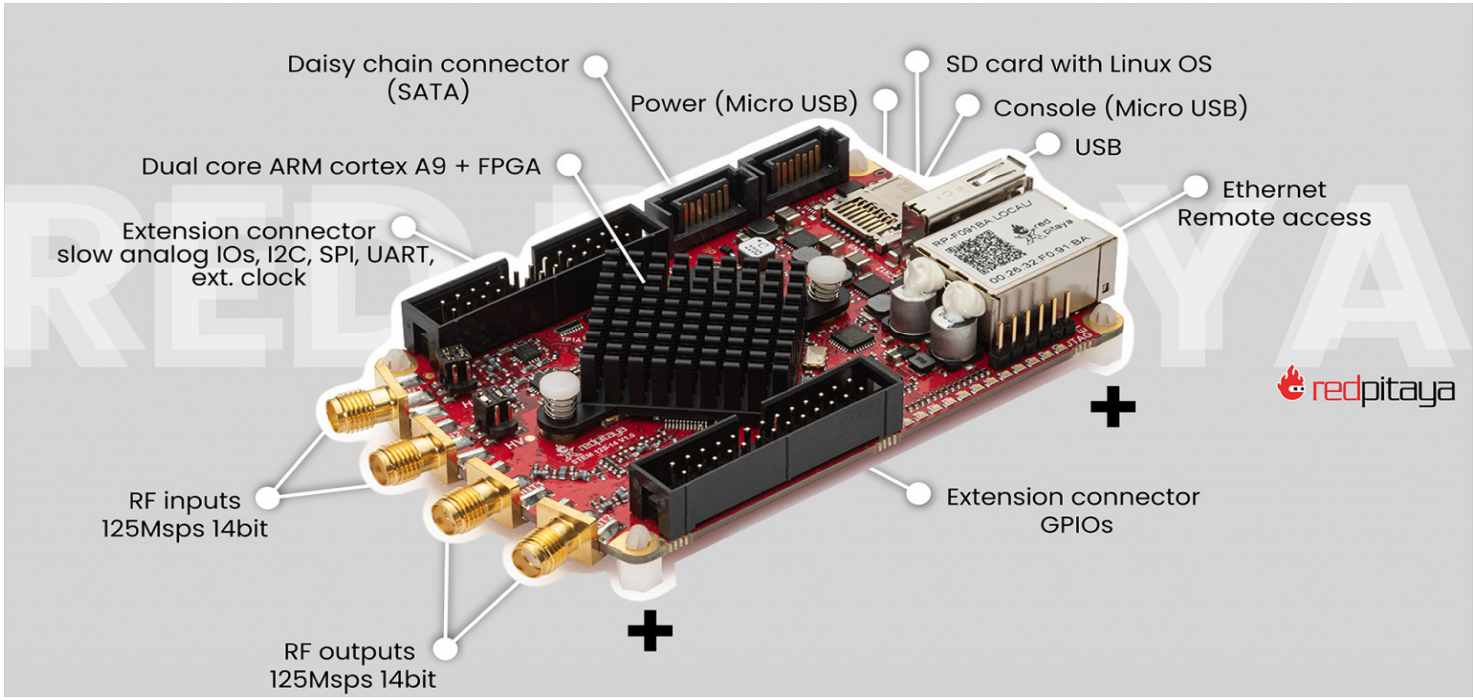


FEATURES

- TMS320-XDS100-V3 hardware is designed to work with CCS5 or CCS6 software
- Grants free license for TI's Code Composer Studio 5 and TI's Code Composer Studio 6 and TI's Code Composer Studio 7.
- Equipped with three JTAG connectors for different JTAG layouts: TI 14-pin JTAG;
- TI 20-pin JTAG and standard ARM 20-pin JTAG layout.
- All plastic headers have 0.1" pin step for easier access
- Two compatible female-female cables included –14-pin and 20-pin one.
- Works with targets in 1.65V-5.0V range.
- The unit is powered from USB
- IEEE 1149.7 capable emulator with a USB interface.
- Can function as an 1149.7 adapter for use with existing scan controllers.
- Software compatible with XDS100v2 (except link delay and IEEE 1149.7 modes).
- Physical jumper to select emulator or adapter mode.
- Operates in 1149.7 Class 4, up to 25MHz.
- LED to indicate IEEE 1149.7 Class 4 operation. LED to indicate operation in adapter mode.
- Supported devices: TMS320C28xx, TMS320C54xx, TMS320C55xx, TMS320C674x, TMS320C64x+, TMS320C66x, ARM9, ARM Cortex A9, ARM Cortex A8, ARM Cortex M3, ARM Cortex R4
- Board dimensions (4.15 x 1.80)" ~ (10.5 x 4.6)cm

STEMlab 125-10/14 Open Source Measurement and Control Unit

It has two 125Msps 14-bit inputs and two 14-bit outputs, Xilinx Zynq 7010 FPGA and offers remote access, with an online app user interface accessible through Ethernet or Wi-Fi.



FEATURES

- Ethernet connectivity
- Xilinx SoC (CPU & FPGA)
- Two fast analog inputs and two outputs Possibility of integration into own system/product
- Open software source code available Works with Linux or Windows PC Can be used as an oscilloscope & signal generator, spectrum, Bode
- analyzer, logic analyzer, LCR meter*, streaming, SDR, or vector network analyzer*
- Can be controlled remotely using LabVIEW, MATLAB, Python, or Scilab
- Can be re-programmed to meet custom needs
- Supported by an app marketplace with several free apps available

* Requires an extension module.