XDS200 USB Debug Probe

(ACTIVE) TMDSEMU200-U



Description

The Spectrum Digital XDS200 is the first model of the XDS200 family of debug probes (emulators) for TI processors. The XDS200 family features a balance of low cost with good performance between the super low cost XDS110 and the high performance XDS560v2, while supporting a wide variety of standards (IEEE1149.1, IEEE1149.7, SWD) in a single pod. Also, all XDS debug probes support Core and System Trace in all ARM and DSP processors that feature an Embedded Trace Buffer (ETB).

The Spectrum Digital XDS200 connects to the target board via a TI 20-pin connector (with multiple adapters for TI 14-pin, ARM 10-pin and ARM 20-pin) and to the host PC via USB2.0 High Speed (480Mbps).

The Spectrum Digital XDS200 comes in a package consisting of:

- XDS200 debug pod
- TI 20-pin to TI 14-pin converter adapter
- TI 20-pin to ARM 20-pin converter adapter
- TI 20-pin to ARM 10-pin converter adapter
- USB2.0 cable
- Quick start guide

Devices supported:

- SimpleLink MCUs (CC13xx, CC26xx, CC3x, MSP432)
- C2000, TM4C12x and Hercules microcontrollers
- Sitara (AM335x, AM43xx, AM57xx, AM65xx, AMIC1xx)
- Automotive SoCs (TDAx ADAS, DRAx infotainment)
- mmWave sensors (IWR/AWR14xx, IWR/AWR16xx, IWR68xx)
- C674x and C66x (Keystone I) Floating point DSPs
- C642x and C645x
- 66AK2 and TCI66x Multicore DSP + ARM® SoCs (Keystone II)
- C55x Low-power DSPs
- UCD3x Digital Power devices
- PGA970 SoC
- Other TI SoCs with PRU, C674x, C66xx, Cortex M, Cortex R and Cortex A cores

Devices **NOT** supported:

- MSP430 Microcontrollers
- AWR12xx mmWave sensors
- C54x
- C62x, C670x, C671x, C672x, C640x and C641x

You will need:

- An installation of **Code Composer Studio v6** (or newer)
- A host PC that matches the minimum requirements of the Code Composer Studio IDE
- A target board that features one of the compatible JTAG headers

You may need:

- An adapter to allow connecting to target boards that features different JTAG headers

Shipping information:

- Product box dimensions: 130mm x 130mm x 50mm (5.0in x 5.0in x 2.0in)
- Packaged product weight: 120g (4.0oz)

Features

The XDS200 is the mid-range family of JTAG debug probes (emulators) for TI processors. Designed to deliver good performance and the most common features that place it between the low cost XDS110 and the high performance XDS560v2, the XDS200 is the balanced solution to debug TI microcontrollers, processors and wireless devices.

The XDS200 is designed to replace the aging XDS510 family of JTAG debuggers with higher JTAG data throughput, added support for cJTAG (IEEE1149.7) and ARM Serial Wire debug modes at a reduced cost.

Following the trend for space reduction on modern TI development boards, all XDS200 variants feature a standard TI 20-pin connector as the primary JTAG connectivity to the target. In addition to that, all variants also feature modular target configuration adapters for TI and ARM standard JTAG headers (the offer of adapters varies per model).

The XDS200 supports the traditional IEEE1149.1 (JTAG), IEEE1149.7 (cJTAG) and ARM's Serial Wire Debug (SWD) and Serial Wire Output (SWO), and supports interface levels from +1.5v to +4.1v.

IEEE1149.7 or Compact JTAG (cJTAG) is a major improvement over the traditional JTAG, as it supports all its features while using only two pins, and is available in selected TI wireless connectivity microcontrollers.

Serial Wire Debug (SWD) is a debug mode that uses two pins (JTAG uses four) and transfers data at a higher clock rate when compared to JTAG. Serial Wire Output (SWO) adds one more pin that allows performing simple Trace operations on selected Cortex M4 microcontrollers.

All XDS200 models support a USB2.0 High Speed (480Mbps) connection to the host, with some models also supporting Ethernet 10/100Mbps. Also, some models support power consumption monitoring on the target board.

The XDS200 family is fully compatible with TI's Code Composer Studio IDE. This combination gives a complete hardware development environment which includes an Integrated Debug Environment, Compiler, and full hardware debugging and Trace capability on selected TI microcontrollers, processors and wireless connectivity microcontrollers.

Other XDS products:

- XDS110
- XDS110 EnergyTrace HDR
- XDS560v2 System Trace with USB
- XDS560v2 System Trace with USB and Ethernet
- XDS560v2 PRO TRACE Receiver