

SAU100v2

Product Brochure



What is the SAU100v2

- The SAU100v2 emulator is Sauris GmbH ultra-low-cost USB-interface JTAG hardware reference design.
- The SAU100v2 emulator provides JTAG access to Texas Instruments' JTAG based devices.
- It is compatible with Code Composer Studio™ development environment.
- The hardware is manufactured by Sauris GmbH.
- The SAU100v2 is available as a discrete emulator, or can be embedded on a development card (DSK, EVM, etc.).
- There is 1 version - SAU100v2.
- Performance of the SAU100v2 is lower than the SAU510. This means that program and data downloads will take a longer time than with SAU510 emulator. Also, stepping in "C" and "Assembly" will be slower with SAU100v2 when compared to SAU510.

General Features

The Sauris GmbH design for the SAU100v2 has the following features:

- Debug features (Emulation Connect/Disconnect, Read/Write memory, Read registers, Load program, Run, Halt, Step, Software and Hardware Breakpoint support, Real-Time Mode)
- Compatible with Code Composer Studio™.
- Support for targets with 1.8v and 3.3v IO voltages.
- Support for "JTAG reset"/"wait-in-reset" boot-modes using the two EMU pins sampled by the nTRST pin.
- Support for "Power-on reset" boot-modes using the two EMU pins sampled by the TVD pin.

- Support for the configuration of the EMU pin features through Code Composer Studio™ Setup “connection properties” dialogs similar to those for the XDS560 Rev-D cable.
- Support for “target power-loss detection” via the TVD pin even when Code Composer Studio™ is not running, and applying boot-modes at Code Composer Studio™ start-up.

SAU100v2 Features

The Sauris GmbH reference design for SAU100v2 has the following features:

- All of the SAU100v2 General_Capabilities
- Support for USB High Speed (480 Mbit/s)
- Support targets with 14-pin TI JTAG connector or 20-pin TI JTAG connector as used by Texas Instruments embedded processors.
- Support for the following processor cores: TMS320C28x, TMS320C54x, TMS320C55x, TMS320C64x+, TMS320C674x, ARM 9, ARM Cortex R4, and ARM Cortex A8.
- Supports cable-break detection
- Supports target power loss detection
- Support for multiple FTDI devices
- Adaptive clocking
- LED light to indicate active USB connection
- Support for Code Composer Studio v4 and newer (Does not support Code Composer Studio v3.3)

Features NOT supported

- It does not support Real Time Data eXchange (RTDX) or High Speed RTDX (HSRTDX)
- It does not provide hardware support for TCLKR external clocking
- Cores NOT supported: ARM 7, ARM 11, ARM Cortex M3, TMS320C24x, TMS320C55x+, TMS320C670x, TMS320C671x, TMS320C672x, TMS320C64x (note that TMS320C64x+ is supported) and other cores not listed as supported.
- It cannot read the value of the EMU0/1 pins, so long profiling operations that use the EMU0/1 pins to handle counter overflows will not be possible.
- JTAG Clock (TCLK) frequency other than default JTAG frequency (1Mhz)

Installation for Code Composer Studio v4.1

A. Install Code Composer Studio 4.1 (SAU100v2 SW support is included) as per the table above **before** connecting SAU100v2 USB hardware.

B. Connect the SAU100v2 hardware

1. Make sure the Code Composer Studio 4.1 is installed **FIRST before** plugging in the SAU100v2 HW to the PC.
2. Connect USB cable from the PC to the SAU100v2 hardware. Connect the JTAG to the target board (be careful to plug it in correctly: pin 1 should go to pin 1. Red strip usually indicates the side of pin 1)
3. You will notice small popups to inform user that USB hardware is recognized and installed correctly. No input are required.

C. Setup Code Composer Studio v4.1

1. Start Code Composer Studio and create a new target configuration. See Quick Tips#Target_Setup.C2.A0
2. Select SAU100v2 as connection type.
3. Select device.

References

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