

XDS110 manual

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1Function Introduction

XDS110 is a new type of debug probe (emulator) for embedded processors. XDS110 replaced XDS100 series, while in a singlepodSupport for a wider range of standards (IEEE1149.1, IEEE1149.7, SWD). In addition, all XDS Debug probes on all ARM and DSP Core and system trace is supported in processors that have an embedded trace buffer (ETB).

XDS110 passes TI 20pin connector to the target board (with pins for TI 14Needle, and ARM 20pin adapters) and through USB 2.0 high speed (480Mbps). Connecting to the host PC, it also provides two additional connections: support EnergyTrace™ Assist 14pin port connector, one full-duplex UART port.

2Interface Definition

The emulator supports three modes: JTAG/SWD/cJTAGWay. JTAGIt is

four-wire mode: TDI, TDO, TMS, TCK, VREF, GND. SWDIt is two-line

mode: SWDIO/TMS, SWCLK/TCK, TRST, VREF, GND

cJTAGIt is two-line mode: TMS, TCK, TRST, VREF, GND. Supports selection of wireless connection devices, such as CC13xx, CC25xx, CC26xx, CC32xx series.

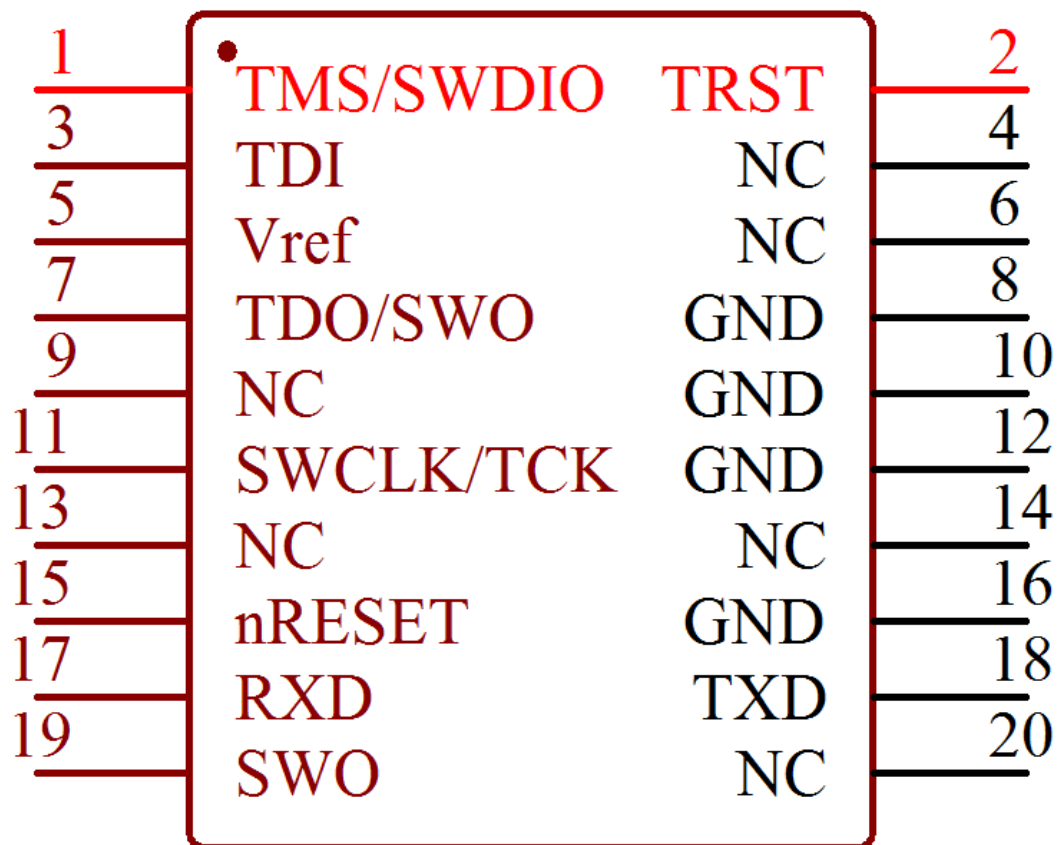
The above methods all require VREF and GND

Note: The downloader does not provide external power: 5V. The pin does not output power. This pin needs to be connected to the power supply of the target board, otherwise it will not work!

Output interface (20P):

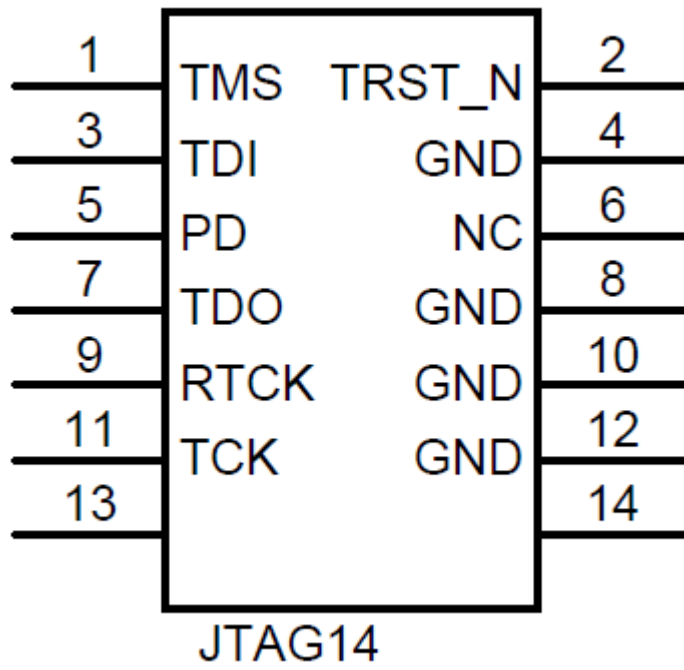


The function diagram of each pin is as follows:

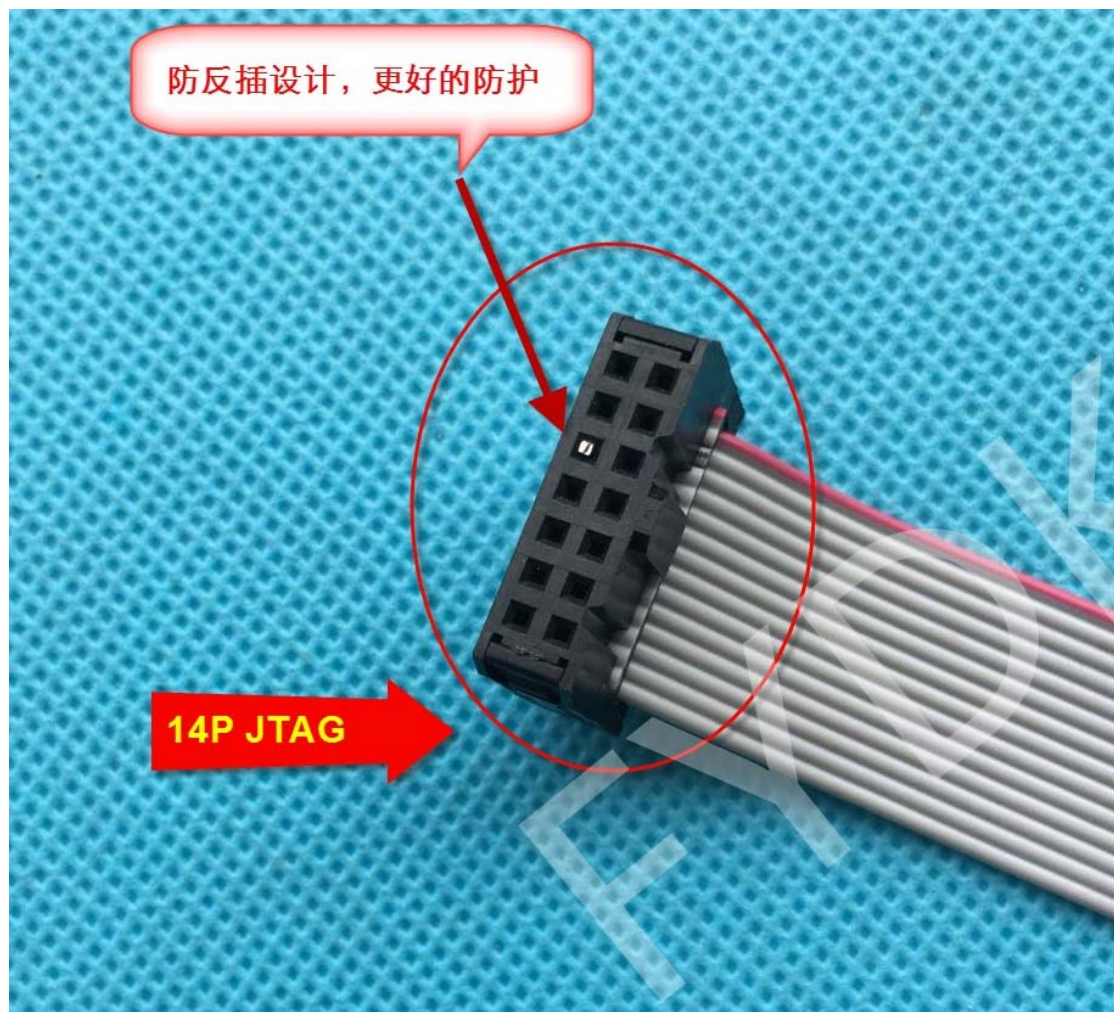


Note: The downloader does not provide external power:5The pin does not output power. This pin needs to be connected to the power supply of the target board, otherwise it will not work!

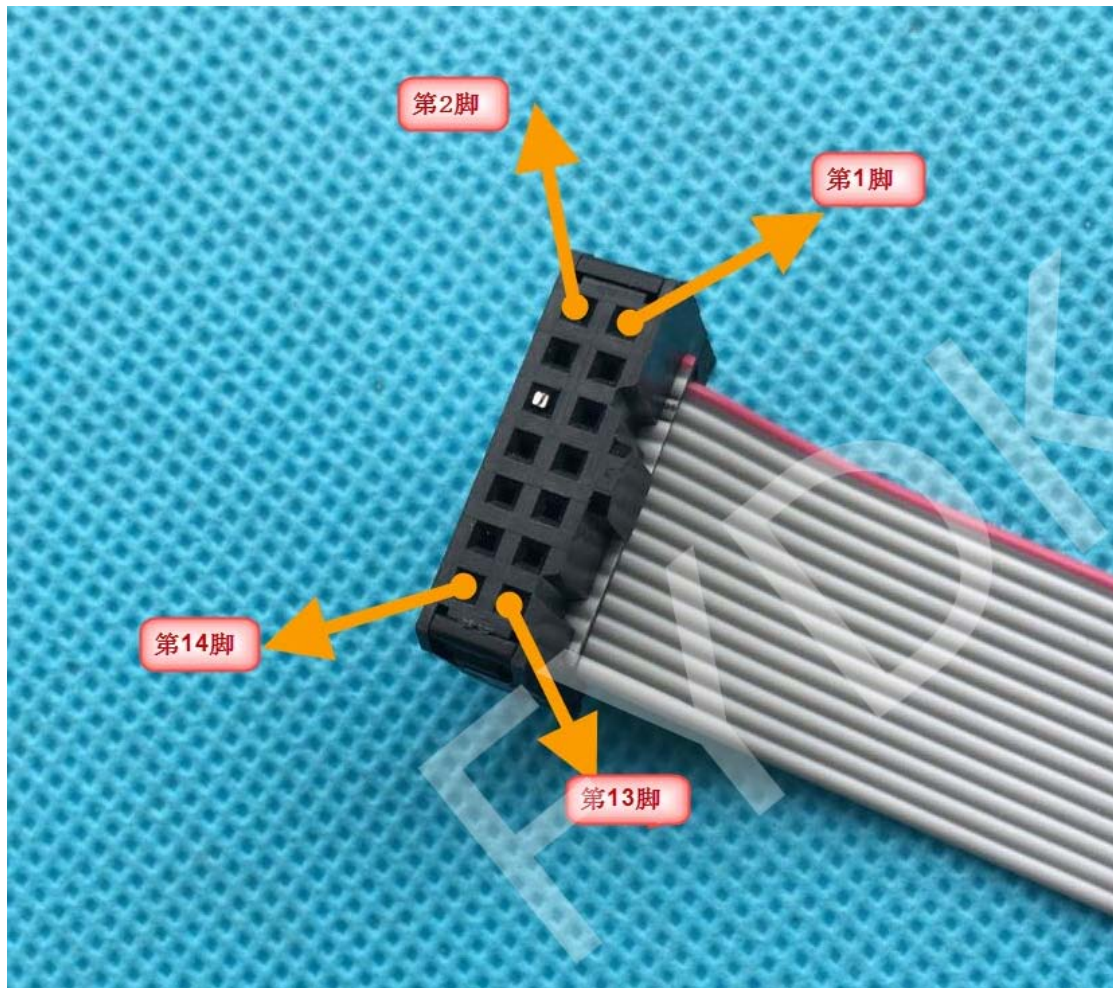
14Output interface signal:



14PCable identification:



Cable output pin sequence:



How to identify 1 foot:

The triangle position is 1 foot, a row of them is odd 1.3.5.7.9..... The next row is even numbers: 2.4.6.8.10.12.....



3Supported chips list:

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

4 Supported Software:

4.1 support Code Composer Studio v6.1(or later)

use CCS When emulating software or downloading programs, support standard JTAG Interface (four-wire TDI, TDO, TCK, TMS) and JTAG Interface (two-wire interface TCK, TMS)

4.2 support IAR FOR ARM V7.5

use IAR When emulating software or downloading programs, support standard JTAG Interface (four-wire TDI, TDO, TCK, TMS) and JTAG Interface (two-wire interface TCK, TMS)

4.3 support Flash Programmer 2

use Flash Programmer 2 When downloading software, support standard JTAG Interface (four-wire TDI, TDO, TCK, TMS) and JTAG Interface (two-wire interface TCK, TMS)

4.4 support uniflash Independent burning software support DSP Device Burning

use uniflash When downloading software, support standard JTAG Interface (four-wire TDI, TDO, TCK, TMS) Supports programming of devices such as TMS320F28035, TMS320F2808, etc.

4.5 support SmartRF studio Configuration software

5 Driver installation method

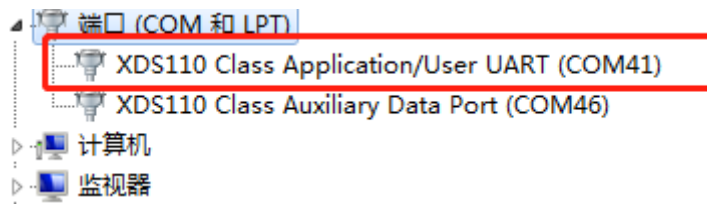
After installing the following software, insert XDS110 The driver will be installed automatically.

- 1, CCS6.1
- 2, Flash Programmer 2
- 3, uniflash

After the above software installation is completed, XDS110 Connect to PC, it will prompt to automatically install the driver. After the driver is installed correctly, it is as follows:



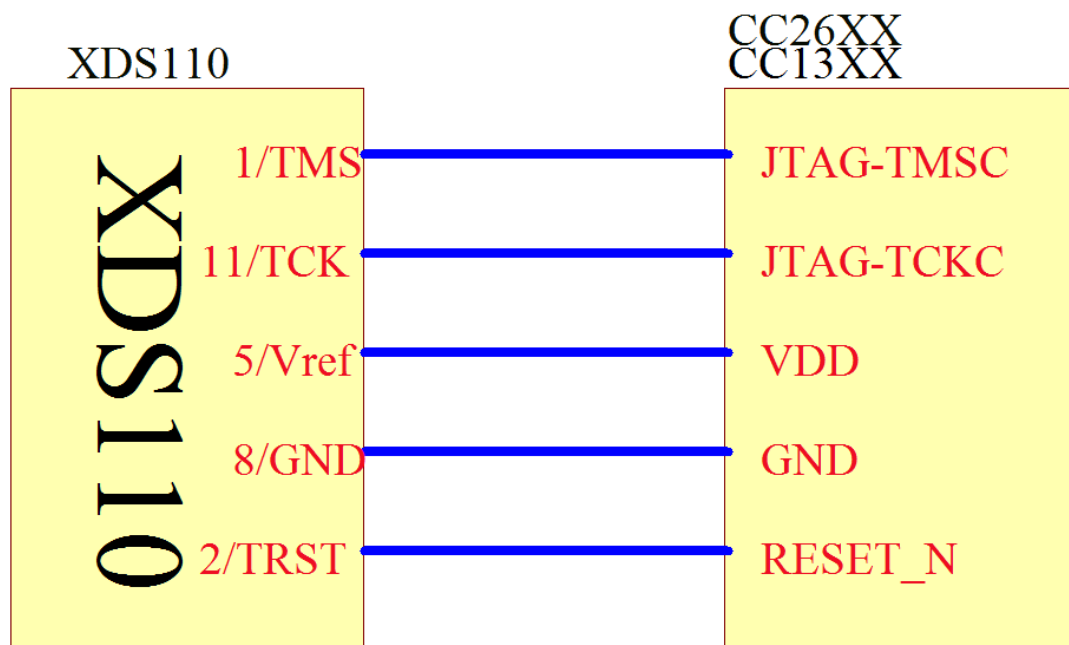
Note: Serial Port TX(No.18foot)RX(No.17pin), because there is a level conversion chip inside the downloader, 5Feet and 8The feet should be connected VCC and GND. Otherwise the serial port will not work. The serial port should be selected in the computer UART. This is the actual serial port. As shown in the red box below.



6How to connect to the device

C2JTAGThe wiring diagram is as follows.

The front of the following figure isXDS110Pin/signal name, whereTRSTit is optional. The others are required pins. None of them can be missing.



4WireJTAGThe wiring diagram is as follows.

The front of the following figure isXDS110Pin/signal name, all are required pins. None can be missing

