



XDS560V2 Installation Guide

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IMPORTANT INFORMATION

About This Manual

This Installation Guide is for the Wintech Digital XDS560v2 JTAG Emulator product.

The Wintech Digital XDS560v2 JTAG Emulator is a module to be attached to a PC for hardware engineers and software programmers to develop DSP applications.

The text paragraphs in this Guide are very important for proper device functioning and for preventing any possible damages on the Wintech Digital XDS560v2 JTAG Emulator device and project target board. These paragraphs are shaded as in the following example. Please carefully read each of the shaded text.

This is an example of a very important text paragraph.

TABLE OF CONTENTS

INTRODUCTION	4
OVERVIEW	4
FEATURES	5
THE XDS560v2 JTAG EMULATOR KIT CONTAINS	6
INSTALLATION REQUIREMENTS	6
SUPPORTS OPERATING SYSTEMS	6
<i>QUICK INSTALL.....</i>	6
QUICK INSTALL PROCEDURES	6
<i>DETAIL INSTALL.....</i>	8
DETAIL INSTALL PROCEDURES	8
<i>HARDWARE SELF-TEST</i>	10
HARDWARE SELF-TEST PROCEDURES.....	12

Introduction

Overview

This document is a system overview for the Texas Instruments (TI) XDS560v2 System Trace Debug and Test Controller (DTC). XDS560v2 DTC is an emulator that provides an interface between IEEE1149.1/1149.7 compliant JTAG signals and a host-side debug system. In addition, XDS560v2 has the capability to collect system trace (STM) data.



Figure 1

Scope

The scope of this document is limited to providing system-level overview for the XDS560v2 product. In general, attempt is made to provide brief information about relevant peripherals or specification for clarity. Readers should refer to related reference material for detailed information.

Intended audience

This document is intended for the following audience:
Hardware engineers developing XDS560v2 reference platforms;
Software engineers developing software for XDS560v2 DTC;
Test engineers validating the product;
Early adopter third-party developers developing XDS560v2 derivatives;
Product & Program Managers.

Features

This product has the following hardware features:

- TMS320DM6441 (405/513 MHz)
- 256 MBytes of DDR2 SDRAM
- 64 MBytes of NAND flash
- 10/100 ENET
- USB 2.0
- Samtec connector interface, 25x2 (QSS-025-RA)
- Samtec SQCD-025-12.00-STR-TEU-1-S cable
- MIPI -60 buffered emulation/trace connector
- MIPI60 to CTI 20 pin adapter
- 5V input power with LED
- 16-bit EMIF DM6441 interface to FPGA
- 16-bit Video interface from FPGA to DM6441
- Cyclone III FPGA
- 6 Status LEDs
- Boot-mode jumper

This product will support following functions:

- IEEE 1149.1 debug
- IEEE 1149.7 debug
- Boot mode control on EMU pins
- System Trace (STM)

This version of the product will not support the following functions:

- Processor Trace

The XDS560v2 JTAG Emulator kit contains

- XDS560v2 JTAG Emulator and target cable
- USB interface cable
- The XDS560v2 driver disk
- XDS560v2 Installation Guide (this document)

Installation Requirements

- Code Composer Studio IDE 4.2 or greater
- An available USB port (USB2.0 is recommended)
- 1GHz or higher Pentium™-compatible CPU
- Local CD-ROM drive

Supports Operating Systems

- Microsoft Windows™ 2000 (SP3 or later)
- Microsoft Windows™ XP (Home and Professional)
- Microsoft Windows™ 2003 Server
- Microsoft Windows™ Vista
- Microsoft Windows™ 7 (32bit and 64bit)

Quick Install

Quick Install Procedures

This Guide describes the steps to install the XDS560v2 JTAG Emulator in the following order:

- Make sure Code Composer Studio™ IDE 3.3 or 4.2 or greater is installed on the PC;
- Install the XDS560v2 JTAG Emulator software;
- Install the XDS560v2 JTAG Emulator hardware;
- Install the XDS560v2 JTAG device driver(USB Mode);
- Run Desktop\ WintechDigital\ Find XDS560v2 to find the XDS560v2 IP address (Ethernet Mode);
- Run CCS, configure CCS and debug the target.

Detail Install

Detail Install Procedures

This Guide describes the steps to use the XDS560v2 JTAG Emulator with Code Composer Studio IDE 4.2 in the following order:

- Install Code Composer Studio™ IDE 4.2;
- Run Setup_XDS560v2.exe on the user disk to install the XDS560v2 JTAG emulator software;
- Connect the XDS560v2 target cable to the emulator;
- Connect the USB cable or Ethernet wire to the emulator;
- Power on the XDS560v2 emulator and wait for about 25 seconds. The Ready LED and Start LED will light on;
- If the USB cable is properly connected, the system will prompt to find a new hardware;
- Follow the hardware install guide to install the device driver. Please select the user disk as the source of driver;
- If Ethernet Mode is used, please run Desktop\ WintechDigital\ Find XDS560v2 to locate the XDS560v2 IP address and record the IP address;
- Run CCS. Click “View->Target Configurations” on the main menu to activate the “Target Configurations” window;
- Click “Target->New Target Configurations” to create a new configuration or double on an existing configuration to modify it;
- Select “WintechDigital XDS560V2 STM LAN Emulator” or “WintechDigital XDS560V2 STM USB Emulator”(Figure 2), depending on your connection type;
- Select a target to match your target board (Figure 2);

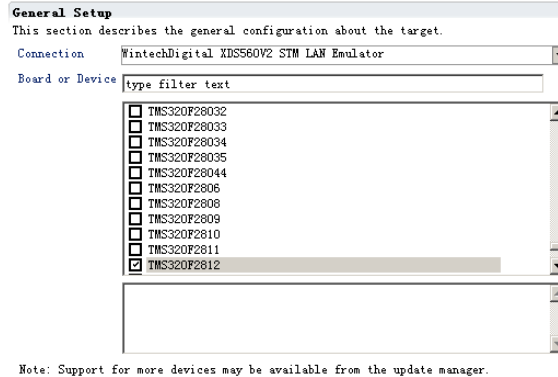


Figure 2

- If you select “WintechDigital XDS560V2 STM LAN Emulator” at step 11, please choose the “Advanced” label at the bottom of the window and input the IP address you have recorded at step 8 to the “The Emulator IP address” box (Figure 3). Please skip Step 13 if you select “WintechDigital XDS560V2 STM USB Emulator” at step 11;

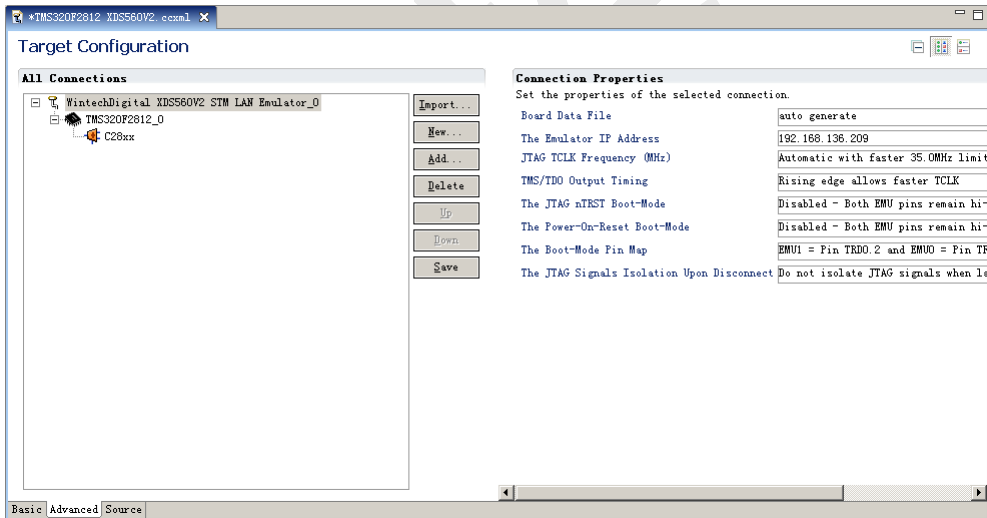
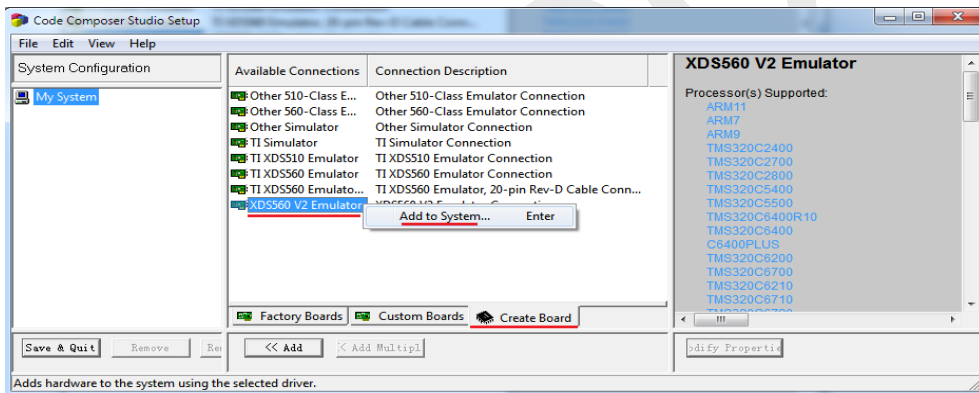


Figure 3

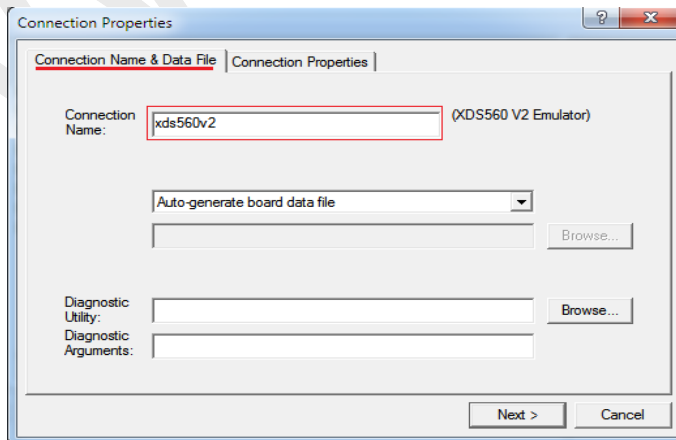
- Click “Save” to save the configuration;
- Click “Target->Launch TI Debugger” on the main menu to activate the debug window;
- Click “Target->Connect Target” to connect the target.

This Guide describes the steps to use the XDS560v2 JTAG Emulator with Code Composer Studio IDE 3.3 in the following order:

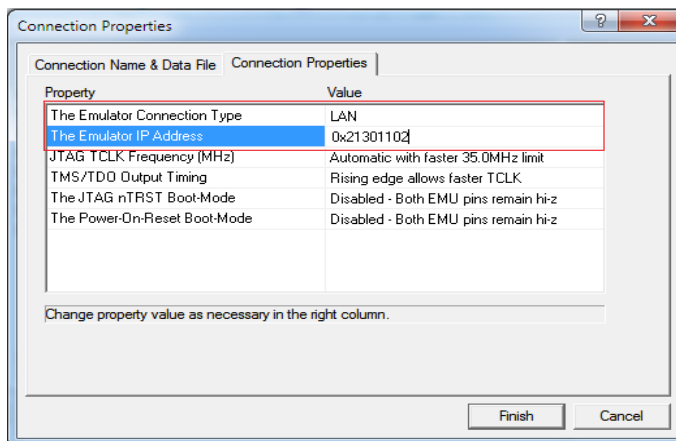
- Install Code Composer Studio IDE 3.3;
- Run ccs3.3_update.bat on the user disk to update CCS 3.3 software;
- Run Setup_XDS560v2.exe on the user disk to install the XDS560v2 JTAG emulator software;
- Connect the XDS560v2 target cable to the emulator;
- Connect the USB cable or Ethernet wire to the emulator;
- Power on the XDS560v2 emulator and wait for about 25 seconds. The STATE-2 LED and STATE-3 LED will light on;
- Run Setup CCStudio v3.3 and add XDS560 V2 Emulator to system;



- Input a connection name, example xds560v2 and then click “Next”;



- If Ethernet Mode is used, configure with following steps and then click “Finish”:
 - a. Run Desktop\ WintechDigital\ Find XDS560v2 to locate the XDS560v2 IP address and record the IP address;
 - b. Choose LAN connection
 - c. Set the IP address. Note for CCS3.3 this must be entered as a hex equivalent of the IP address (ie 33.48.17.2 = 0x21301102)



- Select a target to match your target board and add to system;
- Click “Save & Quit” and then run CCStudio 3.3;
- Click “Debug->Connect” to connect the target;

Hardware Self-Test

Hardware Self-Test Procedures

This Guide describes the steps to run the XDS560v2 JTAG Emulator self-test in the following order:

- Make sure the emulator is connected from host to target;
- Run xds560v2probe.exe located in CCSv4\common\uscif\ or launch it from shortcut “Wintech Digital” on Desktop;
- Choose one of test options and click “start” button to begin self-test;

- **Please make sure a DHCP server is running on your LAN when the emulator is working in Ethernet mode. Otherwise the emulator cannot obtain an IP address. If you do not have a DHCP server running on your network, you should find a DHCP server application named tftpd32.exe at folder “UserDisc\dhcptool\”, this application should provide DHCP service for you.**
- **Please use “Desktop\wintechdigital\Find XDS560v2.exe” to find the IP address of XDS560v2.**
- **Please make sure the IP address of your host computer and the XDS560v2 are on the same network.**
- **It is very important to properly orient the connector on the DSP target system so that Pin 1 on the cable matches Pin 1 on the DSP target system. Connecting the cable incorrectly may cause damages on your DSP target system or the XDS560v2 JTAG Emulator.**