DVDO PrecisionSDI™

Serial Digital Interface Video Input Module for
the iScan™ HD/HD**+** Video Scaling Engine

Installation Guide

How to install, set up, and use your module

PRECISION
SDI
Serial Digital Interface

DVDO
BY ANCHOR BAY TECHNOLOGIES

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TABLE  OF  CONTENTS
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DVDO PrecisionSDI™ Video Input Module Installation Guide

INTRODUCTION

Thank you for purchasing the DVDO PrecisionSDI™ Serial Digital Interface Video Input Module. Upgrading your iScan™ HD/HD+ for SDI digital video input capability is simple, and this Installation Guide will step you through the process.

This installation process is in two parts: hardware and software. For the hardware installation, you will need a few basic tools, including a Phillips-head screwdriver and a pair of long-nose pliers. For the software installation, you will need a PC or laptop computer running the Microsoft Windows operating system, and this computer must also have an RS-232 serial data port on a 9-pin connector.

Should you have any issues or problems during installation, please contact your Authorized DVDO Reseller for assistance.

You can also contact DVDO directly for help:

Email: Help@DVDO.com
Toll-Free (USA only): 1-866-423-DVDO

Contents

- SDI Card
- Bulkhead BNC connector with nut and washer
- Stand-offs (qty. 2)
- BNC-to-BNC Cable
- Hole-plug screws (qty. 2)
- RS-232 serial data cable

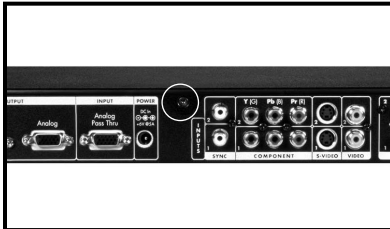## Installing the PrecisionSDI module into your iScan HD/HD+

1 Remove the iScan HD/HD+ top cover. To do this,

   a. Remove three screws on each side of the unit.

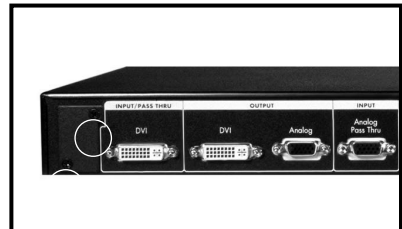   **b.** Remove two screws on the top of the unit.

Step 1a

Step 1b

Step 1c

   c. Remove one screw at the rear of the unit.

   d. Lift the top cover from the rear of the unit and set it aside.

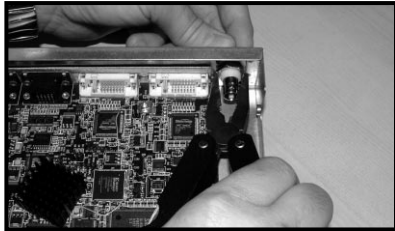**2** Remove the metal plate that covers the hole for the SDI BNC connector.

Step 2

Installation and Set-Up *(continued)*

3 Mount the bulkhead BNC connector. (a,b) Then plug the two screwholes left after the plate removal, with round-head screws from the SDI kit.
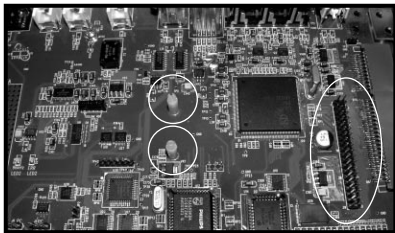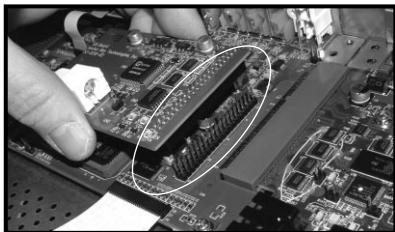

Step 3a

Step 3b

Step 3c

Step 3d

4 Locate the Expansion Module connector (40 pin IDC-type header) on the Video Input board.

5 Locate the mounting holes to the right of the Expansion Module connector.

Steps 4 & 6

6 Snap the stand-offs into each mounting hole.

7 Mount the SDI module onto the Expansion Module connector. Make sure that the stand-offs are lined up exactly with the two mounting holes on the SDI module.
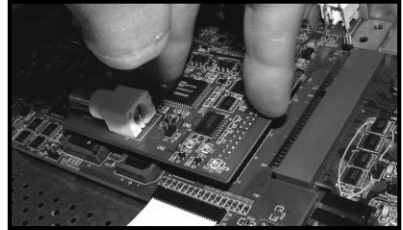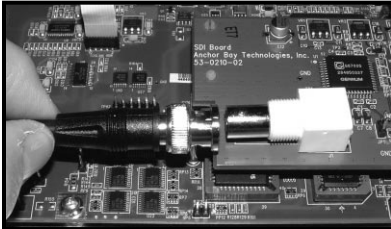

Steps 7 & 8

8 Make sure the 40-pin connector on the SDI card is aligned with the connector on the Video Input board.

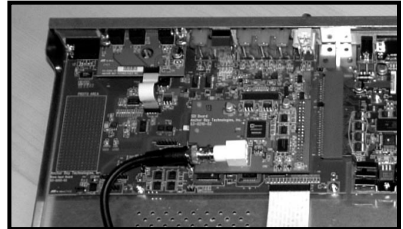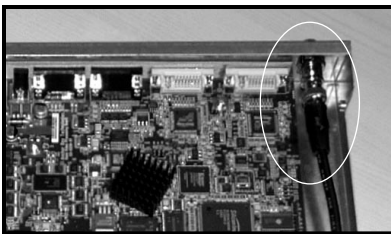**9** Push the module down to ensure a proper mate with the stand-offs.

Step 9

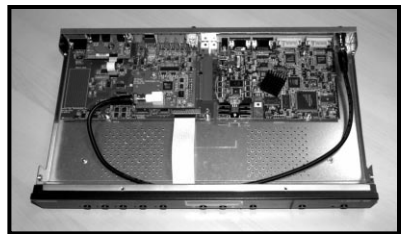**10** Connect one end of the BNC cable to the SDI module BNC connector.

Step 10

11 Connect the other end of the BNC cable to the bulkhead BNC connector inside the enclosure.

Step 11

12 Mount the top cover back onto the unit.

13 Power up the iScan HD and upgrade the software, if required.*

* Only iScan HDs with software versions earlier than 3.4-1.09A require a software update to support the PrecisionSDI Video Input Module. The iScan HD+ is shipped with software that supports the PrecisionSDI™ Video Input Module. No software update is necessary.

for iScan HD only, see note on page 6

iScan HD Software Update instructions

The iScan HD firmware can be updated using a PC with a serial port. We recommend a serial port terminal program called Tera Term Pro (Version 2.3) that we provide on our website.
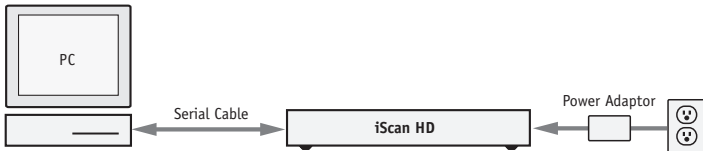
Hardware setup

What's needed:

• DB9 Male to Female extension (1:1) Serial Cable
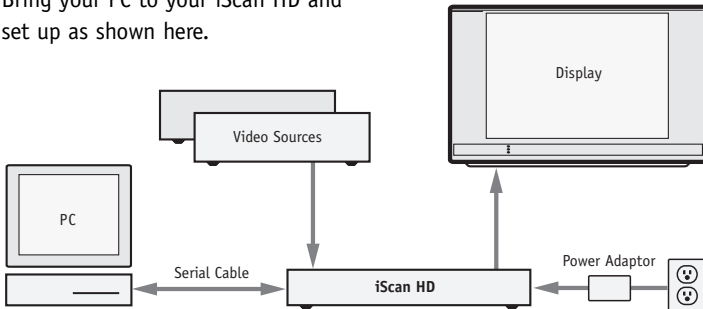
• iScan HD with Power Supply

If you have NOT already installed your iScan HD into your home theater system:

Set up the iScan HD as shown below.

If you HAVE already installed your iScan HD into your home theater system:

Bring your PC to your iScan HD and set up as shown here.

• Connect Serial Port cable between PC and iScan HD.

• Turn the PC and iScan HD on.

The CD that comes with your SDI kit includes the Tera Term Pro software (teraterm_ext) and the .abt file that is needed to update your iScan HD. You may want to check the www.dvdo.com website for the latest software release.

To install Tera Term Pro on your PC

1 Double click on 'tera_term.exe'.

2 Click 'Unzip'.

3 This action upzips the program to a temporary folder.
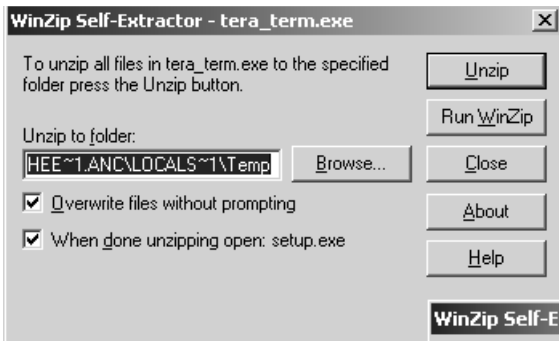
4 Click 'OK'. This starts the Tera Term Pro setup program.
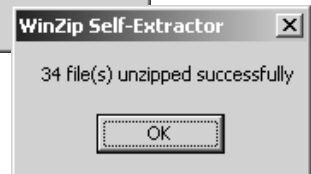
5 Select the preferred language and click 'Continue'.

6 Click 'Continue' unless an old version of Tera Term Pro is currently running.
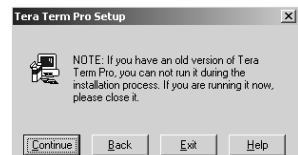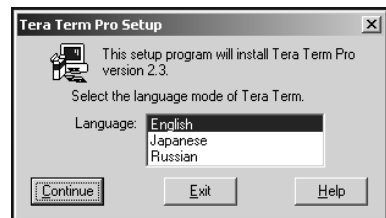
Software Update *(continued)*

7 Click 'Continue' to install Tera Term Pro in the default Program directory.

8 Close this window and click 'OK' to exit the setup program.

Using Tera Term Pro

Make sure that no other program is using the serial port that's connected to the iScan HD.

1 Run Tera Term Pro from the Program Menu.

2 Select 'Serial Port' from the Setup menu.

3 Tera Term Pro has been configured to communicate directly with the iScan HD through the serial port COM1. See below. Select the correct COM port if the serial cable is not connected to COM1.

4 Click 'OK.' Now the serial port setup is completed.

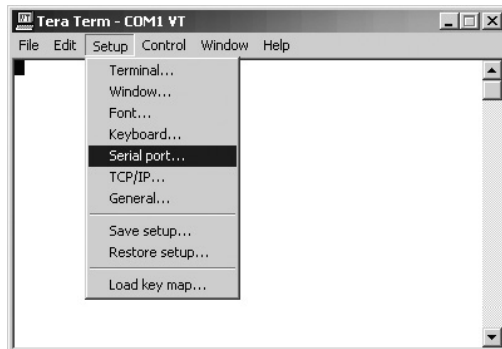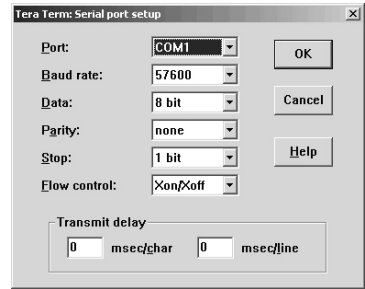| Tera Term: Serial port setup		
Port:	COM1	OK
Baud rate:	57600	
Data:	8 bit	Cancel
Parity:	none	
Stop:	1 bit	Help
Flow control:	Xon/Xoff	
Transmit delay		
0 msec/char	0 msec/line	

5 Tera Term Pro is now ready to send the new software file to the iScan HD.

Setting up the iScan HD for software update

There are two ways to perform software update: using the Front Panel buttons or using the remote control and On-Screen Display (OSD).

If the iScan HD has not been installed in your home theater system, just use the Front Panel buttons as described below.

Using the Front Panel buttons

1 Press the **Configuration** button repeatedly until the display shows "SWUP" (**S**oft**W**are **UP**date).

2 Press the **Up** or **Down** arrow buttons until the display shows "YES".

3 Press the **Enter/Exit** button to confirm the software update.

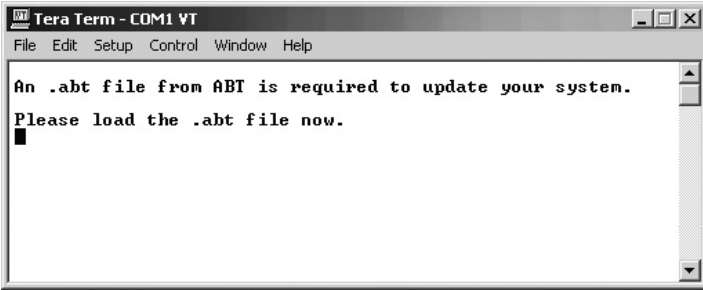**4** The Front Panel Display will show 'LOAD'.

Using OSD and Remote Control

1 Press **Menu** button.

2 Select Configuration -> Software Update -> Yes.

3 Confirm by pressing the **Enter** button.

4 The Front Panel Display will show 'LOAD'.

Completing the update process

1 On the Tera Term window, you will see the following message.

Important Note:

You can still cancel the download operation at this point.
There are two ways to do this.

•   Do nothing for about 5 minutes. After this time the iScan HD will revert back to normal operations with the current software.

•   Unplug the power cord from the iScan HD and then plug it back in again. The iScan HD will revert back to normal operations with the current software.

2 To update the system software select 'Send File' from the file menu.
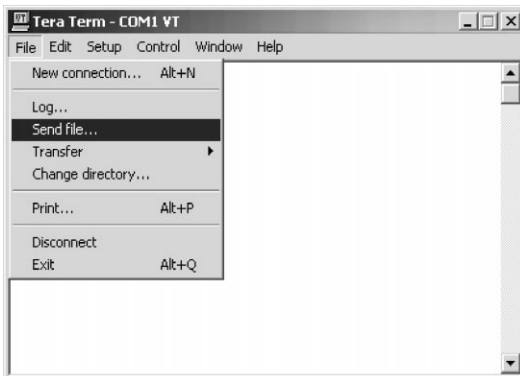
3 Make sure Binary mode is selected.

4 Locate the '.abt' file to download. Only files with a '.abt' extension should be loaded. If any other file is loaded, an error will occur. If this happens see the troubleshooting section.

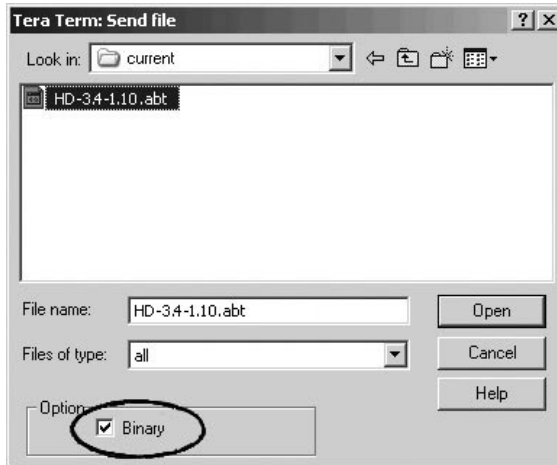**5** Click the 'Open' button to send the file.

6 Data is now being transferred to your iScan HD. You should see the word "BUSY" scrolling on the Front Panel. You will also see the download status on your PC.

7 When the update is complete you will see 'VRFY' momentarily displayed on the Front Panel Display. This is the iScan HD checking its software to be sure it is correct. The download process may take up to 5 minutes to complete.

8 When the update process is complete, the front panel light will turn green.

9 Your iScan HD with your new PrecisionSDI Input Module upgrade is now ready to use. To select the SDI input, use the SDI button on the remote control, or select the SDI input using the front panel button labeled **Input Select**.

TROUBLESHOOTING

The front panel displays 'LOAD' even after cycling the system power by unplugging the iScan HD and plugging it in again.

If this problem occurs you must load a .abt file into your iScan HD. Download a .abt file from www.dvdo.com and load it according to the procedure above steps 4 through 6.

The front panel displays ERR2.

Check to be sure the correct file was chosen. Only files with the .abt extension are valid for updating the iScan HD.

Once the correct file is located, reset the system by unplugging it and plugging it in again. You can follow the software update procedure again to update the system with a valid .abt file.

If after making a second attempt and the display still shows ERR2, check the file to be sure it was not corrupted during download. To check the file make sure the size of the file is correct. If you are not sure it is suggested to download the file again.

The front panel displays ERR7.

This error means that the transmission of data to the iScan HD has been interrupted. This could be caused by the terminal program being paused or canceled. Another cause of this error is that the serial port has become disconnected or has a faulty serial cable. If you have paused the terminal you can just restart it and the download will resume. Otherwise you must cycle the system power by unplugging it and plugging it in again.

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│      A P P E N D I X   A                  │
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iScan HD Bootloader Error Codes

These error codes will appear in the front panel display (FPD) of the iScan HD.

FPD shows	Type	Description	Possible causes
ERR0	Unknown Error	An unknown error occured.	1) Software bug.
ERR1	File checksum error	Wrong checksum received at the end of an ASCII file record.	1) Wrong file loaded. 2) Corrupted file loaded.
ERR2	Bad record type	Record in ascii data is incorrect.	1) Wrong file loaded. 2) Corrupted file loaded.
ERR3	Flash program error	Error programming flash device	1) Wrong file loaded 2) Hardware failure
ERR4	Device 1 checksum error	Calculated checksum for device 1 does not match expected checksum	1) Firmware update interrupted 2) Hardware failure
ERR5	Device 2 checksum error	Calculated checksum for device 1 does not match expected checksum	1) Firmware update interrupted 2) Hardware failure
ERR6	Erase timeout	Erasing flash device took more than 30 seconds	1) Hardware failure
ERR7	Program timeout	Programming a byte in flash took more than 500ms	1) Hardware failure
ERR8	Buffer empty timeout	RS232 data buffer was empty for more than 500ms	1) RS232 communication broken.

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December 2004
English

Installation Guide version 1.2
ABT P/N 75-0227-03

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