
TABLE OF CONTENTS

1.	OVERVIEW.....	1
2.	INSTALLATION.....	3
3.	SPECIFICATIONS.....	4
3.1.	SERIAL VIDEO INPUT	4
3.2.	SERIAL VIDEO OUTPUTS.....	4
3.3.	ELECTRICAL	4
3.4.	PHYSICAL.....	4
4.	STATUS LEADS.....	5
4.1.	INPUT 1 INDICATORS	5
4.2.	INPUT 2 INDICATORS	5
5.	LOCATION OF LEADS AND JUMPERS	6
5.1.	SELECTING WHETHER LOCAL FAULTS WILL BE MONITORED BY THE GLOBAL FRAME STATUS.....	6
5.2.	SETTING THE CABLE DRIVER MODE TO HD-SDI OR SD-SDI.....	6
6.	VISTALINK [®] REMOTE MONITORING/CONTROL.....	7
6.1.	WHAT IS VISTALINK [®] ?	7
6.2.	VISTALINK [®] MONITORED PARAMETERS	7
6.3.	VISTALINK [®] TRAPS	8
	TABLE 6-2: VISTALINK [®] TRAPS	8

Figures

Figure 1-1:	500DA2Q-HD-N Block Diagram	2
Figure 2-1:	500DA2Q-HD-N Rear Panel Overlay	3
Figure 5-1:	LED and Jumper Locations	6

REVISION HISTORY

<u>REVISION</u>	<u>DESCRIPTION</u>	<u>DATE</u>
1.0	First Release	Jul 07

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1. OVERVIEW

The 500DA2Q-HD-N Dual HD/SD-SDI Non-Reclocking Distribution Amplifier provides the highest density DA in the industry allowing up to 32 HD-SDI or SD-SDI Distribution Amplifiers in a 3RU rack space. It provides inexpensive distribution of your SMPTE 292M (1.5Gb/s), SMPTE 259M (143 to 360Mb/s) or any other SDI signal within the 143Mb/s to 1.5Gb/s range. The 500DA2Q-HD-N features two auto-equalized inputs.

The 500DA2Q-HD is housed in the 500FR **exponent** Frame that will hold up to 16 modules.

Features:

- Mode for SMPTE 292M (1.5Gb/s) or SMPTE 259M (143-360Mb/s)
- Fully hot-swappable from front of frame with no BNC disconnect required
- Independent isolated output drivers to ensure no cross channel loading effects (i.e. no need to terminate unused outputs)
- Module health and Status LEDs
- Carrier Present LEDs for each DA channel
- Tally output on Frame Status bus upon loss of input signal
- VistaLINK[®] capable for remote monitoring via SNMP (using VistaLINK[®] PRO)
- When installed in 500FR frame with 500FC VistaLINK[®] Frame Controller

Inputs

- 2 inputs
- SMPTE 292M (1.5Gb/s) and SMPTE 259M Compliant
- Auto equalization to 100m Input A, 90m Input B (Belden 1694A) @ 1.5Gb/s

Outputs

- 4 non-reclocked outputs per input
- Jitter < 0.2 UI

Card Edge LEDs

- Module Health Status
- Carrier Present

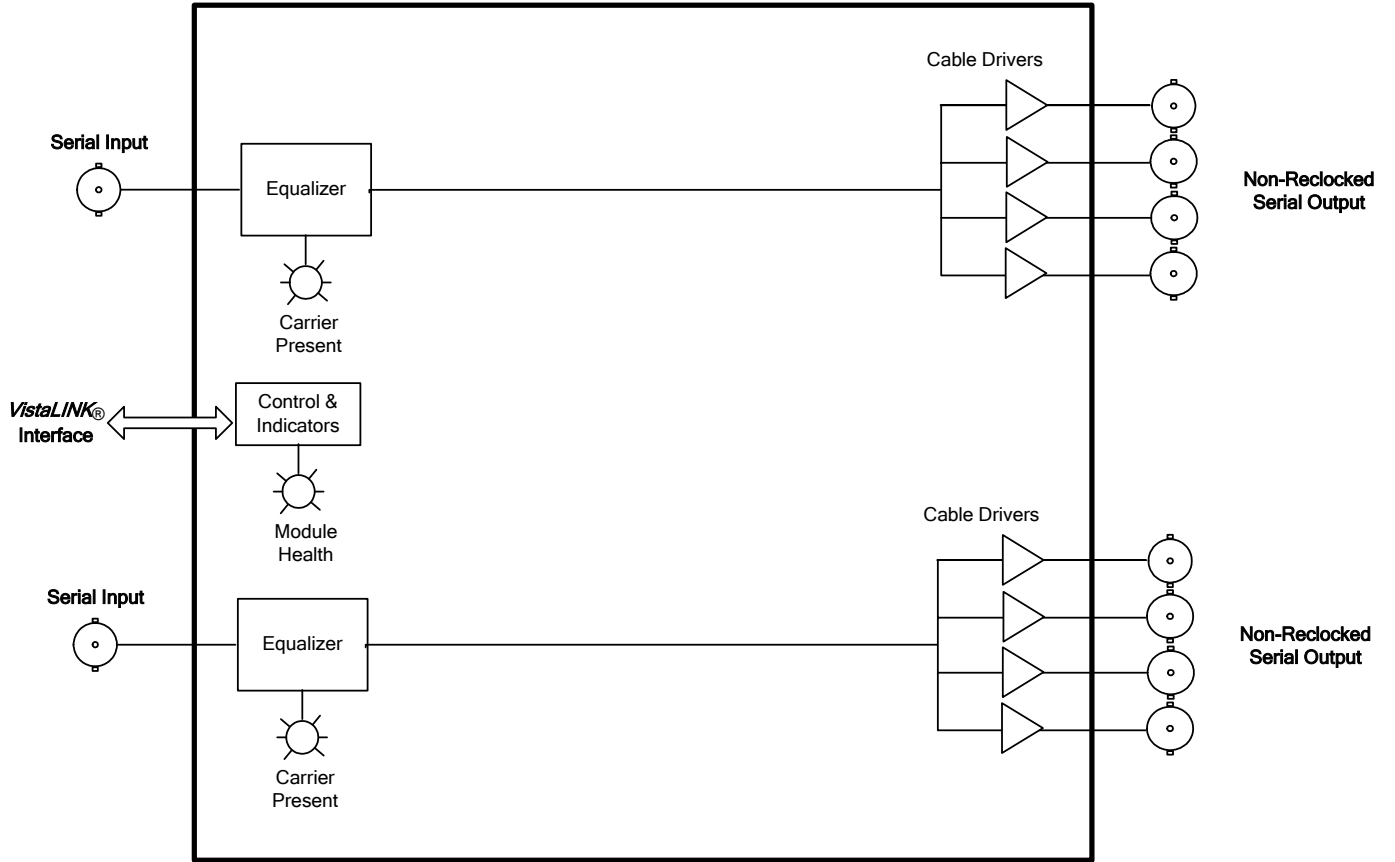


Figure 1-1: 500DA2Q-HD-N Block Diagram

2. INSTALLATION

The 500DA2Q-HD-N comes with a companion rear panel overlay that can be placed over the rear panel BNC connectors to identify their function. For information on inserting the module into the frame see section 3 of the 500FR chapter.

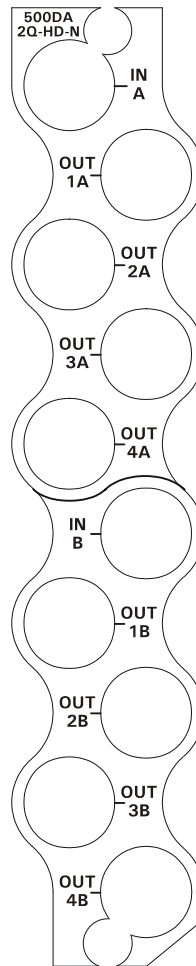


Figure 2-1: 500DA2Q-HD-N Rear Panel Overlay

- IN A & IN B** Input BNC connectors for 10-bit serial digital video signals compatible with the SMPTE 292M, SMPTE 259M, SMPTE 344M and SMPTE 310M (19.4 Mb/s) standards or any SDI signal between the range of 143Mb/s to 1.5 Gb/s.
- OUT 1A to 4A** These four BNC connectors are used to output the serial component video from IN (A).
- OUT 1B to 4B** These four BNC connectors are used to output the serial component video from IN (B).

3. SPECIFICATIONS

3.1. SERIAL VIDEO INPUT

Standards: Any SDI signal in the 143Mb/s to 1.5 Gb/s range
Connectors: 2 BNC per IEC 60169-8 Amendment 2
Equalization: Automatic to 100m @ 1.5 Gb/s with Belden 1694A or equivalent cable on input A
Automatic to 90m @ 1.5 Gb/s with Belden 1694A or equivalent cable on input B
Return Loss: >10 dB up to 1.5 Gb/s

3.2. SERIAL VIDEO OUTPUTS

Number of Outputs: 4 non-reclocked from each input
Connector: BNC per IEC 60169-8 Amendment 2
Signal Level: 800mV nominal
DC Offset: 0V \pm 0.5V
Rise and Fall Time: 200ps nominal
Overshoot: <10% of amplitude
Return Loss: >10 dB up to 1.5 Gb/s
Jitter: < 0.2 UI

3.3. ELECTRICAL

Voltage: + 12VDC
Power: 4 Watts
EMI/RFI: Complies with FCC Part 15 Class A, EU EMC Directive

3.4. PHYSICAL

Number of slots: 1

4. STATUS LEDs

The 500DA2Q-HD-N has four LED Status indicators on the front card edge to show operational status of the card at a glance. Figure 5-1 shows the location of the LEDs.

Two large LEDs on the front of the board indicate the general health of the module

STATUS: This Red LED indicates poor module health or will be On during the absence of both input signals or if a local input power fault exists (i.e.: a blown fuse). The STATUS indication can also be reported to the frame by setting the FRAME STATUS jumper J1 to the ON position.

MODULE OK: This Green LED indicates good module health. It will be On when a valid input signal is applied, and board power is good.

4.1. INPUT 1 INDICATORS

There is one small LED in the middle of the module that indicates the status of equalizer for input.

SIGNAL DETECT: This Green LED will be On when cable equalizer 1 detects that there is a signal present at input 1.

4.2. INPUT 2 INDICATORS

There is one small LED at the bottom of the module that indicates the status of equalizer for input.

CARRIER PRESENT: This Green LED will be On when cable equalizer 2 detects that there is a signal present at input 2.

5. LOCATION OF LEDs AND JUMPERS

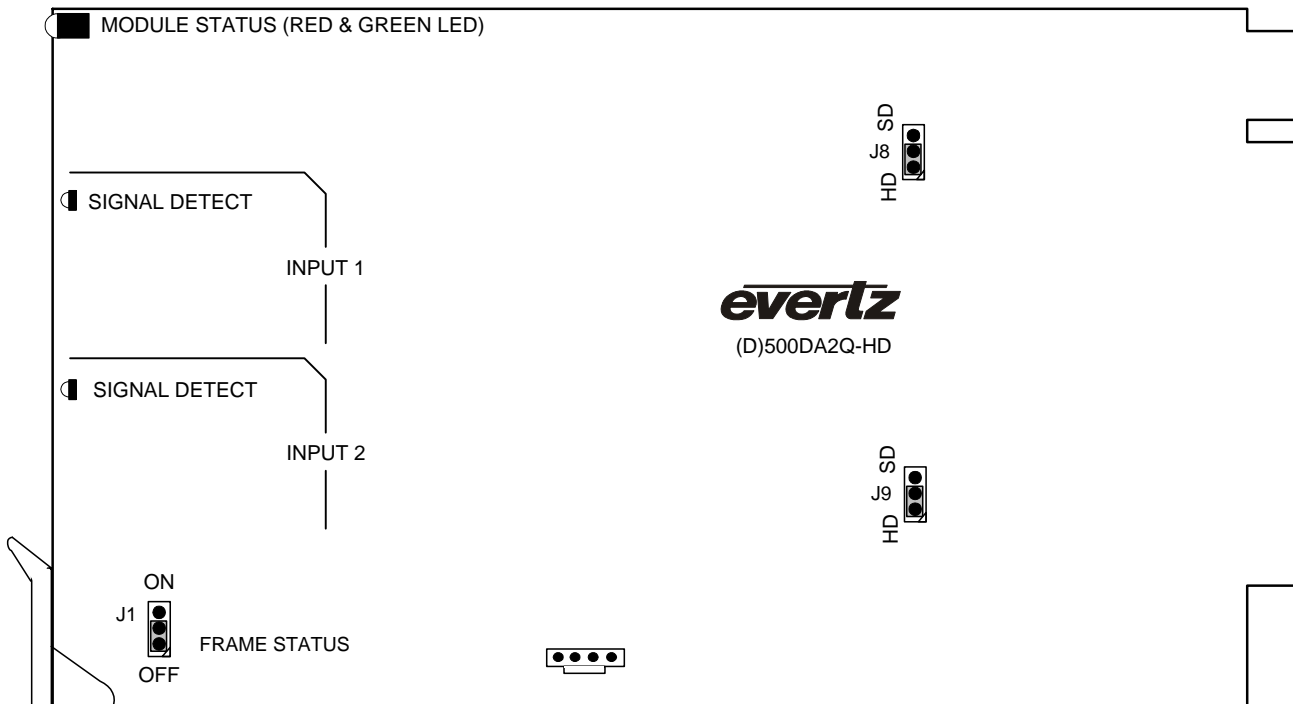


Figure 5-1: LED and Jumper Locations

5.1. SELECTING WHETHER LOCAL FAULTS WILL BE MONITORED BY THE GLOBAL FRAME STATUS

The FRAME STATUS jumper J1, located at the front of the module determines whether local faults (as shown by the Local Fault indicator) will be connected to the 500FR frame's global status bus.

FRAME STATUS: To monitor faults on this module with the frame status indicators (on the power supply's FRAME STATUS LED's and on the Frame's Fault Tally output) install this jumper in the On position.

When this jumper is installed in the Off position local faults on this module will not be monitored.

5.2. SETTING THE CABLE DRIVER MODE TO HD-SDI or SD-SDI

HD/SD MODE: The slew rate of the cable drivers can be configured for HD-SDI or SD-SDI input signals. Jumper J8 will set the mode for the cable drivers of Input 1 and jumper J9 will set the mode for the cable drivers on Input 2.



If the input signal is HD-SDI then set the jumper to HD. If the input signal is SD-SDI then set the jumper to SD.

6. VistaLINK[®] REMOTE MONITORING/CONTROL

6.1. What is VistaLINK[®]?

VistaLINK[®] is Evertz's remote monitoring and configuration platform which operates over an Ethernet network using Simple Network Management Protocol (SNMP). SNMP is a standard computer network protocol that enables different devices sharing the same network to communicate with each other. VistaLINK[®] provides centralized alarm management, which monitors, reports, and logs all incoming alarm events and dispatches alerts to all the VLPro Clients connected to the server. Card configuration through VistaLINK[®] PRO can be performed on an individual or multi-card basis using simple copy and paste routines, which reduces the time to configure each module separately. Finally, VistaLINK[®] enables the user to configure devices in the network from a central station and receive feedback that the configuration has been carried out.

There are 3 components of SNMP:

1. An SNMP manager, also known as a Network Management System (NMS), is a computer running special software that communicates with the devices in the network. Evertz VistaLINK[®] Pro Manager graphical user interface (GUI), third-party, or custom manager software may be used to monitor and control Evertz VistaLINK[®] enabled products.
2. Managed devices, (such as 7700R4x1-HD), each with a unique address (OID), communicate with the NMS through an SNMP Agent. Evertz VistaLINK[®] enabled 7700 series modules reside in the 3RU 7700FR-C MultiFrame and communicate with the manager via the 7700FC VistaLINK[®] frame controller module, which serves as the Agent.
3. A virtual database, known as the Management Information Base (MIB), lists all the variables being monitored, which both the Manager and Agent understand. Please contact Evertz for further information about obtaining a copy of the MIB for interfacing to a third party Manager/NMS.

For more information on connecting and configuring the VistaLINK[®] network, see the 7700FC Frame Controller chapter.

6.2. VistaLINK[®] MONITORED PARAMETERS

The following parameters can be remotely monitored through the VistaLINK[®] interface.

Parameter	Description
Input 1 Locked	Indicates if the module has detected a valid signal on input 1
Input 2 Locked	Indicates if the module has detected a valid signal on input 2
Module OK	Indicates if the module is operating correctly with at least one input signal present

Table 6-1: VistaLINK[®] Monitored Parameters

6.3. VistaLINK® TRAPS

Trap	Description
Input 1 Locked	Triggers when input 1 is not present
Input 2 Locked	Triggers when input 2 is not present
Module OK	Triggers when the module is in a fault state

Table 6-2: VistaLINK® Traps