7708SFP Series **Fiber Optic SFP Card Module User Manual**

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IMPORTANT SAFETY INSTRUCTIONS

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "Dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.
The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (Servicing) instructions in the literature accompanying the product.

- Read these instructions
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC – SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE

WARNING

DO NOT EXPOSE THIS EQUIPMENT TO DRIPPING OR SPLASHING AND ENSURE THAT NO OBJECTS FILLED WITH LIQUIDS ARE PLACED ON THE EQUIPMENT

WARNING

TO COMPLETELY DISCONNECT THIS EQUIPMENT FROM THE AC MAINS, DISCONNECT THE POWER SUPPLY CORD PLUG FROM THE AC RECEPTACLE

WARNING

THE MAINS PLUG OF THE POWER SUPPLY CORD SHALL REMAIN READILY OPERABLE

INFORMATION TO USERS IN EUROPE

<u>NOTE</u>

CISPR 22 CLASS A DIGITAL DEVICE OR PERIPHERAL

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to the European Union EMC directive. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.



EN60065 EN55103-1: 1996 EN55103-2: 1996 Safety Emission Immunity



EN504192 2005 Waste electrical products should not be disposed of with household waste. Contact your Local Authority for recycling advice

INFORMATION TO USERS IN THE U.S.A.

<u>NOTE</u>

FCC CLASS A DIGITAL DEVICE OR PERIPHERAL

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

WARNING

Changes or Modifications not expressly approved by Evertz Microsystems Ltd. could void the user's authority to operate the equipment.

Use of unshielded plugs or cables may cause radiation interference. Properly shielded interface cables with the shield connected to the chassis ground of the device must be used.



TABLE OF CONTENTS

1.	OVE	RVIEW	1
	1.1.	7708SFP VERSIONS	2
	1.2.	SFP OPTIONS	4
2.	GET	TING STARTED	7
3.	TEC	HNICAL SPECIFICATIONS	9
	3.1.	SYSTEM	9
	3.2.	OPTICAL OUTPUT	9
	3.3.	OPTICAL INPUT	9
	3.4.	ELECTRICAL INPUTS	9
	3.5.	RECLOCKED ELECTRICAL OUTPUTS	10
	3.6.	ELECTRICAL OUTPUTS	10
	3.7.	COMPLIANCE	10
	3.8.	PHYSICAL (NUMBER OF SLOTS)	10
	3.9.	ELECTRICAL	10
4.	VIST	ALINK PRO INTERFACE	11
	4.1.	CONNECTING TO VLPRO	11
	4.2.	7708SFP ON VISTALINK PRO	12
		4.2.1. Control	12
		4.2.2. Monitor	13 14
	4.3.	7708SFP-2 ON VISTALINK PRO	15
		4.3.1. Control	15
	4.4.	7708SFP-2-DIN ON VISTALINK PRO	19
		4.4.1. Control	19
		4.4.2. Monitor	20 22
	4.5.	7708SFP-4-DIN-A	24
		4.5.1. Control	24
		4.5.2. Monitor	26 28
_			-0
5.	UPG	RADING THE FIRMWARE	31
	5.1.	CHECKING FIRMWARE VERSION ON THE 7708SFP SERIES	31
		5.1.1. Downloading the //U85FP Image	31



5.2.	REMOTE UPGRADE PROCEDURE USING VISTALINK.	
•	5.2.1. Upgrading the 7708SFP Image using VistaLINK _®	
5.3.	UPGRADING SERIALLY THROUGH THE SERIAL PORT	
	5.3.1. Setting the 7708SFP to Upgrade Mode	
	5.3.2. Setting up the Serial Baud Rate	
5.4.	UPGRADING IN UPGRADE MODE	
5.5.	UPGRADING IN RUN MODE	
	5.5.1. Viewing Upgrade Information	35
JAR	UPGRADE PROCEDURES	
6.1.	VISTALINK PRO JAR FILE UPGRADE	

Figures

6.

Figure 1-1: 7708SFP Block Diagram	2
Figure 1-2: 7708SFP-2 and 7708SFP-2 DIN Block Diagram	2
Figure 1-3: 7708SFP-4-DIN-A	3
Figure 1-4: Complete Block Diagram Overview	3
Figure 1-5: SFP Options	6
Figure 2-1: Rear Plate Options	7
Figure 4-1: Control Conguration Screen	12
Figure 4-2: Monitor Screen	13
Figure 4-3: Trap Enable & Fault Status	14
Figure 4-4: Control Configuration Screen	15
Figure 4-5: Monitor Screen	16
Figure 4-6: Trap Enable & Fault Status	18
Figure 4-7: Control Configuration Screen	19
Figure 4-8: Monitor Screen	20
Figure 4-9: Trap Enable & Fault Status	22
Figure 4-10: Control Configuration Screen	24
Figure 4-11: Monitor Screen	26
Figure 4-12: Trap Enable & Fault Status	28
Figure 5-1: Version Information	31
Figure 5-2: Baud Rate Settings on COM port	33
Figure 6-1: Jar File Version Information	37
Figure 6-2: Downloading Jar File from Everts.com	37
Figure 6-3: VistaLINK _® PRO Server	38
Figure 6-4: Alarm Server Restart Notification	38

Tables

Table 1: Types of 7708SFP Modules	2
Table 2: 7708SFP Optical and Electrical Mapppings	4



REVISION HISTORY

REVISION

DESCRIPTION

DATE

1.0 First Release

Feb 2015

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Although every attempt has been made to accurately describe the features, installation and operation of this product in this manual, no warranty is granted nor liability assumed in relation to any errors or omissions unless specifically undertaken in the Evertz sales contract or order confirmation. Information contained in this manual is periodically updated and changes will be incorporated into subsequent editions. If you encounter an error, please notify Evertz Customer Service department. Evertz reserves the right, without notice or liability, to make changes in equipment design or specifications.



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1. OVERVIEW

The Evertz 7708SFP series is a card-based equivalient to the 3405FR series fiber optic SFP frames. The 7708SFP series can accommodate any 3405 series SFP, allowing the SFP cages to be populated as needed with optical transmit, receive, regenerator or electrical distribution amplifier SFP's. The 7708SFP series offers a very high-density and cost-effective solution for constructing modern fiber optic infrastructures. Benefits of fiber optics for video transport include longer attainable distances, smaller/lighter cabling, reduced cable tray loads and electrical isolation. The 7708SFP series provides a low-overhead means for simple electrical/optical conversion for interfacility transport, as well as over coming the limitations imposed by coaxial cable in intra-facility applications.

The 3405 series SFP's are able to handle ASI, SDI, HD-SDI and 3G digital video signals, as well as other signal rates up to 3 Gig on non-reclocked versions (e.g. MADI). The SFP modules are hot-swappable on the rear panel, allowing for quick servicing or easy configuration or expansion at any time. 16 CWDM wavelengths are also available, which when combined with Evertz CWDM products allows up to 16 signals to be multiplexed on to a single fiber, greatly conserving fiber usage.

The 7708SFP modules support full remote monitoring and control over SNMP/VistaLINK® when used in conjunction with an Evertz fame with frame controller module. Numerous parameters such as optical power and electrical signal presence and rate can be accessed remotely to monitor system integrity.

Features & Benefits

- Models available to hold one, two or four SFP's to suit different capacity requirements
- Models available with BNC or DIN 1.0/2.3 connectors to suit different density or connector preferences
- Any combination of 3405SFP types may be installed in a single card including optical transmit, receive, regenerator and electrical distribution amplifiers
- SFP modules are hot-swappable from the rear plate
- 7708SFP card modules are hot swappable through the front of the frame
- Comprehensive signal and card status monitoring via four digit card edge display or remotely through SNMP and VistaLINK_® when used in conjunction with an Evertz frame controller module



1.1. 7708SFP VERSIONS

Model	Description	Connector	Number of Slot	Density
7708SFP	Single SFP BNC card module	BNC	1	Up to 2 EO or OE conversions in 1 card slot
7708SFP-2	Dual SFP BNC card module	BNC	2	Up to 4 EO, OE, or mixture of EO and OE in 2 card slots
7708SFP-2-DIN	Dual SFP DIN card module	DIN 1.0/2.3	1	Up to 4 EO, OE, or mixture of EO and OE in 1 card slot
7708SFP-4-DIN-A	Quad SFP DIN card module	DIN 1.0/2.3	2	Up to 8 EO, OE, or mixture of EO and OE in 2 card slots

The 7708SFP series is available in four different versions:

Table 1: Types of 7708SFP Modules









Figure 1-4: Complete Block Diagram Overview



1.2. SFP OPTIONS

SFP Type	Optical and Electrical Layout
3405T13-2/	Electrical Input A maps to Optical Out A
3405Txx/yy-2	Electrical Input B maps to Optical Out B
	Electrical input C and D not used
3405T13-R/	Electrical Input A maps to Optical Output A
3405Txx-R	Electrical Input A maps to Electrical output B, C, D
	Optical Out B not used
3405R-2R	Optical Input A maps to Electrical Output A and C (reclocked)
(reclocked)	Optical Input B maps to Electrical Output B and D (reclocked)
3405R-2	Optical Input A maps to Electrical Output A and C
	Optical Input B maps to Electrical Output B and D
3405R-DA4R	Optical input B maps to Electrical Output A, B, C, D (reclocked)
(reclocked)	
34050013-DA4/	Optical Input B maps to Electrical Output A, B, C, D (reclocked) and Optical
340500xx-DA4	Output A
(reclocked)	
3405DA5	SFP Electrical Input A maps to Electrical Output A, B, C,D (reclocked) and SFP
(reclocked)	Electrical Output B

Table 2: 7708SFP Optical and Electrical Mapppings















2. GETTING STARTED

Each 7708SFP module comes with a companion rear plate that has at least one SFP connector (depending on the options ordered). In addition, there can be an array of BNC or DIN connectors used to to suit different density or connector preferences.



Figure 2-1: Rear Plate Options



NOTE: SFP's must be ordered separately.



To successfully install the 7708SFP module you will require the following:

- 1. VistaLINK_® PRO Server IP address.
- 2. 7700 or 7800 Series Frame.
- 3. 7700 or 7800 Frame Controller.

Before handling the card it is important to minimize the potential effects of static electricity. It is therefore recommended that an ESD strap be worn.

Locate on the chassis one or two vacant slots depending on the module size. Unpack the 7708SFP and separate the rear panel from the main card. Locate on the rear of the rack the one or two empty slots and remove the blank panels. Insert the rear panel into the back of the chassis and secure using the screws provided.

Now insert the 7708SFP card into the corresponding front slots ensuring the card lines up with the slot runners on the bottom and the top of the chassis. Push the card firmly into the slot ensuring that when it mates with the rear card it has been firmly pushed into a seated position.

When installing the Evertz SFP module into the rear plate SFP housing, align the transmit and receive arrow indicators to the LEFT with the rear plate upright. Gently slide the SFP module into the rear plate SFP housing until it clicks into place.



3. TECHNICAL SPECIFICATIONS

3.1. SYSTEM

Density:

7708SFP: 7708SFP-2: 7708SFP-2-DIN: 7708SFP-4-DIN-A: 1 SFP module Up to 2 SFP modules Up to 2 SFP modules Up to 4 SFP modules 75Ω

Impedance: Connector:

 7708SFP:
 BNC per IEC 61169-8 Annex A

 7708SFP-2:
 BNC per IEC 61169-8 Annex A

 7708SFP-2-DIN:
 DIN 1.0/2.3

 7708SFP-4-DIN-A:
 DIN 1.0/2.3

3.2. OPTICAL OUTPUT

Number of Outputs:	Up to 2 per SFP
Connector:	LC/UPC
Rise/Fall Time:	<270ps
Optical Power:	•
Standard:	-2dBm +/-1dBm
CWDM:	+3.5dBm +/-1dBm

3.3. OPTICAL INPUT

Number of Inputs:	Up to 2 per SFP
Connector:	LC/UPC
Operating Wavelength:	1270nm to 1610
Maximum Input Power:	
Standard:	-1dBm
Optical Sensitivity:	
Standard:	-21dBm at 2.97Gb/s pathological Level A

3.4. ELECTRICAL INPUTS

7708SFP-2-DIN:

7708SFP-4-DIN-A:

Reclocked Standard:	SMPTE 424M (3Gb/s) SMPTE ST 292-1 (1.5Gb/s)
	SMPTE ST 259 (270Mb/s) DVB-ASI
Connector:	
7708SFP:	BNC per IEC 61169-8 Annex A
7708SFP-2:	BNC per IEC 61169-8 Annex A

DIN 1.0/2.3

DIN 1.0/2.3

-23dBm at 2.97Gb/s color bars



Equalization:

Return Loss:

Automatic to 80m @ 3Gb/s 100m @ 1.5Gb/s 250m @ 270Mb/s (wih Belden 1694A or equivalent) >15dB up to 1.5GHz >10dB to 3GHz

3.5. RECLOCKED ELECTRICAL OUTPUTS

Signal Level:
DC Offset:
Rise and Fall Time:
HD/3G:
SD:
Overshoot:

800mV (nominal) 0V +/0.5V

<135ps <900ps <0.2UI (Reclocked) to 1.485Gb/s <0.3UI (Reclocked) to 2.97 Gb/s

3.6. ELECTRICAL OUTPUTS

Connector:

7708SFP:	BNC per IEC 61169-8 Annex A
7708SFP-2:	BNC per IEC 61169-8 Annex A
7708SFP-2-DIN:	DIN 1.0/2.3
7708SFP-4-DIN-A:	DIN 1.0/2.3
Impedance:	75Ω (nominal)
Return Loss:	>15dB to 1.5GHz
	>10dB to 3GHz

3.7. COMPLIANCE

Laser Safety:	Class 1 laser product, Complies with 24 CFR 1040.10 and
	1040.11, IEC 60825-1
EMR/RFI:	Complies with FCC part 15, Class A complies with EU EMC
	Directives

3.8. PHYSICAL (NUMBER OF SLOTS)

7708SFP:	1
7708SFP-2:	2
7708SFP-2-DIN:	1
7708SFP-4-DIN-A:	2

3.9. ELECTRICAL

Voltage:	+12V DC
Power:	11W (max)



4. VISTALINK PRO INTERFACE

4.1. CONNECTING TO VLPRO

This chapter assumes that the VistaLINK_® PRO server and client are already configured for your network and you have basic knowledge of the VistaLINK_® PRO interface. It also assumes that the user or network administrator has already added the appropriate jar file to the server, and both the client and server applications have been restarted. Please refer to the VistaLINK_® PRO manual for instructions on how to load a jar file.

Open VistaLINK_® PRO and click on the refresh tree icon. Expand the hardware tree by clicking on the "+" button. Your card should appear as a newly listed device under the IP address used for the frame controller.



Please consult your network administrator if you continue to have problems connecting the card with VistaLINK_® PRO, alternatively contact Evertz Microsystems Ltd. or your authorized reseller for technical support.



4.2. 7708SFP ON VISTALINK PRO

4.2.1. Control

sh 🕼 🗘 1.0 Apply 🛨 🐧	Status		🛛 🗙 Logger 🔳
Control Monitor Notify			
SFP 1			
Transmitter Squelch A	Off		
Transmitter Squelch B	Off		
Receiver Squelch A	Off	-	
Receiver Squelch B	Off	-	
Receiver Low Optical Threshold A		• •	
Receiver Low Optical Threshold B			
Receiver Output Slew Rate A	SD	v -2	
Receiver Output Slew Rate B	SD	T	
Receiver Swap Channels	No	~	
Receiver Invert Output A	No	T	
Receiver Invert Output B	No	-	
Output Mute	No	-	
Reclocker Mode	Auto Bypass	V	
Switch Mode	Auto No Switch Back	V	
Switch Type	Signal Presence Loss	-	

Figure 4-1: Control Conguration Screen

Transmitter Squelch: This control allows the user to either enable or disable the ability to Squelch transmitted signals.

Receiver Squelch: This control allows the user to either enable or disable the ability to Squelch received signals.

Receiver Low Optical Threshold: This control allows the user to set the minimum optical level drop being received in in dB. Range for this value can be from -2dB to -40dB.

Receiver Output Slew Rate: This control allows the user to set the slew rate to either SD,or HD/3G on the receiver output.



Receiver Swap Channels: This control allows channel swapping for input streams.

Receiver Invert Output: This control allows the user to invert the output being received on Output A or B.

Output Mute: This control allows the user to mute the output.

Reclocker Mode: This control allows the user to set the reclocking method to either Auto Bypass or Forced Bypass.

Switch Mode: This control allows the user to set the switching method to Auto No Switch Back, Auto with Switch Back, Forced Channel A, or Forced Channel B.

Switch Type: This control allows the user to define the method switch type to detect based on Signal Presence Loss, or Reclock Loss.

Full Refresh 💽 🔂 1.0 Apply 🕈 🤻	🕼 Status	🗙 Logger 🔳
Control Monitor Notify	-	
Management Monitor		
Card Type		
SFP 1		-
Module Type		
Module Serial Number		
Module Version		
Upgrade Support		
Receiver Optical Power A		
Receiver Optical Power B		
Receiver Detected Standard A		
Receiver Detected Standard B		
Transmitter Wave Length A		
Transmitter Wave Length B		
Transmitter Laser Status A	ОК	
Transmitter Laser Status B	ок	
Transmitter Laser Enable A	Disabled	
Transmitter Laser Enable B	Disabled	
Transmitter Detected Standard A		
Transmitter Detected Standard B		

Figure 4-2: Monitor Screen

4.2.2. Monitor



Module Type: Displays the 7708SFP series module type

Module Serial Number: Displays the part serial number, this is required to access the card via Evertz Product Support Services Web page.

Module Version: Displays the current firmware version being used on the card.

Upgrade Support: Displays whether or not there is Upgrade Support that is provided for the current firmware version.

Receiver Optical Power: This control displays the currently measured optical power on the receiver input in dB.

Receiver Detected Standard: Displays video output standard

Transmitter Wave Length: This control displays the current wavelength in nanometres(nm) being transmitted.

Transmitter Laser Status: This control displays the current transmitter laser status.

Transmitter Laser Enable: This control displays will confirm if the transmitter laser is either 'Enabled' or 'Disabled'.

Transmitter Detected Standard: Displays Video input standard

4.2.3. Notify



Figure 4-3: Trap Enable & Fault Status

Receiver Optical Power High: Optical input power exceeds max input power specification.

Receiver Optical Power Low: Optical input power below threshold.



No Input Detected: Video not present. **Reclocker loss:** Video not detected by reclocker.

Transmitter Laser Status: Laser health.

SFP Communication Loss: SFP communication with FC not present.

4.3. 7708SFP-2 ON VISTALINK PRO

4.3.1. Control

Full Refresh 😋 💲 1.0 Apply 🛨	😻 Status		🗙 Logger 🔳		
Control Monitor Notify					
SFP 1			SFP 2		
Transmitter Squelch A	Off	V	Transmitter Squelch A	Off	T
Transmitter Squelch B	Off	T	Transmitter Squelch B	Off	T
Receiver Squelch A	Off	T	Receiver Squelch A	Off	T
Receiver Squelch B	Off	T	Receiver Squelch B	Off	T
Receiver Low Optical Threshold A		●2	Receiver Low Optical Threshold A		
Receiver Low Optical Threshold B			Receiver Low Optical Threshold B		
Receiver Output Slew Rate A	SD	T	Receiver Output Slew Rate A	SD	T
Receiver Output Slew Rate B	SD	T	Receiver Output Slew Rate B	SD	T
Receiver Swap Channels	No	T	Receiver Swap Channels	No	T
Receiver Invert Output A	No	T	Receiver Invert Output A	No	T
Receiver Invert Output B	No	T	Receiver Invert Output B	No	T
Output Mute	No	T	Output Mute	No	T
Reclocker Mode	Auto Bypass	T	Reclocker Mode	Auto Bypass	T
Switch Mode	Auto No Switch Back	T	Switch Mode	Auto No Switch Back	T
Switch Type	Signal Presence Loss	T	Switch Type	Signal Presence Loss	T

Figure 4-4: Control Configuration Screen

Transmitter Squelch: This control allows the user to either enable or disable the ability to Squelch transmitted signals.

Receiver Squelch: This control allows the user to either enable or disable the ability to Squelch received signals.

Receiver Low Optical Threshold: This control allows the user to set the minimum optical level drop being received in in dB. Range for this value can be from -2dB to -40dB.

Receiver Output Slew Rate: This control allows the user to set the slew rate to either SD, HD, or 3G on the receiver output.

Receiver Swap Channels: This control allows channel swapping for input streams.



Receiver Invert Output: This control allows the user to invert the output being received on Output A or B.

Output Mute: This control allows the user to mute the output.

Reclocker Mode: This control allows the user to set the reclocking method to either Auto Bypass or Forced Bypass.

Switch Mode: This control allows the user to set the switching method to Auto No Switch Back, Auto With Switch Back, Forced Channel A, or Forced Channel B.

Switch Type: This control allows the user to define the method switch type to detect based on Signal Presence Loss, or Reclock Loss.

Control Monitor Notify		
Management Monitor	_	
Card Type		
SFP 1	SFP 2	
Module Type	Module Type	
Module Serial Number	Module Serial Number	
Module Version	Module Version	
Upgrade Support	Upprade Support	
Receiver Oplical Power A	Receiver Optical Power A	
Receiver Optical Power B	Receiver Optical Power B	
Receiver Detected Standard A	Receiver Detected Standard A	
Receiver Detected Standard B	Receiver Detected Standard B	
Transmitter Wave Length A	Transmitter Wave Length A	
Transmitter Wave Length B	Transmitter Wave Length B	
Transmitter Laser Status A	Transmitter Laser Status A	
Transmitter Laser Status B	Transmitter Laser Status B	
Transmitter Laser Enable A	Transmitter Laser Enable A	
Transmitter Laser Enable B	Transmitter Laser Enable B	
Transmitter Detected Standard A	Transmitter Detected Standard A	
Transmitter Detected Standard B	Transmitter Detected Standard B	
Signal Presence A	Signal Presence A	
Signal Presence B	Signal Presence B	
Signal Lock A	Signal Lock A	
Signal Lock B	Signal Lock B	
Signal Rate A	Signal Rate A	
Signal Rate B	Signal Rate B	

Figure 4-5: Monitor Screen

Module Type: Displays the 7708SFP series module type



Module Serial Number: Displays the part serial number, this is required to access the card via Evertz Product Support Services Web page.

Module Version: Displays the current firmware version being used on the card.

Upgrade Support: Displays whether or not there is Upgrade Support that is provided for the current firmware version.

Receiver Optical Power: This control displays the currently measured optical power on the receiver input in dB.

Receiver Detected Standard: Displays video output standard

Transmitter Wave Length: This control displays the current wavelength in nanometres(nm) being transmitted.

Transmitter Laser Status: This control displays the current transmitter laser status.

Transmitter Laser Enable: This control displays will confirm if the transmitter laser is either 'Enabled' or 'Disabled'.

Transmitter Detected Standard: Displays video input standard

Signal Presence: Displays the current signal presence status.

Signal Lock: Displays if the current lock status of the signal being transmitted.

Signal Rate: Displays the surrent signal rate being transmitted.

7708SFP Fiber Optic SFP Card Module



Control	Monitor Notify		
Trap En	able SFP 1	Fault Sta	atus SFP 1
	Receiver Optical Power High A		Receiver Optical Power High A
	Receiver Optical Power High B		Receiver Optical Power High B
	Receiver Optical Power Low A		Receiver Optical Power Low A
	Receiver Optical Power Low B		Receiver Optical Power Low B
	No Input Detected A		No Input Detected A
	No Input Detected B		No Input Detected B
	Reclocker Loss A		Reclocker Loss A
	Reclocker Loss B		Reclocker Loss B
	Transmitter Laser Status A		Transmitter Laser Status A
	Transmitter Laser Status B		Transmitter Laser Status B
	SFP Communication Loss		SFP Communication Loss
Trap En	able SFP 2	Fault Sta	atus SFP 2
Trap En	able SFP 2 Receiver Optical Power High A	Fault Sta	atus SFP 2 Receiver Optical Power High A
Trap En	able SFP 2 Receiver Optical Power High A Receiver Optical Power High B	Fault Sta	atus SFP 2 Receiver Optical Power High A Receiver Optical Power High B
Trap En	able SFP 2 Receiver Optical Power High A Receiver Optical Power High B Receiver Optical Power Low A	Fault Sta	atus SFP 2 Receiver Optical Power High A Receiver Optical Power High B Receiver Optical Power Low A
Trap En	able SFP 2 Receiver Optical Power High A Receiver Optical Power High B Receiver Optical Power Low A Receiver Optical Power Low B	Fault Sta	atus SFP 2 Receiver Optical Power High A Receiver Optical Power High B Receiver Optical Power Low A Receiver Optical Power Low B
Trap En	able SFP 2 Receiver Optical Power High A Receiver Optical Power High B Receiver Optical Power Low A Receiver Optical Power Low B No Input Detected A	Fault Sta	Atus SFP 2 Receiver Optical Power High A Receiver Optical Power High B Receiver Optical Power Low A Receiver Optical Power Low B No Input Detected A
Trap En	able SFP 2 Receiver Optical Power High A Receiver Optical Power Low A Receiver Optical Power Low B No Input Detected A No Input Detected B	Fault Sta	atus SFP 2 Receiver Optical Power High A Receiver Optical Power High B Receiver Optical Power Low A Receiver Optical Power Low B No Input Detected A No Input Detected B
	able SFP 2 Receiver Optical Power High A Receiver Optical Power High B Receiver Optical Power Low A Receiver Optical Power Low B No Input Detected A No Input Detected B Reclocker Loss A	Fault Sta	Atus SFP 2 Receiver Optical Power High A Receiver Optical Power High B Receiver Optical Power Low A Receiver Optical Power Low B No Input Detected A No Input Detected B Reclocker Loss A
Trap En	Able SFP 2 Receiver Optical Power High A Receiver Optical Power Low A Receiver Optical Power Low B No Input Detected A No Input Detected B Reclocker Loss A Reclocker Loss B	Fault Sta	atus SFP 2 Receiver Optical Power High A Receiver Optical Power High B Receiver Optical Power Low A Receiver Optical Power Low B No Input Detected A No Input Detected B Reclocker Loss A Reclocker Loss B
Trap En	able SFP 2 Receiver Optical Power High A Receiver Optical Power High B Receiver Optical Power Low A Receiver Optical Power Low B No Input Detected A No Input Detected B Reclocker Loss A Reclocker Loss B Transmitter Laser Status A	Fault Sta	Atus SFP 2 Receiver Optical Power High A Receiver Optical Power High B Receiver Optical Power Low A Receiver Optical Power Low B No Input Detected A No Input Detected B Reclocker Loss A Reclocker Loss B Transmitter Laser Status A
Trap En	able SFP 2 Receiver Optical Power High A Receiver Optical Power High B Receiver Optical Power Low A Receiver Optical Power Low B No Input Detected A No Input Detected B Reclocker Loss A Reclocker Loss B Transmitter Laser Status A Transmitter Laser Status B	Fault Sta	atus SFP 2 Receiver Optical Power High A Receiver Optical Power Ligh B Receiver Optical Power Low A Receiver Optical Power Low B No Input Detected A No Input Detected B Reclocker Loss A Reclocker Loss B Transmitter Laser Status A Transmitter Laser Status B
Trap En	Able SFP 2 Receiver Optical Power High A Receiver Optical Power High B Receiver Optical Power Low A Receiver Optical Power Low B No Input Detected A No Input Detected B Reclocker Loss A Reclocker Loss B Transmitter Laser Status A Transmitter Laser Status B SFP Communication Loss	Fault Sta	Atus SFP 2 Receiver Optical Power High A Receiver Optical Power High B Receiver Optical Power Low A Receiver Optical Power Low B No Input Detected A No Input Detected B Reclocker Loss A Reclocker Loss B Transmitter Laser Status A Transmitter Laser Status B SFP Communication Loss

Figure 4-6: Trap Enable & Fault Status

Receiver Optical Power High: Optical input power exceeds max input power specification.

Receiver Optical Power Low: Optical input power below threshold.

No Input Detected: Video not present.

Reclocker loss: Video not detected by reclocker.

Transmitter Laser Status: Laser health.

SFP Communication Loss: SFP communication with FC not present.



4.4. 7708SFP-2-DIN ON VISTALINK PRO

4.4.1. Control

sull Refresh 😋 🕄 1.0 Apply 🛨	😻 Status		🗙 Logger 🔳		
Control Monitor Notify					
SFP 1			SFP 2		
Transmitter Squelch A	Off	T	Transmitter Squelch A	Off	V
Transmitter Squelch B	Off	T	Transmitter Squelch B	Off	T
Receiver Squelch A	Off	T	Receiver Squelch A	Off	T
Receiver Squelch B	Off	T	Receiver Squelch B	Off	T
Receiver Low Optical Threshold A		2	Receiver Low Optical Threshold A		
Receiver Low Optical Threshold B		2	Receiver Low Optical Threshold B		
Receiver Output Slew Rate A	SD	T	Receiver Output Slew Rate A	SD	V
Receiver Output Slew Rate B	SD	T	Receiver Output Slew Rate B	SD	V
Receiver Swap Channels	No	T	Receiver Swap Channels	No	V
Receiver Invert Output A	No	T	Receiver Invert Output A	No	T
Receiver Invert Output B	No	T	Receiver Invert Output B	No	T
Output Mute	No	T	Output Mute	No	T
Reclocker Mode	Auto Bypass	T	Reclocker Mode	Auto Bypass	T
Switch Mode	Auto No Switch Back	T	Switch Mode	Auto No Switch Back	T
Switch Type	Signal Presence Loss	T	Switch Type	Signal Presence Loss	T

Figure 4-7: Control Configuration Screen

Transmitter Squelch: This control allows the user to either enable or disable the ability to Squelch transmitted signals.

Receiver Squelch: This control allows the user to either enable or disable the ability to Squelch received signals.

Receiver Low Optical Threshold: This control allows the user to set the minimum optical level drop being received in in dB. Range for this value can be from -2dB to -40dB.

Receiver Output Slew Rate: This control allows the user to set the slew rate to either SD, HD, or 3G on the receiver output.

Receiver Swap Channels: This control allows channel swapping for input streams.

Receiver Invert Output: This control allows the user to invert the output being received on Output A or B.

Output Mute: This control allows the user to mute the output.

Reclocker Mode: This control allows the user to set the reclocking method to either Auto Bypass or Forced Bypass.

7708SFP Fiber Optic SFP Card Module



Switch Mode: This control allows the user to set the switching method to Auto No Switch Back, Auto With Switch Back, Forced Channel A, or Forced Channel B.

Switch Type: This control allows the user to define the method switch type to detect based on Signal Presence Loss, or Reclock Loss.

4.4.2. Monitor

Full Refresh 😋 🗘 1.0 Apply 🛓 🤮	Status	🗙 Logger 🔳	
Control Monitor Notify			
Management Monitor		1	
Card Type			
SFP 1		SFP 2	
Module Type		Module Type	
Module Serial Number		Module Serial Number	
Module Version		Module Version	
Upgrade Support		Upgrade Support	
Receiver Optical Power A		Receiver Optical Power A	
Receiver Optical Power B		Receiver Optical Power B	
Receiver Detected Standard A		Receiver Detected Standard A	
Receiver Detected Standard B		Receiver Detected Standard B	
Transmitter Wave Length A		Transmitter Wave Length A	
Transmitter Wave Length B		Transmitter Wave Length B	
Transmitter Laser Status A		Transmitter Laser Status A	
Transmitter Laser Status B		Transmitter Laser Status B	
Transmitter Laser Enable A		Transmitter Laser Enable A	
Transmitter Laser Enable B		Transmitter Laser Enable B	
Transmitter Detected Standard A		Transmitter Detected Standard A	
Transmitter Detected Standard B		Transmitter Detected Standard B	
Signal Presence A		Signal Presence A	
Signal Presence B		Signal Presence B	
Signal Lock A		Signal Lock A	
Signal Lock B		Signal Lock B	
Signal Rate A		Signal Rate A	
Signal Rate B		Signal Rate B	
Cable Equalization A		Cable Equalization A	
Cable Equalization B		Cable Equalization B	

Figure 4-8: Monitor Screen

Module Type: Displays the 7708SFP series module type

Module Serial Number: Displays the part serial number, this is required to access the card via Evertz Product Support Services Web page.



Module Version: Displays the current firmware version being used on the card.

Upgrade Support: Displays whether or not there is Upgrade Support that is provided for the current firmware version.

Receiver Optical Power: This control displays the currently measured optical power on the receiver input in dB.

Receiver Detected Standard: Displays video output standard

Transmitter Wave Length: This control displays the current wavelength in nanometres(nm) being transmitted.

Transmitter Laser Status: This control displays the current transmitter laser status.

Transmitter Laser Enable: This control displays will confirm if the transmitter laser is either 'Enabled' or 'Disabled'.

Transmitter Detected Standard: Displays video input standard

Signal Presence: Displays the current signal presence status.

Signal Lock: Displays if the current lock status of the signal being transmitted.

Signal Rate: Displays the surrent signal rate being transmitted.

Cable Equalization: Displays the frequency losses being experienced on the current cable due to possible attenuation caused by external cabling.

7708SFP Fiber Optic SFP Card Module



4.4.3. Notify

Full Refresh	😋 😳 1.0 Apply 🛨 🌞 Status		🗙 Logger 🔳
Control	Monitor Notify		
Trap Ena	able SFP 1	Fault St	atus SFP 1
	Receiver Optical Power High A		Receiver Optical Power High A
	Receiver Optical Power High B		Receiver Optical Power High B
	Receiver Optical Power Low A		Receiver Optical Power Low A
	Receiver Optical Power Low B		Receiver Optical Power Low B
	No Input Detected A		No Input Detected A
	No Input Detected B		No Input Detected B
	Reclocker Loss A		Reclocker Loss A
	Reclocker Loss B		Reclocker Loss B
	Transmitter Laser Status A		Transmitter Laser Status A
	Transmitter Laser Status B		Transmitter Laser Status B
	SFP Communication Loss		SFP Communication Loss
Trap Ena	able SFP 2	Fault St	atus SFP 2
			Receiver Optical Power High A
			Receiver Optical Power High B
	Receiver Optical Power Low A		Receiver Optical Power Low A
	Receiver Optical Power Low B		Receiver Optical Power Low B
	No Input Detected A		No Input Detected A
	No Input Detected B		No Input Detected B
	Reclocker Loss A		Reclocker Loss A
	Reclocker Loss B		Reclocker Loss B
	Transmitter Laser Status A		Transmitter Laser Status A
	Transmitter Laser Status B		Transmitter Laser Status B
	SFP Communication Loss		SFP Communication Loss
Tree Fee		Eauth Ch	SED 2
	Receiver Optical Power High A		Receiver Optical Power High A
	Receiver Optical Power High B	-	Receiver Optical Power High B
-	Receiver Optical Power Low A	-	Receiver Optical Power Low A
	Receiver Optical Power Low B	-	Receiver Optical Power Low B
	No Input Detected A	-	No Input Detected A
	No Input Detected B		No Input Detected B
	Reclocker Loss A		Reclocker Loss A
	Reclocker Loss B		Reclocker Loss B
	Transmitter Laser Status A	1 -	Transmitter Laser Status A
	SFP Communication Loss		SFP Communication Loss
Trap En	able SEP 4	Eault St	atus SEP 4
	Receiver Optical Power High A		Receiver Optical Power High A
	Receiver Optical Power High B	-	Receiver Optical Power High B
	Receiver Optical Power Low A	-	Receiver Optical Power Low A
-	Receiver Optical Power Low B	-	Receiver Optical Power Low B
	No Input Detected A		No Input Detected A
	No Input Detected B		No Input Detected B
	Reclocker Loss A		Reclocker Loss A
	Transmitter Laser Status A		Transmitter Laser Status A
	Transmitter Laser Status B		Transmitter Laser Status B
	SFP Communication Loss		SFP Communication Loss

Figure 4-9: Trap Enable & Fault Status

evertz.

Receiver Optical Power High: Optical input power exceeds max input power specification.

Receiver Optical Power Low: Optical input power below threshold.

No Input Detected: Video not present.

Reclocker loss: Video not detected by reclocker.

Transmitter Laser Status: Laser health.

SFP Communication Loss: SFP communication with FC not present.



4.5. 7708SFP-4-DIN-A

4.5.1. Control

Control Monitor Notify					
SFP 1			SFP 2		
Transmitter Squelch A	Off	T	Transmitter Squelch A	Off	•
Transmitter Squelch B	Off	T	Transmitter Squelch B	Off	T
Receiver Squelch A	Off	v	Receiver Squelch A	Off	V
Receiver Squelch B	Off	T	Receiver Squelch B	Off	V
Receiver Low Optical Threshold A		2	Receiver Low Optical Threshold A		●2
Receiver Low Optical Threshold B		●2	Receiver Low Optical Threshold B		● _2
Receiver Output Slew Rate A	SD	T	Receiver Output Slew Rate A	SD	T
Receiver Output Slew Rate B	SD	T	Receiver Output Slew Rate B	SD	T
Receiver Swap Channels	No	T	Receiver Swap Channels	No	T
Receiver Invert Output A	No	T	Receiver Invert Output A	No	T
Receiver Invert Output B	No	T	Receiver Invert Output B	No	v
Output Mute	No	T	Output Mute	No	V
Reclocker Mode	Auto Bypass	T	Reclocker Mode	Auto Bypass	T
Switch Mode	Auto No Switch Back	T	Switch Mode	Auto No Switch Back	T
Switch Type	Signal Presence Loss	T	Switch Type	Signal Presence Loss	T
			1		
<u> </u>					
SFP 3			SFP 4		
SFP 3 Transmitter Squeich A	Off	•	SFP 4 Transmitter Squelch A	Off	•
SFP 3 Transmitter Squelch A Transmitter Squelch B	Off Off	T	SFP 4 Transmitter Squelch A Transmitter Squelch B	Ott	T
SFP 3 Transmitter Squeich A Transmitter Squeich B Receiver Squeich A	Off Off	- - -	SFP 4 Transmitter Squelch A Transmitter Squelch B Receiver Squelch A	Off Off	T
SFP 3 Transmitter Squelch A Transmitter Squelch B Receiver Squelch A Receiver Squelch B	Off Off Off Off	T T T	SFP 4 Transmitter Squelch A Transmitter Squelch B Receiver Squelch A Receiver Squelch B	0ff 0ff	T T T
SFP 3 Transmitter Squeich A Transmitter Squeich B Receiver Squeich A Receiver Squeich B Receiver Low Optical Threshold A	Off Off Off	▼ ▼ ▼ ▼ -2	SFP 4 Transmitter Squelch A Transmitter Squelch B Receiver Squelch A Receiver Squelch B Receiver Low Optical Threshold A	Off Off Off Off	• • • • •
SFP 3 Transmitter Squelch A Transmitter Squelch B Receiver Squelch A Receiver Squelch B Receiver Low Optical Threshold A Receiver Low Optical Threshold B	Off Off Off Off	▼ ▼ ▼ ■ -2 ● -2	SFP 4 Transmitter Squelch A Transmitter Squelch B Receiver Squelch A Receiver Squelch B Receiver Low Optical Threshold A Receiver Low Optical Threshold B	0ff 0ff	▼ ▼ ▼ -2 ● -2
SFP 3 Transmitter Squelch A Transmitter Squelch B Receiver Squelch A Receiver Squelch B Receiver Low Optical Threshold A Receiver Low Optical Threshold B Receiver Output Slew Rate A	Off Off Off Off SD	▼ ▼ ▼ −2 ▼	SFP 4 Transmitter Squelch A Transmitter Squelch B Receiver Squelch A Receiver Squelch B Receiver Low Optical Threshold A Receiver Low Optical Threshold B Receiver Output Slew Rate A	Off Off Off Off SD	• • • • -2 • -2
SFP 3 Transmitter Squelch A Transmitter Squelch B Receiver Squelch A Receiver Squelch B Receiver Low Optical Threshold A Receiver Low Optical Threshold B Receiver Output Slew Rate A Receiver Output Slew Rate B	Off Off Off Off SD SD	▼ ▼ ▼ ▼ -2 ▼ ▼	SFP 4 Transmitter Squelch A Transmitter Squelch B Receiver Squelch A Receiver Squelch B Receiver Low Optical Threshold A Receiver Low Optical Threshold B Receiver Output Slew Rate A Receiver Output Slew Rate B	Off Off Off Off SD SD	▼ ▼ ▼ −2 ▼ ▼
SFP 3 Transmitter Squelch A Transmitter Squelch B Receiver Squelch B Receiver Squelch B Receiver Low Optical Threshold A Receiver Low Optical Threshold B Receiver Output Slew Rate A Receiver Output Slew Rate B Receiver Swap Channels	Off Off Off Off SD SD No	-2 -2 -2 -2	SFP 4 Transmitter Squelch A Transmitter Squelch B Receiver Squelch B Receiver Squelch B Receiver Low Optical Threshold A Receiver Low Optical Threshold B Receiver Output Slew Rate A Receiver Output Slew Rate B Receiver Swap Channels	Off Off Off Off SD SD No	-2 -2 -2 -2
SFP 3 Transmitter Squelch A Transmitter Squelch B Receiver Squelch A Receiver Squelch B Receiver Low Optical Threshold A Receiver Low Optical Threshold B Receiver Output Slew Rate A Receiver Output Slew Rate B Receiver Swap Channels Receiver Invert Output A	Off Off Off Off SD SD No No	▼ ▼ ▼ −2 ▼ ▼ ▼	SFP 4 Transmitter Squelch A Transmitter Squelch B Receiver Squelch A Receiver Squelch B Receiver Low Optical Threshold A Receiver Low Optical Threshold B Receiver Output Slew Rate A Receiver Output Slew Rate B Receiver Swap Channels Receiver Invert Output A	Off Off Off Off SD SD No No	• • • • • • • • • • • • • •
SFP 3 Transmitter Squelch A Transmitter Squelch B Receiver Squelch A Receiver Squelch B Receiver Low Optical Threshold A Receiver Low Optical Threshold B Receiver Output Slew Rate A Receiver Output Slew Rate B Receiver Swap Channels Receiver Invert Output A Receiver Invert Output B	Off Off Off Off SD SD No No	▼ ▼ ▼ -2 ▼ -2 ▼ ▼	SFP 4 Transmitter Squelch A Transmitter Squelch B Receiver Squelch B Receiver Squelch B Receiver Low Optical Threshold A Receiver Low Optical Threshold B Receiver Output Siew Rate A Receiver Output Siew Rate B Receiver Output Siew Rate B Receiver Swap Channels Receiver Invert Output A Receiver Invert Output B	Off Off Off Off SD SD No No No	
SFP 3 Transmitter Squelch A Transmitter Squelch B Receiver Squelch A Receiver Squelch B Receiver Low Optical Threshold A Receiver Low Optical Threshold B Receiver Output Slew Rate A Receiver Output Slew Rate B Receiver Swap Channels Receiver Invert Output A Receiver Invert Output B Output Mute	Off Off Off Off SD SD No No No No	-2 -2 -2 -2 -2 -2	SFP 4 Transmitter Squelch A Transmitter Squelch B Receiver Squelch A Receiver Squelch B Receiver Low Optical Threshold A Receiver Low Optical Threshold B Receiver Output Slew Rate A Receiver Output Slew Rate B Receiver Swap Channels Receiver Invert Output A Receiver Invert Output B Output Mute	Off Off Off Off SD SD No No No No No	-2 -2 -2 -2 -2
SFP 3 Transmitter Squelch A Transmitter Squelch B Receiver Squelch B Receiver Squelch B Receiver Low Optical Threshold A Receiver Low Optical Threshold B Receiver Output Slew Rate A Receiver Output Slew Rate B Receiver Output Slew Rate B Receiver Swap Channels Receiver Invert Output A Receiver Invert Output B Output Mute Reclocker Mode	Off Off Off Off SD SD No No No Auto Bypass	▼ ▼ ▼ −2 ● −2 ▼ ▼ ▼ ▼	SFP 4 Transmitter Squelch A Transmitter Squelch B Receiver Squelch B Receiver Squelch B Receiver Low Optical Threshold A Receiver Low Optical Threshold B Receiver Output Slew Rate A Receiver Output Slew Rate B Receiver Output Slew Rate B Receiver Swap Channels Receiver Invert Output A Receiver Invert Output B Output Mute Reclocker Mode	Off Off Off Off SD SD SD No No No Auto Bypass	▼ ▼ ▼ −2 ▼ ▼ ▼ ▼
SFP 3 Transmitter Squelch A Transmitter Squelch B Receiver Squelch B Receiver Squelch B Receiver Low Optical Threshold A Receiver Low Optical Threshold B Receiver Output Slew Rate A Receiver Output Slew Rate B Receiver Swap Channels Receiver Invert Output A Receiver Invert Output B Output Mute Reclocker Mode Switch Mode	Off Off Off Off SD SD No No No No No Auto Bypass Auto No Switch Back	▼ ▼ ▼ -2 ● -2 ▼ ▼ ▼ ▼	SFP 4 Transmitter Squelch A Transmitter Squelch B Receiver Squelch B Receiver Squelch B Receiver Low Optical Threshold A Receiver Low Optical Threshold B Receiver Output Slew Rate A Receiver Output Slew Rate B Receiver Swap Channels Receiver Invert Output A Receiver Invert Output B Output Mute Reclocker Mode Switch Mode	Off Off Off Off SD SD No No No No No Auto Bypass Auto No Switch Back	
SFP 3 Transmitter Squelch A Transmitter Squelch B Receiver Squelch B Receiver Squelch B Receiver Low Optical Threshold A Receiver Low Optical Threshold B Receiver Output Slew Rate A Receiver Output Slew Rate B Receiver Swap Channels Receiver Invert Output A Receiver Invert Output B Output Mute Reclocker Mode Switch Mode Switch Type	Off Off Off Off Off SD SD SD No No No No No Auto Bypass Auto No Switch Back Signal Presence Loss	▼ ▼ ▼ −2 ● −2 ▼ ▼ ▼ ▼ ▼ ▼	SFP 4 Transmitter Squelch A Transmitter Squelch B Receiver Squelch B Receiver Squelch B Receiver Low Optical Threshold A Receiver Low Optical Threshold B Receiver Output Slew Rate A Receiver Output Slew Rate B Receiver Swap Channels Receiver Invert Output A Receiver Invert Output B Output Mute Reclocker Mode Switch Mode Switch Type	Off Off Off Off SD SD SD No No No No Auto Bypass Auto No Switch Back Signal Presence Loss	▼ ▼ ▼ −2 ▼ ▼ ▼ ▼ ▼

Figure 4-10: Control Configuration Screen

Transmitter Squelch: This control allows the user to either enable or disable the ability to Squelch transmitted signals.

Receiver Squelch: This control allows the user to either enable or disable the ability to Squelch received signals.



Receiver Low Optical Threshold: This control allows the user to set the minimum optical level drop being received in in dB. Range for this value can be from -2dB to -40dB.

Receiver Output Slew Rate: This control allows the user to set the slew rate to either SD, HD, or 3G on the receiver output.

Receiver Swap Channels: This control allows channel swapping for input streams.

Receiver Invert Output: This control allows the user to invert the output being received on Output A or B.

Output Mute: This control allows the user to mute the output.

Reclocker Mode: This control allows the user to set the reclocking method to either Auto Bypass or Forced Bypass.

Switch Mode: This control allows the user to set the switching method to Auto No Switch Back, Auto With Switch Back, Forced Channel A, or Forced Channel B.

Switch Type: This control allows the user to define the method switch type to detect based on Signal Presence Loss, or Reclock Loss.



4.5.2. Monitor

Control Monitor Notify			
Management Monitor		1	
Card Type			
SFP 1		SFP 2	
Module Type		Module Type	
Module Serial Number		Module Serial Number	
Module Version		Module Version	
Upgrade Support		Upgrade Support	
Receiver Optical Power A		Receiver Optical Power A	
Receiver Optical Power B		Receiver Optical Power B	
Receiver Detected Standard A		Receiver Detected Standard A	
Receiver Detected Standard B		Receiver Detected Standard B	
Transmitter wave Length B		Transmitter wave Length B	
Transmitter Laser Status A		Transmitter Laser Status A	
Transmitter Laser Status B		Transmitter Laser Status B	
Transmitter Laser Enable A		Transmitter Laser Enable A	
Transmitter Laser Enable B		Transmitter Laser Enable B	
Transmitter Detected Standard A		Transmitter Detected Standard A	
Transmitter Detected Standard B		Transmitter Detected Standard B	
Signal Presence A		Signal Presence A	
Signal Presence B		Signal Presence B	
Signal Lock A		Signal Lock A	
Signal Lock B		Signal Lock B	
Signal Rate A		Signal Rate A	
Signal Rate B		Signal Rate B	
Cable Equalization A			
Cable Equalization R		Cable Equalization A	
	50 %		50 %
SFP 3		SFP 4	
Module Type		Module Type	
Module Serial Number		Module Serial Number	
Module Version		Module Version	
Upgrade Support		Upgrade Support	
Receiver Optical Power A		Receiver Optical Power A	
Receiver Optical Power B		Receiver Optical Power B	
Receiver Detected Standard A		Receiver Detected Standard A	
Receiver Detected Standard B		Receiver Detected Standard B	
Transmitter Wave Length A		Transmitter Wave Length A	
Trapsmitter Wave Length B		Transmitter Wave Lenoth B	
Transmitter Lease Status A		Torono Manufactor Status A	
Transmitter Laser Status A		Transmitter Laser Status A	
Transmitter Laser Status B		Transmitter Laser Status B	
Transmitter Laser Enable A		Transmitter Laser Enable A	
Transmitter Laser Enable B		Transmitter Laser Enable B	
Transmitter Detected Standard A		Transmitter Detected Standard A	
Transmitter Detected Standard B		Transmitter Detected Standard B	
Signal Presence A		Signal Presence A	
Signal Presence B		Signal Presence B	
Signal Lock A		Signal Lock A	
Signal Lock A Signal Lock B		Signal Lock A Signal Lock B	
Signal Lock A Signal Lock B Signal Rate A		Signal Lock A Signal Lock B Signal Rate A	

Figure 4-11: Monitor Screen

Module Type: Displays the 7708SFP series module type

Module Serial Number: Displays the part serial number, this is required to access the card via Evertz Product Support Services Web page.

Module Version: Displays the current firmware version being used on the card.

Upgrade Support: Displays whether or not there is Upgrade Support that is provided for the current firmware version.

Receiver Optical Power: This control displays the currently measured optical power on the receiver input in dB.

Receiver Detected Standard: Displays video output standard

Transmitter Wave Length: This control displays the current wavelength in nanometres(nm) being transmitted.

Transmitter Laser Status: This control displays the current transmitter laser status.

Transmitter Laser Enable: This control displays will confirm if the transmitter laser is either 'Enabled' or 'Disabled'.

Transmitter Detected Standard: Displays video input standard

Signal Presence: Displays the current signal presence status.

Signal Lock: Displays if the current lock status of the signal being transmitted.

Signal Rate: Displays the surrent signal rate being transmitted.

Cable Equalization: Displays the frequency losses being experienced on the current cable due to possible attenuation caused by external cabling.



4.5.3. Notify

Control	Monitor Notify		
Trap Enable	e SFP 1	Fault Sta	atus SFP 1
R	Receiver Optical Power High A		Receiver Optical Power High A
R	Receiver Optical Power High B		Receiver Optical Power High B
R	Receiver Optical Power Low A		Receiver Optical Power Low A
R	Receiver Optical Power Low B		Receiver Optical Power Low B
N	Io Input Detected A		No Input Detected A
N	lo Input Detected B		No Input Detected B
B	Declacker Loss A		Reclacker Lass A
			Periocker Loss R
	FP Communication Loss		SFP Communication Loss
Trap Enable	e SFP 2	Fault Sta	stus SFP 2
R	Receiver Optical Power High A		Receiver Optical Power High A
R	Receiver Optical Power High B		Receiver Optical Power High B
R	Receiver Optical Power Low A		Receiver Optical Power Low A
R	Receiver Optical Power Low B		Receiver Optical Power Low B
N	Io Input Detected A		No Input Detected A
N	lo Input Detected B		No Input Detected B
R	Reclocker Loss A		Reclocker Loss A
R	leclocker Loss B		Reclocker Loss B
т	ransmitter Laser Status A		Transmitter Laser Status A
Т	ransmitter Laser Status B		Transmitter Laser Status B
s	SEP Communication Loss		SEP Communication Loss
Trap Enable	9 SFP 3	Fault Sta	atus SFP 3
Trap Enable	eceiver Optical Power High A	Fault Sta	Receiver Optical Power High A
Trap Enable R	s SFP 3 eceiver Optical Power High A eceiver Optical Power High B	Fault Sta	atus SFP 3 Receiver Optical Power High A Receiver Optical Power High B
Trap Enable	s SFP 3 eceiver Optical Power High A eceiver Optical Power High B eceiver Optical Power Low A	Fault Sta	atus SFP 3 Receiver Optical Power High A Receiver Optical Power High B Receiver Optical Power Low A
Trap Enable Ra Ra Ra	s SFP 3 eceiver Optical Power High A eceiver Optical Power High B eceiver Optical Power Low A eceiver Optical Power Low B	Fault Sta	atus SFP 3 Receiver Optical Power High A Receiver Optical Power High B Receiver Optical Power Low A Receiver Optical Power Low B
Trap Enable R R R R	e SFP 3 eceiver Optical Power High A eceiver Optical Power High B eceiver Optical Power Low A eceiver Optical Power Low B o Input Detected A	Fault Sta	atus SFP 3 Receiver Optical Power High A Receiver Optical Power High B Receiver Optical Power Low A Receiver Optical Power Low B No Input Detected A
Trap Enable R R R R R	eceiver Optical Power High A eceiver Optical Power High B eceiver Optical Power Low A eceiver Optical Power Low B o Input Detected A o Input Detected B	Fault Sta	Atus SFP 3 Receiver Optical Power High A Receiver Optical Power High B Receiver Optical Power Low A Receiver Optical Power Low B No Input Detected A No Input Detected B
Trap Enable R R R R N N R	eceiver Optical Power High A eceiver Optical Power High B eceiver Optical Power Low A eceiver Optical Power Low B o Input Detected A o Input Detected B eclocker Loss A	Fault Sta	Atus SFP 3 Receiver Optical Power High A Receiver Optical Power High B Receiver Optical Power Low A Receiver Optical Power Low B No Input Detected A No Input Detected B Reclocker Loss A
Trap Enable R R R R R R R R R	eceiver Optical Power High A eceiver Optical Power High B eceiver Optical Power Low A eceiver Optical Power Low B o Input Detected A o Input Detected B eclocker Loss A eclocker Loss B	Fault Sta	Atus SFP 3 Receiver Optical Power High A Receiver Optical Power High B Receiver Optical Power Low A Receiver Optical Power Low B No Input Detected A No Input Detected B Recelocker Loss A Recelocker Loss B
Trap Enable R R R R R R R R	eceiver Optical Power High A eceiver Optical Power High B eceiver Optical Power Low A eceiver Optical Power Low B o Input Detected A o Input Detected B eclocker Loss A eclocker Loss B ransmitter Laser Status A	Fault Sta	Atus SFP 3 Receiver Optical Power High A Receiver Optical Power High B Receiver Optical Power Low A Receiver Optical Power Low B No Input Detected A No Input Detected B Reclocker Loss A Reclocker Loss B Transmitter Laser Status A
Trap Enable R R R R R R R R R	eceiver Optical Power High A eceiver Optical Power High B eceiver Optical Power Low A eceiver Optical Power Low B o Input Detected A o Input Detected B eclocker Loss A eclocker Loss B ransmitter Laser Status A ransmitter Laser Status B	Fault Sta	Atus SFP 3 Receiver Optical Power High A Receiver Optical Power High B Receiver Optical Power Low A Receiver Optical Power Low B No Input Detected A No Input Detected B Reclocker Loss A Reclocker Loss B Transmitter Laser Status A Transmitter Laser Status B
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Figure 4-12: Trap Enable & Fault Status

evertz.

Receiver Optical Power High: Optical input power exceeds max input power specification.

Receiver Optical Power Low: Optical input power below threshold.

No Input Detected: Video not present.

Reclocker loss: Video not detected by reclocker.

Transmitter Laser Status: Laser health.

SFP Communication Loss: SFP communication with FC not present.



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5. UPGRADING THE FIRMWARE

5.1. CHECKING FIRMWARE VERSION ON THE 7708SFP SERIES

From time to time, the 7708SFP series modules will need to be upgraded with the latest information ("image") to maintain the most up-to-date monitoring and control capabilities.

There are two methods for checking the firmware version.

• Using VistaLink (see Figure 5-1 – Version Information)



Ensure that the 7708SFP series module is running the latest firmware, to check this simply right click on the cards in VLPro Client and select *Version Information*.

7780BPX-DS3 [3]	Filter 💽 Supported 🔵 Active		7708	3-SFP-2			
	🗆 🔜 Hardware	Upgra	Host IP	Slot	Sw Major	Sw Minor	Pnt Num
7708-SFP-2-DIN [6]			1.1.1.1				
📟 🎫 7708-SFP-4-DIN [7]	🖼 7708-SFP-2						
🔜 7708-SFP-4-DIN-A [8]							

Figure 5-1: Version Information

5.1.1. Downloading the 7708SFP Image

 Download the image file " 7708SFP Image File". To retrieve the firmware contact your Evertz sales representative or check Evertz web site for availability (<u>www.evertz.com</u> – Support> Downloads > Firmware Downloads link > Type "7708SFP" in the Model search and press "Go"). Save the files to the hard drive.



Please contact Evertz for image file if it not available on Evertz web site.

2) Unzip the downloaded file and store the .bin file in a selected sub-directory. Record the location of the stored file.

The 7708SFP image can be upgraded by a couple different procedures, which are outlined in sections 5.2 and 5.3.



5.2. REMOTE UPGRADE PROCEDURE USING VistaLINK®

To perform the remote upgrade for the 7708SFP you will need the following setup:

- A working install of a VistaLINK® Pro client or VLPRO-C that's version 10.0.7 or greater.
- A downloaded and unzipped FC image file (.bin file) from http://www.evertz.com

5.2.1. Upgrading the 7708SFP Image using VistaLINK $_{\ensuremath{\circledast}}$

- 1) Use the right-click mouse button on the '7708SFP' in the tree and select *Version Information* ...' option.
- 2) Open hardware tree and select card to be upgraded
- 3) Check mark card or cards to be upgraded.
- 4) Click the 'Upgrade' button on bottom right corner.
- 5) Click the 'Browse' button to select the unzipped 7708SFP Image .bin file downloaded in section 5.1.1.
- 6) Click the 'Upgrade' button and wait for the upload to complete. This will take approximately 5 to 10 minutes depending on network traffic.

Upon completion, the 7708SFP series modules will reboot automatically and return online in normal "run" mode.



5.3. UPGRADING SERIALLY THROUGH THE SERIAL PORT

5.3.1. Setting the 7708SFP to Upgrade Mode

The RS232 serial port connector J5 located at the front of the module is used when "image" upgrades are being done to the 7708SFP series module.

There are two ways to enter upgrade mode:

- 1) Boot up module in upgrade mode see section 5.4
- 2) Boot up module in run mode and use the menu to select to upgrade see section 5.5

5.3.2. Setting up the Serial Baud Rate

Open TeraTerm and set up the Baud Rate for communication as follows on the COM port that is being used:

Tera Term: Serial port setup	,
Port:	СОМ5 - ОК
Baud rate:	115200 -
Data:	8 bit 🔹 Cancel
Parity:	none 🔹
Stop:	1 bit 🔹 Help
Flow control:	none 🔹
Transmit delay 0 msec/	char 0 msec/line

Figure 5-2: Baud Rate Settings on COM port

5.4. UPGRADING IN UPGRADE MODE

For normal operation the jumper is set in the *RUN* position. To upgrade the firmware in the module unit pull it out of the frame. Move Jumper J5 into the **UPGRADE** position. Connect Once Tera Term is connected, insert the 7708SFP series module into its slot.



NOTE: Make sure to put it back to the RUN postion when done. Skip to section 5.5.1

7708SFP Fiber Optic SFP Card Module



5.5. UPGRADING IN RUN MODE

- 1) Boot up card and press 'enter'.
- 2) Select '1' for '7708-SFP Settings"

🧕 COM5:115200baud - Tera Term VT		x
File Edit Setup Control Window Resize Help		
PROD=7708-SFP-4-DIN-A FRAME=7700FR MCF5272 COLD BOOT> BOOTING		^
7708-SFP(2) hardware build 1, S/N 3731363235.		
28F160C3B FLASH DETECTED (2) 7708-SFP-4-DIN-A hardware build 1, S/N 716254006. Software version 2.00 build 13		
Product string: 7708-SFP Evertz model 7708-SFP Fibre Card 7708-SFP: Software version 2.00 build 13		
Product: 7708-SFP-4-DIN-A Initialize USB (CtrlIface) Initializing Timer.		
Initialize Menus Initialize Factory Presets Initialize Presets		
Preset version is Ø Factory reset		
Power up reset Running		
Store Presets		
K<<7708-SFP-4-DIN-A U2.00 build 13>>> 1- 7708-SFP Settings 2- SFP Settings []		•

3) Select '1' for 'Firmware Upgrade'.





5.5.1. Viewing Upgrade Information

1) Booting information will then be sent to the Tera Term window. After the card powers up the "upload" message is displayed.

🦉 COM5:115200baud - Tera Term VT		×
File Edit Setup Control Window Resize Help		
UPLOAD FILE NOW, CONTROL-X TO CANCEL		*
EVERTZ MCF5272 MONITOR 2.4 BUILD 2 (66 MHZ) COPYRIGHT 1997, 1998, 1999, 2000, 2001, 2002 EVERTZ MICROSYSTEMS LTD. 28F160C3B FLASH DETECTED BRD=7708-SFP MODEL=BA7708-SFP-REU2 PROD=7708-SFP-4-DIN-A FRAME=7700FR UPGRADE JUMPER INSTALLED		
UPLOAD FILE NOW, CONTROL-X TO CANCEL		

2) Using XMODEM select to 'Send'.

<u>w</u> c	OM5:115200b	oaud - Tera	Term VT							×
File	Edit Setup	Control	Window	Resize	Help					
	New connect	tion	Alt+N	O CAN	CEL					-
	Duplicate ses	sion	Alt+D							
	Cygwin conr	ection	Alt+G	UILD 2000,	2 <66 2001,	MHZ> 2002 1	EVERTZ MICRO	OSYSTE	IS LTD.	
	Log				-					
	Comment to	Log								
	View Log									
	Show Log dia	alog		O CON	CEL					
	Send file						7			
	Transfer		×.	Ke	ermit	×.	1			
	SSH SCP			X	NODEM	+	Receive		1	
	Change direc	tory		ZI	NODEM	+	Sen .			
	Replay Log			B	Plus	•				
	TTY Record			Q	uick-VAN	↓ ►				
	TTY Replay						-			
	Print		Alt+P							
	Disconnect		Alt+I							
	Exit		Alt+Q							
B001	(>			-						-

7708SFP Fiber Optic SFP Card Module



3) Locate the unzipped image file and select 'Open'. File will now download. This make take several minutes.

🧕 COM5:115200baud - Tera Term VT	
File Edit Setup Control Window Resize H	lelp
UPLOAD FILE NOW, CONTROL-X TO CANCE	L
Tera Term: XMODEM Send	CROSYSTEMS LTD.
Look in: Look in: Look in:	G 🛊 📂 🖽 -
Name	Date modified
🔋 🔒 lang	7/3/2014 4:00 PM
📔 퉬 plugin	7/3/2014 4:00 PM
👔 퉬 theme	7/3/2014 4:00 PM
💼 cyglaunch	11/10/2009 6:44 PM
cygterm.cfg	7/3/2014 4:10 PM 👻
۲. III.	• • • • • • • • • • • • • • • • • • •
File name:	Open
Files of type: All(*.*)	Cancel
	Help
Option	
Checksum CRC 1K	
Files of type: Al(*.*) Option Option CRC 1K	Cancel Help

4) Select image file downloaded and unzipped in section 5.1.1 and upload file. Module will automatically reboot.



If jumper J5 was used in UPGRADE mode then place jumper J5 back in RUN mode and reboot module.



6. JAR UPGRADE PROCEDURES

6.1. VISTALINK PRO JAR FILE UPGRADE

Evertz products are constantly evolving and new features are often added. It is therefore important to update the JAR files in use to provide access to all the latest features or enhancements. It will also be necessary to add JAR files for new products. If your new product has not appeared even after waiting a few minutes for the Ethernet switch negotiation to complete, then it is possible that your JAR file may be old or missing.



Ensure that the 7708SFP series module is running the latest JAR file, to check this simply right click on the cards in VLPro Client and select *Version Information*.

	Filter 💿 Supported 🔵 Active	Product	7708-5	FP-2					
	Hardware	Upgra	Host IP	Slot	Sw Major	Sw Minor	Pnt Number	Sw Build	Bd Build
	7708-SFP-2		1.1.1.1						
🛄 🐖 7708-SFP-4-DIN-A [8]									

Figure 6-1: Jar File Version Information

Download the JAR file "7800SFP". To retrieve the JAR file contact your Evertz sales representative or check Evertz web site for availability (<u>www.evertz.com</u> – Support> Downloads VistaLINK_® PRO JAR File Downloads> > Type "7708SFP" in the Model search and press "Go"). Save the files to the hard drive.



Figure 6-2: Downloading Jar File from Everts.com



Please contact Evertz for JAR file if it not available on Evertz web site.

7708SFP Fiber Optic SFP Card Module



To perform a JAR update, ensure that all VistaLINK_® PRO clients are closed (those clients which are not closed will automatically be disconnected as soon as the VistaLINK_® PRO Server is restarted). Maximize the VistaLINK_® PRO Server window from the Windows task bar, select *Help> Apply Update> Product* from the menu.

File Tools Help			
Status	Server Log	🚑 Clients 🔊	Discovery
Database:	Log of server action	s and status.	
E-mail System: 🔘	Time	Date	Description
Logging System: 🥘	12:00:00	2014-06-12	Completed sending message "DBAdmin completed"
MVP Ack System:	12:00:00	2014-06-12	Sending message "DBAdmin completed"
Network: 🥘	12:00:00	2014-06-12	DBAdmin completed
License	12:00:00	2014-06-12	Pare DBAdmin logs to 5000 megs allocated of disk space
Expires on 30-05-2015 Trial Version	12:00:00	2014-06-12	DBAdmin scan of Element log completed
1 General Clients	12:00:00	2014-06-12	DBAdmin scanning records from element log. Scan 1
2 Plus Clients	12:00:00	2014-06-12	DBAdmin archiving is turned on so logs are being written to disk.
- Third Party Devices	12:00:00	2014-06-12	DBAdmin initiating scan of Element log
Licensed Features	12:00:00	2014-06-12	DBAdmin scan of Audit log completed
Auto Response	12:00:00	2014-06-12	DBAdmin moved 1 audit records to archives.
Cause/Effect	12:00:00	2014-06-12	DBAdmin created archive list of 1 items. Scan 1
MIB Parsing	12:00:00	2014-06-12	DBAdmin extracted records from audit log. Building archive file. Scan 1
SLA	12:00:00	2014-06-12	DBAdmin archiving is turned on so logs are being written to disk.
Thumbnail	12:00:00	2014-06-12	DBAdmin scanning records from audit log. Scan 1
Web Service	12:00:00	2014-06-12	DBAdmin initiating scan of Audit log
Sustan Statistics	12:00:00	2014-06-12	DBAdmin scan of Alarm log completed
System Statistics	12:00:00	2014-06-12	DBAdmin moved 0 alarm records to archives.
	12:00:00	2014-06-12	Logger Running State set to log events
	12:00:00	2014-06-12	Loader Running State set to buffer events
			Details Clear

Figure 6-3: VistaLINK_® PRO Server

A window will appear, as shown in Figure 7-2: VistaLINK_® PRO Server, navigate to the location of the new JAR file and double click to select the file. The window will automatically close and the update will be applied in the background. VistaLINK_® PRO Server must be restarted in order for changes to take effect.



Figure 6-4: Alarm Server Restart Notification