

INSTALLATION & CONFIGURATION MANUAL

GDR416

**4K, 3GB/S, HD AND SD FOUR INPUT
DISTRIBUTION AMPLIFIER WITH 4
RECLOCKED OUTPUTS PER CHANNEL**



SYNAPSE 





Copyright

EVS Broadcast Equipment S.A. – Copyright © 2001 – 2021. All rights reserved.

Disclaimer

The information in this manual is furnished for informational use only and subject to change without notice. While every effort has been made to ensure that the information contained in this user manual is accurate, up-to-date and reliable, EVS Broadcast Equipment cannot be held responsible for inaccuracies or errors that may appear in this publication.

Improvement Requests

Your comments will help us improve the quality of the user documentation. Do not hesitate to send improvement requests, or report any error or inaccuracy on this user manual by e-mail to doc@evs.com.

Regional Contacts

The address and phone number of the EVS headquarters are usually mentioned in the **Help > About** menu in the user interface.

You will find the full list of addresses and phone numbers of local offices either at the end of this user manual (for manuals on hardware products) or on the EVS website on the following page: <http://www.evs.com/contacts>.

User Manuals on EVS Website

The latest version of Media Infrastructure manuals are available at: <https://mi-sftp.evs.com/>
The user manuals for other EVS products can be found at the EVS download center, on the following webpage: <https://www.evs.com/en/download-area>.



WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRICAL SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE

- ALWAYS disconnect your entire system from the AC mains before cleaning any component. The product frame (SFR18 or SFR04) must be terminated with three-conductor AC mains power cord that includes an earth ground connection. To prevent shock hazard, all three connections must always be used.
- NEVER use flammable or combustible chemicals for cleaning components.
- NEVER operate this product if any cover is removed.
- NEVER wet the inside of this product with any liquid.
- NEVER pour or spill liquids directly onto this unit.
- NEVER block airflow through ventilation slots.
- NEVER bypass any fuse.
- NEVER replace any fuse with a value or type other than those specified.
- NEVER attempt to repair this product. If a problem occurs, contact your local EVS distributor.
- NEVER expose this product to extremely high or low temperatures.
- NEVER operate this product in an explosive atmosphere.

Warranty: EVS warrants their products according to the warranty policy as described in the general terms. That means that EVS Broadcast Equipment SA can only warrant the products as long as the serial numbers are not removed.

Copyright © 2001 – 2021 EVS Broadcast Equipment SA

Date created: 23-04-2015

Date last revised: 14-02-2017

EVS, the EVS logo and Synapse are trademarks of EVS Broadcast Equipment SA

This product complies with the requirements of the product family standards for audio, video, audio-visual entertainment lighting control apparatus for professional use as mentioned below.



EN60950	Safety
EN55103-1: 1996	Emission
EN55103-2: 1996	Immunity

EVS Broadcast Equipment
GDR416



Tested To Comply
With FCC Standards

FOR HOME OR OFFICE USE

This device complies with part 15 of the FCC Rules
Operation is subject to the following two conditions:
(1) This device may cause harmful interference, and
(2) This device must accept any interference received, including
interference that may cause undesired operation.



Table of Contents

Introduction to Synapse	4
An Introduction to Synapse	4
Local Control Panel	4
Remote Control Capabilities	4
Unpacking and Placement	5
Unpacking	5
Placing the card	5
A Quick Start	6
When Powering-up	6
Changing settings and parameters	6
Front Panel Control	6
Example of changing parameters using front panel control	7
EVS Cortex Software	8
Menu Structure Example	8
The GDR416 Card	9
Introduction	9
Features	9
Applications	9
Block schematic	9
Settings Menu	10
Introduction	10
Mode	10
PLL_set_A	10
Reclocker_A	10
Mute_A	10
PLL_set_B	11
Reclocker_B	11
Mute_B	11
PLL_set_C	11
Reclocker_C	11
Mute_C	11
PLL_set_D	11
Reclocker_D	12
Mute_D	12
HDMI1-Format	12
HDMI1-DVI-Mode	12
HDMI1_Mute_All	12
HDMI2-Format	12
HDMI2-DVI-Mode	12
HDMI2_Mute_All	12
Note:	13
Status Menu	14
Introduction	14
SDI-Input_A	14
PLL-rate_A	14
SDI-Input_B	14
PLL-rate_B	14
SDI-Input_C	14
PLL-rate_C	14
SDI-Input_D	14
PLL-rate_D	14
SFP1-Vendor	14
SFP1-Type	15
SFP2-Vendor	15
SFP2-Type	15
SFP1-Temp-Stat	15
SFP1-Volt-Stat	15
Port1/2-Enabled	15
Port1/2-Power	15
Port1/2-Pow-Stat	15

Port1/2-Bias	15
Port1/2-Bias-Stat	15
Port1/2-Wavelength	15
SFP2-Temp-Stat	15
SFP2-Volt-Stat	16
Port3/4-Enabled	16
Port3/4-Power	16
Port3/4-Pow-Stat	16
Port3/4-Bias	16
Port3/4-Bias-Stat	16
Port3/4-Wavelength	16
Events Menu	17
Introduction	17
What is the Goal of an event?	17
Events	17
Announcements	17
Input_A	17
Input_B	17
Input_C	17
Input_D	17
What information is available in an event?	17
The Message String	17
The Tag	18
Defining Tags	18
The Priority	18
The Address	18
LED Indication	19
Input A LED	19
Input B LED	19
Input C LED	19
Input D LED	19
Block Schematic	20
Connector Panels	21

1 Introduction to Synapse

An Introduction to Synapse

Synapse is a modular system designed for the broadcast industry. High density, intuitive operation and high quality processing are key features of this system. Synapse offers a full range of converters and processing modules. Please visit the EVS Broadcast Equipment SA Website at <http://www.evs.com> to obtain the latest information on our new products and updates.

Local Control Panel

The local control panel gives access to all adjustable parameters and provides status information for any of the cards in the Synapse frame, including the Synapse rack controller. The local control panel is also used to back-up and restore card settings. Please refer to the rack controller manuals for a detailed description of the local control panel, the way to set-up remote control over IP and for frame related settings and status information.

Remote Control Capabilities

The remote control options are explained in the rack controller (RRC, RRS, ERC or ERS) manual. The method of connecting to a computer using Ethernet is also described in these manuals.



CHECK-OUT: “EVS CORTEX” SOFTWARE WILL INCREASE SYSTEM FLEXIBILITY OF ONE OR MORE SYNAPSE FRAMES

Although not required to use Cortex with a Synapse frame, you are strongly advised to use a remote personal computer or laptop PC with EVS Cortex installed, as this increases the ease of use and understanding of the modules.

2 Unpacking and Placement

Unpacking

The EVS Synapse card must be unpacked in an anti-static environment. Care must be taken NOT to touch components on the card – always handle the card carefully by the edges. The card must be stored and shipped in anti-static packaging. Ensuring that these precautions are followed will prevent premature failure from components mounted on the board.

Placing the card

The Synapse card can be placed vertically in an SFR18 frame or horizontally in an SFR04 and SFR08 frame. Locate the two guide slots to be used, slide in the mounted circuit board, and push it firmly to locate the connectors.

Correct insertion of card is essential as a card that is not located properly may show valid indicators, but does not function correctly.

NOTE: On power up all LED's will light for a few seconds, this is the time it takes to initialise the card.

3 A Quick Start

When Powering-up

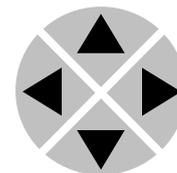
On powering up the Synapse frame, the card set will use basic data and default initialisation settings. All LED's will light during this process. After initialisation, several LED's will remain lit – the exact number and configuration is dependent upon the number of inputs connected and the status of the inputs.

Changing settings and parameters

The front panel controls or the EVS Cortex can be used to change settings. An overview of the settings can be found in chapter 5, 6 and 7 of this manual.

Front Panel Control

Front Panel Display and Cursor



Settings are displayed and changed as follows;

Use the cursor 'arrows' on the front panel to select the menu and parameter to be displayed and/or changed.

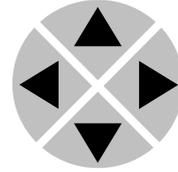
- Press ► To go forward through the menu structure.
- Press ◀ To go back through the menu structure.
- Press ▲ To move up within a menu or increase the value of a parameter.
- Press ▼ To move down through a menu or decrease the value of a parameter.

NOTE: Whilst editing a setting, pressing ► twice will reset the value to its default.

Example of changing parameters using front panel control

With the display as shown below

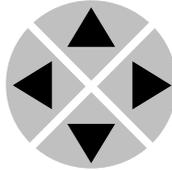
RRC18 [Select Card]
>S01=SFS10



Pressing the ► selects the SFS10 in frame slot 01.

The display changes to indicate that the SFS10 has been selected. In this example the Settings menu item is indicated.

SFS10 [Select Menu]
>Settings



Pressing the ► selects the menu item shown, in this example Settings.

(Pressing ▲ or ▼ will change to a different menu eg Status, Events).

The display changes to indicate that the SFS10 Settings menu item SDI-Format has been selected and shows that its current setting is Auto.

SFS10 [Settings]
>SDI-Format=Auto



Pressing the ► selects the settings item shown, in this example SDI-Format.

(Pressing ▲ or ▼ will change to a different setting, eg Mode, H-Delay).

The display changes to indicate that the SFS10 Edit Setting menu item SDI-Format has been selected.

SFS10 Edit Setting
SDI-Format>Auto



To edit the setting of the menu item press ▲ or ▼.

All menu items can be monitored and/or changed in this way. Changing a setting has an immediate effect.



EVS Cortex Software

EVS Cortex can be used to change the settings of Synapse modules from a PC, either locally or remotely. The software enables communication based on TCP/IP between the Setup PC and Synapse frames/modules.

Each Synapse frame is addressed through its rack controller's unique IP address, giving access to each module, its menus and adjustment items. EVS Cortex has access to data contained within the Synapse module and displays it on a GUI. The software has an intuitive structure following that of the module that it is controlling.

For operation of EVS Cortex, please refer to the Cortex help files.

Menu Structure Example

Slot	Module	Item	Parameter	Setting
▲				
▲				
S02		Identity		
▲				
S01	SFS10	▶ Settings	▶ Standard_dig	▶ Auto
▼				
S00	RRC18	Status	Mode	625
		▼ Events	▼ Ref-Input	▼ 525
			▼ H-Delay	
			▼	
			▼	



Note Further information about Front Panel Control and Synapse Cortex can be obtained from the RRC, RRS, ERC and ERS operational manuals and the Cortex help files

4 The GDR416 Card

Introduction

The GDR416 is a four channel 3Gb/s, HD, SD SDI reclocking distribution amplifier. Having four inputs, with each input having 4 outputs, makes this card the ideal 4K DA.

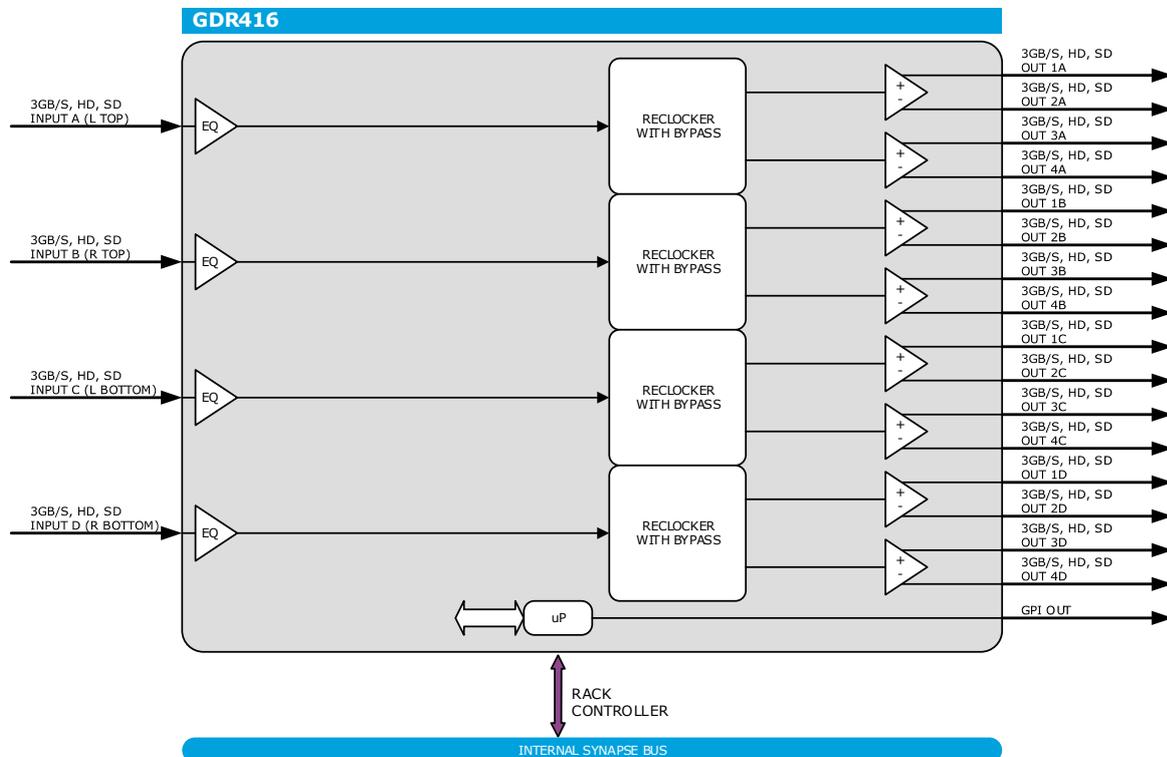
Features

- Quad channel DA with 16 outputs
- GPI controlled input swapping and status monitoring
 - GPO-0 = Carrier detect A
 - GPO-1 = Carrier detect B
 - GPO-2 = Carrier detect C
 - GPO-3 = Carrier detect D
- Compatible with:
 - SD SDI 270 Mbit/s (SMPTE 259M)
 - HD SDI 1485 Mbit/s (SMPTE 292M)
 - 3Gb/s SDI 2970 Mbit/s (SMPTE 424M)
 - ASI/DVB only on positive outputs
- Bypass function of the reclocker for non-standard frequencies

Applications

- 4K generic wideband DA
- 4 to 4 generic wideband 3Gb/s DA

Block schematic





5 Settings Menu

Introduction

The settings menu displays the current state of each GDR416 setting and allows you to change or adjust it. Settings can be changed using the front panel of the Synapse frame (SFR18, SFR08 or SFR04) or with Cortex. Also the SCP08 control can be used. Please refer to chapter 3 for information on the Synapse front panel control and Cortex.

SYSTEM SETTINGS

Mode

In the setting Mode you can select how you want to use the GDR416: in a normal 4 x 3Gb DA mode or in a 4K mode. In the 4K mode, only the settings for input A are used and copied to all other inputs (in other words: only PLL_set_A, Reclocker_A and Mute_A are used; input B, C and D settings will be automatically set to the settings of input A). Default is 4K.

PLL_set_A

The GDR416 is capable of re-clocking a range of 3Gbit/s, HD and SD SDI transport stream bitrates. PLL_Set_A is used to set input A of the GDR416 to the correct bitrate of the incoming signal (if mode is set to 4K, the PLL_Set_A will be copied to PLL_Set_B, C and D as well). PLL_Set_A can be set to Auto, 270 Mb/s, 1485 Mb/s and 2970 Mb/s. The default setting is Auto.

Reclocker_A

The setting item Reclock_A determines if the incoming signal on input A will be reclocked by the GDR416. The settings are:

- Auto: Auto selection between Bypass and Reclocked.
- Bypass: Does not re-clock the incoming signal
- On: The GDR416 always attempts to re-clock the input

The default setting is Auto.

Mute_A

Mute_A enables input A of the GDR416 to be muted. The settings of Mute_A are On, Off, Input Loss or PLL Unlock. Set to Input Loss will mute input A only in case a carrier loss is detected on input A. Set to PLL unlock will mute input A in case the PLL rate of input A is not available. The Default setting is Off.

PLL_set_B	<p>The GDR416 is capable of re-clocking a range of 3Gbit/s, HD and SD SDI transport stream bitrates. PLL_Set_B is used to set input B of the GDR416 to the correct bitrate of the incoming signal. PLL_Set_B can be set to Auto, 270 Mb/s, 1485 Mb/s and 2970 Mb/s. The default setting is Auto.</p>
Reclocker_B	<p>The setting item Reclock_B determines if the incoming signal on input B will be reclocked by the GDR416. The settings are:</p> <ul style="list-style-type: none">■ Auto: Auto selection between Bypass and Reclocked.■ Bypass: Does not re-clock the incoming signal■ On: The GDR416 always attempts to re-clock the input <p>The default setting is Auto.</p>
Mute_B	<p>Mute_B enables input B of the GDR416 to be muted. The settings of Mute_B are On, Off, Input Loss or PLL Unlock. Set to Input Loss will mute input B only in case a carrier loss is detected on input B. Set to PLL unlock will mute input B in case the PLL rate of input B is not available. The Default setting is Off.</p>
PLL_set_C	<p>The GDR416 is capable of re-clocking a range of 3Gbit/s, HD and SD SDI transport stream bitrates. PLL_Set_C is used to set input C of the GDR416 to the correct bitrate of the incoming signal. PLL_Set_C can be set to Auto, 270 Mb/s, 1485 Mb/s and 2970 Mb/s. The default setting is Auto.</p>
Reclocker_C	<p>The setting item Reclock_C determines if the incoming signal on input C will be reclocked by the GDR416. The settings are:</p> <ul style="list-style-type: none">■ Auto: Auto selection between Bypass and Reclocked.■ Bypass: Does not re-clock the incoming signal■ On: The GDR416 always attempts to re-clock the input <p>The default setting is Auto.</p>
Mute_C	<p>Mute_C enables input C of the GDR416 to be muted. The settings of Mute_C are On, Off, Input Loss or PLL Unlock. Set to Input Loss will mute input C only in case a carrier loss is detected on input C. Set to PLL unlock will mute input C in case the PLL rate of input C is not available. The Default setting is Off.</p>
PLL_set_D	<p>The GDR416 is capable of re-clocking a range of 3Gbit/s, HD and SD SDI transport stream bitrates. PLL_Set_D is used to set input D of the GDR416 to the correct bitrate of the incoming signal. PLL_Set_D can be set to Auto, 270 Mb/s, 1485 Mb/s and 2970 Mb/s. The default setting is Auto.</p>



Reclocker_D

The setting item `Reclock_D` determines if the incoming signal on input D will be reclocked by the GDR416. The settings are:

- `Auto`: Auto selection between `Bypass` and `Reclocked`.
- `Bypass`: Does not re-clock the incoming signal
- `On`: The GDR416 always attempts to re-clock the input

The default setting is `Auto`.

Mute_D

`Mute_D` enables input D of the GDR416 to be muted. The settings of `Mute_D` are `On`, `Off`, `Input Loss` or `PLL Unlock`. Set to `Input Loss` will mute input D only in case a carrier loss is detected on input D. Set to `PLL unlock` will mute input D in case the PLL rate of input D is not available. The Default setting is `Off`.

HDMI

HDMI1-Format

Here you select the output format of HDMI output module 1. Possible modes are:

- `RGB444` (default)
- `YCrCb422`
- `YCrCb444`

HDMI1-DVI-Mode

With these settings you set SFP HDMI output A to either `DVI-Mode` or `HDMI-Mode`. Default is `DVI-Mode`.

HDMI1_Mute_All

Here you can mute all audio on SFP HDMI output A. `Off` means no audio mute. `On` means all audio is muted. Default is `Off`.

HDMI2-Format

Here you select the output format of HDMI output module 2. Possible modes are:

- `RGB444` (default)
- `YCrCb422`
- `YCrCb444`

HDMI2-DVI-Mode

With these settings you set SFP HDMI output B to either `DVI-Mode` or `HDMI-Mode`. Default is `DVI-Mode`.

HDMI2_Mute_All

Here you can mute all audio on SFP HDMI output B. `Off` means no audio mute. `On` means all audio is muted. Default is `Off`.

Note: If PLL_Set_# is set to 1485 or 2970 Mb/s it is possible that a properly applied 270Mb/s signal (with a high signal strength and low jitter) will pass through. However we do not advice to use this situation because it could sometimes “miss-clock”.



When 270Mb/s signals need to pass, please set PLL_Set_# to 270Mb/s or set it to Auto.



6 Status Menu

Introduction	The status menu indicates the current status of each item listed below. There are no defaults for status indicators. Status depends of input signals being present or not.
SDI-Input_A	This status item indicates the presence of a valid SDI signal on input A. SDI_Input_A indicates if an input signal is Present, Loss or NA.
PLL-rate_A	PLL_rate_A indicates the rate at which the PLL of input A is locked when PLL_Set_A is set to auto. The range of locking rates is as follows: 270 Mb/s, 1485 Mb/s, and 2970 Mb/s
SDI-Input_B	This status item indicates the presence of a valid SDI signal on input B. SDI_Input_B indicates if an input signal is Present, Loss or NA.
PLL-rate_B	PLL_rate_B indicates the rate at which the PLL of input B is locked when PLL_Set_B is set to auto.
SDI-Input_C	This status item indicates the presence of a valid SDI signal on input C. SDI_Input_C indicates if an input signal is Present, Loss or NA.
PLL-rate_C	PLL_rate_C indicates the rate at which the PLL of input C is locked when PLL_Set_C is set to auto.
SDI-Input_D	This status item indicates the presence of a valid SDI signal on input D. SDI_Input_D indicates if an input signal is Present, Loss or NA.
PLL-rate_D	PLL_rate_D indicates the rate at which the PLL of input D is locked when PLL_Set_D is set to auto.
SFP1-Vendor	This status item displays the name of the SFP I/O module A.

SFP1-Type	This status item displays the type name/number SFP I/O module A.
SFP2-Vendor	This status item displays the name of the SFP I/O module B.
SFP2-Type	This status item displays the type name/number SFP I/O module B.
SFP1-Temp-Stat	These indicate whether the temperature of SFP input/output module A is Too_High, High, OK, Low or Too_Low. Can also be NA in case Temperature monitoring is not available or the module is not inserted.
SFP1-Volt-Stat	These indicate whether the voltage usage of SFP input/output module A is Too_High, High, OK, Low or Too_Low. Can also be NA in case Voltage monitoring is not available or the module is not inserted.
Port1/2-Enabled	These item indicate whether the corresponding output port on SFP output module A is enabled, disabled or NA (Not available, when no input signal is available or an input module is inserted.)
Port1/2-Power	These status items indicate the current transmitter power of the specified port on SFP output module A between 0mW and 6.55mW. When a receiver is installed or no SFP module is inserted this value is 0.
Port1/2-Pow-Stat	These indicate whether the output power of the specified port on SFP output module A is Too_High, High, OK, Low or Too_Low. Can also be NA in case of an input module or no module is inserted.
Port1/2-Bias	These status items indicate the current laser bias of the specified port on SFP module A is between 0mA and 300mA. When there is a non fiber SFP or an input module is inserted, this value will be 0.
Port1/2-Bias-Stat	These indicate whether the laser bias of the specified port on SFP output module A is Too_High, High, OK, Low or Too_Low. Can also be NA in case laser bias monitoring is not available or no output module is inserted.
Port1/2-Wavelength	Indicates the current wave length of the corresponding output port on the SFP output module A between 0nm and 2000nm. When there is a non fiber SFP or RX module installed, this value will be 0.
SFP2-Temp-Stat	These indicate whether the temperature of SFP input/output module B is Too_High, High, OK, Low or Too_Low. Can also be NA in



SFP2-Volt-Stat	case Temperature monitoring is not available or the module is not inserted. These indicate whether the voltage usage of SFP input/output module B is Too_High, High, OK, Low or Too_Low. Can also be NA in case Voltage monitoring is not available or the module is not inserted.
Port3/4-Enabled	These item indicate whether the corresponding output port on SFP output module A is enabled, disabled or NA (Not available, when no input signal is available or an input module is inserted.)
Port3/4-Power	These status items indicate the current transmitter power of the specified port on SFP output module A between 0mW and 6.55mW. When a receiver is installed or no SFP module is inserted this value is 0.
Port3/4-Pow-Stat	These indicate whether the output power of the specified port on SFP output module A is Too_High, High, OK, Low or Too_Low. Can also be NA in case of an input module or no module is inserted.
Port3/4-Bias	These status items indicate the current laser bias of the specified port on SFP module A is between 0mA and 300mA. When there is a non fiber SFP or an input module is inserted, this value will be 0.
Port3/4-Bias-Stat	These indicate whether the laser bias of the specified port on SFP output module A is Too_High, High, OK, Low or Too_Low. Can also be NA in case laser bias monitoring is not available or no output module is inserted.
Port3/4-Wavelength	Indicates the current wave length of the corresponding output port on the SFP output module A between 0nm and 2000nm. When there is a non fiber SFP or RX module installed, this value will be 0.

7 Events Menu

Introduction	An event is a special message that is generated on the card asynchronously. This means that it is not the response to a request to the card, but a spontaneous message.
What is the Goal of an event?	The goal of events is to inform the environment about a changing condition on the card. A message may be broadcast to mark the change in status. The message is volatile and cannot be retrieved from the system after it has been broadcast. There are several means by which the message can be filtered.
Events	The events reported by the GDR416 are as follows;
Announcements	Announcements is not an event. This item is only used for switching the announcement of status changes on/off. 0=off, other =on
Input_A	Input A status can be selected between 0 .. 255. 0= no event, 1..255 is the priority setting.
Input_B	Input B status can be selected between 0 .. 255. 0= no event, 1..255 is the priority setting.
Input_C	Input C status can be selected between 0 .. 255. 0= no event, 1..255 is the priority setting.
Input_D	Input D status can be selected between 0 .. 255. 0= no event, 1..255 is the priority setting.
What information is available in an event?	<p>The message consists of the following items;</p> <ol style="list-style-type: none"> 1) A message string to show what has happened in text, for example: "INP_LOSS", "REF_LOSS", "INP_RETURN". 2) A tag that also shows what happens, but with a predefined number: e.g. 1 (= loss of input), 2 (= loss of reference), 129(= 1+128 = return of input). For a list of these predefined tags see the table on the next page. 3) A priority that marks the importance of an event. This value is defined by the user and can have any value between 1 and 255, or 0 when disabled. 4) A slot number of the source of this event.
The Message String	The message string is defined in the card and is therefore fixed. It may be used in controlling software like Synapse Set-up to show the event.



The Tag

The tag is also defined in the card. The tag has a fixed meaning. When controlling or monitoring software should make decisions based on events, it is easier to use the tag instead of interpreting a string. The first implementation is the tag controlled switch in the GPI16. In cases where the event marks a change to fault status (e.g. 1 for Loss of Input) the complement is marked by the tag increased by 128 (80_{hex}) (e.g. 129 (81_{hex}) for Return of Input).

Defining Tags

The tags defined for the card are:

Event Menu Item	Tag	Tag	Description
Announcements	0 or NA	0 or NA	Announcing of report and control values
Input_A	01 _{hex} =INP_LOST	81 _{hex} =INP_RETURN	SDI input A lost or returned
Input_B	12 _{hex} =INP_LOST	92 _{hex} =INP_RETURN	SDI input B lost or returned
Input_C	13 _{hex} =INP_LOST	93 _{hex} =INP_RETURN	SDI input C lost or returned
Input_D	52 _{hex} =INP_LOST	D2 _{hex} =INP_RETURN	SDI input D lost or returned

The Priority

The priority is a user-defined value. The higher the priority of the alarm, the higher this value. Setting the priority to Zero disables the announcement of this alarm. Alarms with priorities equal or higher than the Error Threshold setting of the RRC will cause the error LED on the Synapse rack front panel to light.

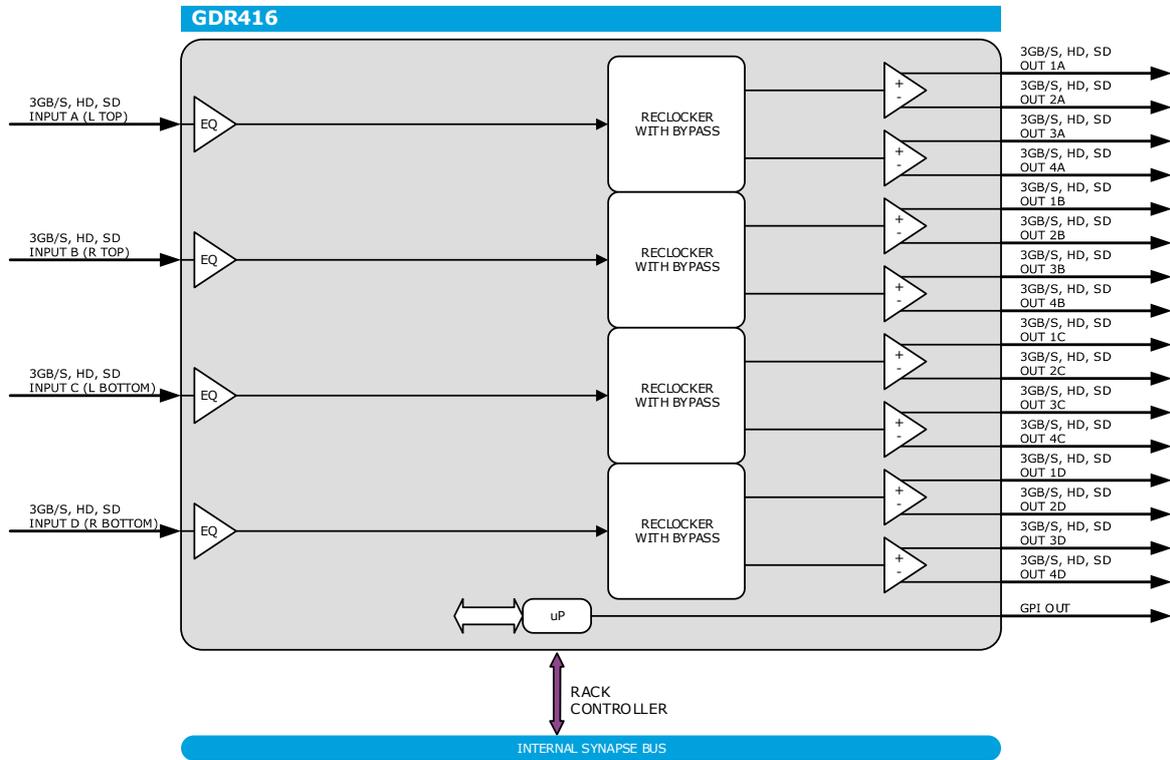
The Address

Together with the message string or the tag, the slot number or address of the card is relevant to be able to assign the event to a certain card.

8 LED Indication

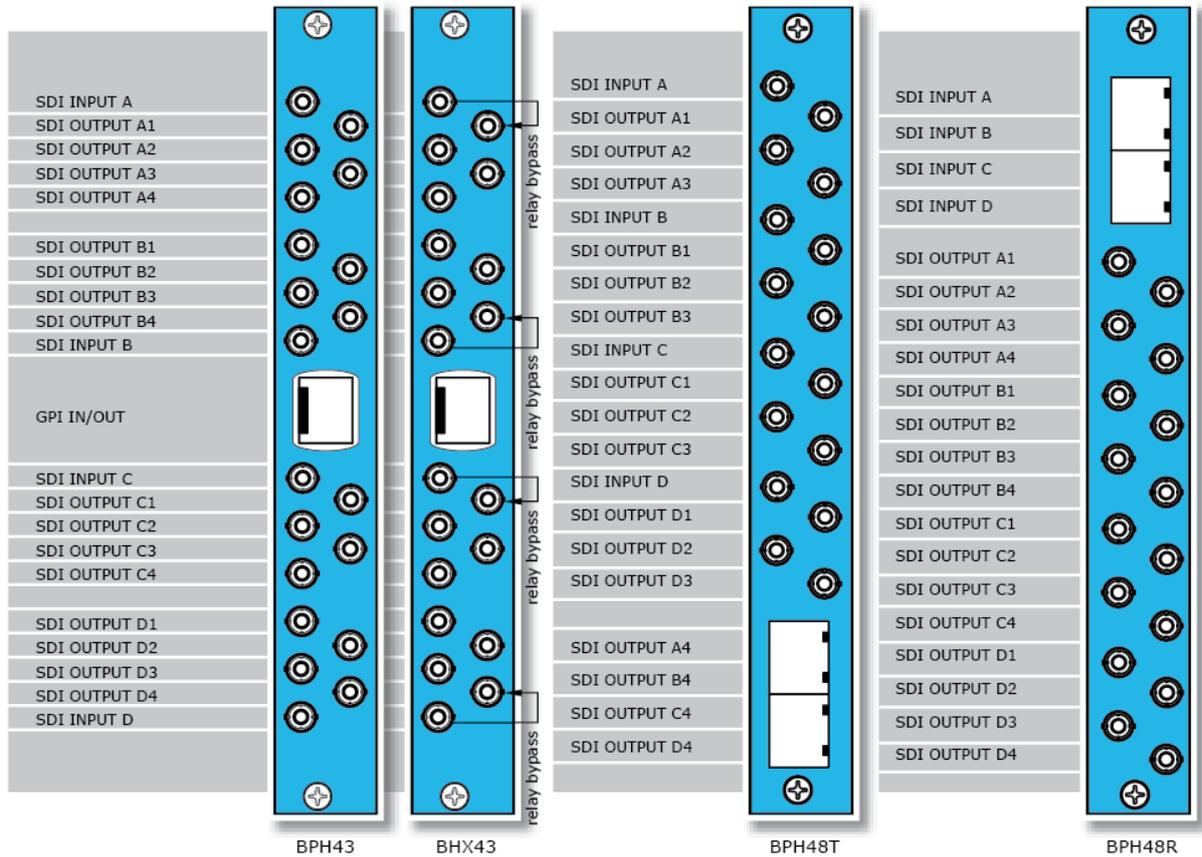
Input A LED	This LED indicated the presence of a valid video signal on input A.
Input B LED	This LED indicated the presence of a valid video signal on input B.
Input C LED	This LED indicated the presence of a valid video signal on input C.
Input D LED	This LED indicated the presence of a valid video signal on input D.

9 Block Schematic



10 Connector Panels

The GDR416 can be used with the BPH43, BHX43, BPH48-T and BPH48R.

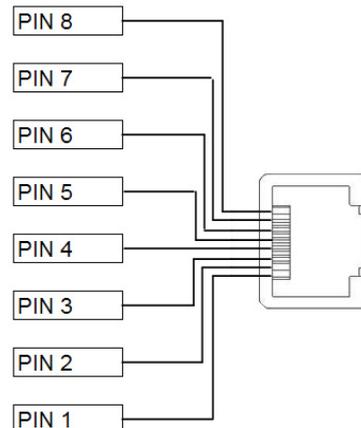


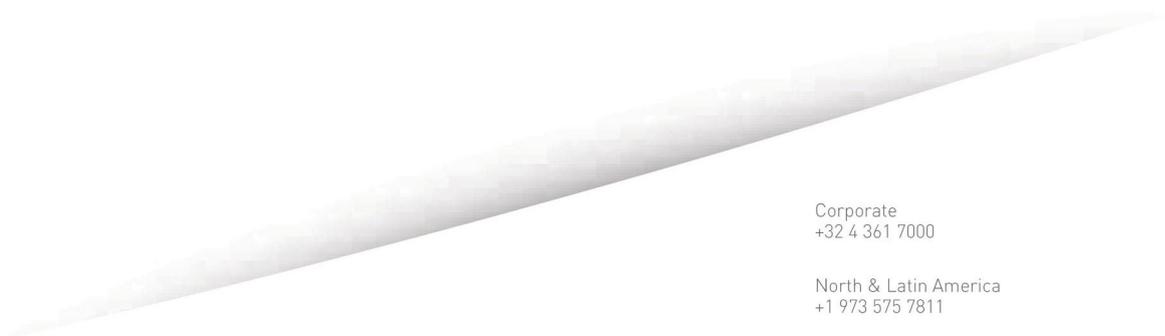
Unused inputs and outputs must be terminated with the correct impedance! If the outputs are not correctly terminated, the resulting eye patterns and cable lengths will be seriously decreased. When using BHX43, cable lengths are also reduced.

GPI I/O

RJ45 connector with the following pinning:

Pin 1	GPO 0	Input A status
Pin 2	GPO 1	Input B status
Pin 3	GPO 2	Input C status
Pin 4	GND	Ground
Pin 5	GPO 3	Input D status
Pin 6	NC	Not connected
Pin 7	NC	Not connected
Pin 8	NC	Not connected





Corporate
+32 4 361 7000

North & Latin America
+1 973 575 7811

Asia & Pacific
+852 2914 2501

Other regional offices
www.evs.com/contact

EVS Headquarters
Liège Science Park
13, rue Bois St Jean
B-4102 Seraing
Belgium



To learn more about EVS go to www.evs.com

EVS Broadcast Equipment is continuously adapting and improving its products in accordance with the ever changing requirements of the Broadcast Industry.
The data contained herein is therefore subject to change without prior notice. Companies and product names are trademarks or registered trademarks of their respective companies.