

8945EDA&8945EDA-D

HD EQUALIZING DA MODULE

Instruction Manual

SOFTWARE VERSION 1.0.0

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the most watched worldwide

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Preface

About This Manual

This manual describes the features of 8945EDA and 8945EDA-D front modules and their corresponding rear module (8900WE-R) in the Gecko Flex frame. As part of this module family, it is subject to Safety and Regulatory Compliance described in the Gecko Flex frame documentation.

8945EDA and 8945EDA-D Equalizing Distribution Amplifier

Introduction

The 8945EDA or 8945EDA-D Wideband Front Equalizing DA provides basic equalization and distribution of a standard definition or high definition signal up to eight outputs over 75 ohm coaxial cable in SD/ASI or HD.

The two models, 8945EDA (single) and 8945EDA-D (dual) must be installed in a Gecko Flex frame.

Features

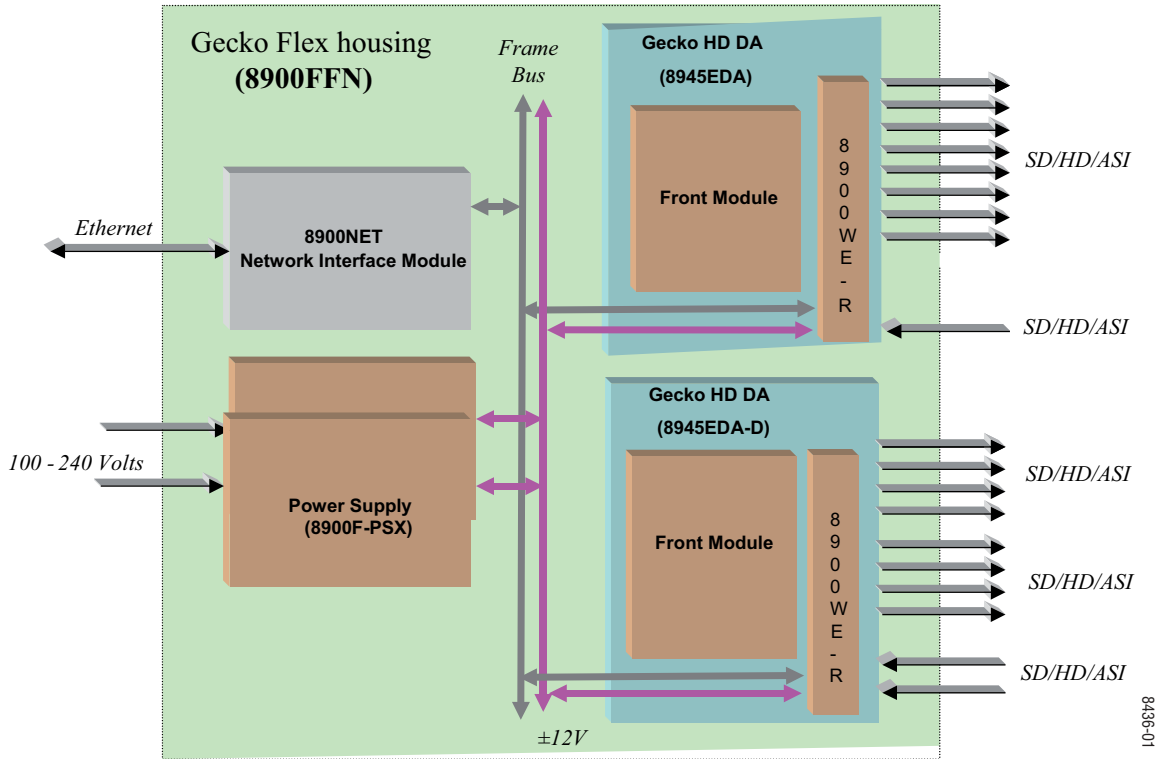
The features of the 8945EDA and 8945EDA-D include:

- Auto cable equalization for up to 330m of cable in the case of SD and ASI signals and for up to 125m of cable in the case of HD signals,
- Accepts a wide range of standard definition or high definition input signal on one electrical input (two electrical inputs in the case of 8945EDA-D),
- Non-inverted outputs allow distribution of compressed signals for handling such as DVB-ASI,
- Eight HD or SD/ASI electrical outputs,
- Provides a bypass mode for non-supported signal rates,
- Provide alarm (signal presence detection) and status management,
- Supports SNMP MIB reporting basic board alarms, and
- Remote control and monitoring support: web pages, Newton control panel, NetConfig management system.

Product Architecture

The 8945EDA and 8945EDA-D are part of a number of different Gecko Flex modules illustrated in [Figure 1](#) below.

Figure 1. Product Architecture



Product Environment

The 8945EDA and 8945EDA-D modules are installed only in a Gecko Flex frame. They may not be installed in older 8900 frames. The devices can be located in broadcast centers, video production facilities, OB vans and production trucks. The main application of those products is the distribution of the incoming SD/ASI or HD SDI signals to the video processing devices (routers, switchers, tape recorder, monitoring devices, etc.). Usually, those devices are located in the area of the reception transmission signal.

Installation

The front and the rear modules are delivered together as a set.

Installation of the 8945EDA or 8945EDA-D module is a process of:

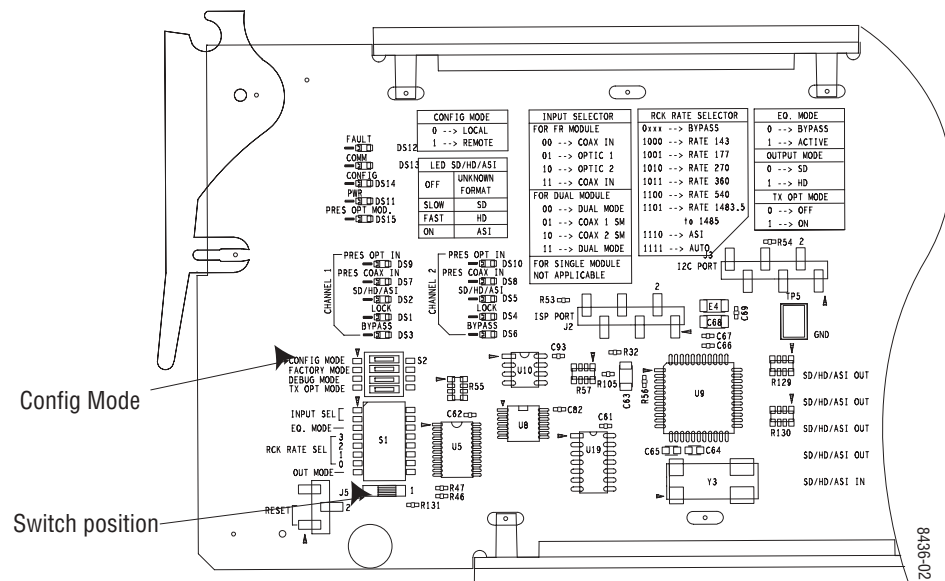
- Placing the rear module in a rear frame slot,
- Placing the front module in the corresponding front slot, and
- Cabling signal ports.

The 8945EDA and 8945EDA-D modules can be plugged in and removed from a Gecko Flex frame with power on, without disrupting operation on adjacent running modules. When power is applied to the module, LED indicators reflect the initialization process (see *Power Up on page 12*).

Local Configuration

Local configuration of the 8945EDA and 8945EDA-D consists of several switches as shown in [Figure 2](#).

Figure 2. Switches On 8945EDA Module



The Config Mode Switch may be on Remote (1) or Local (0).

When the switch is on the 0 position, the other switches must be manually positioned.

When the switch is on the 1 position, the other parameters are positioned by the web page via the NetConfig application.

Module Placement in the Gecko Flex Frame

There are ten rear and front slot locations in the 2 RU frame to accommodate either analog or digital modules. The 8945EDA or 8945EDA-D module must be plugged into any one of the slots of the Gecko Flex frame.

Rear Module Installation

Note Never remove the screws which maintain the retainer rear shields.

To install a rear module into the frame, follow these steps:

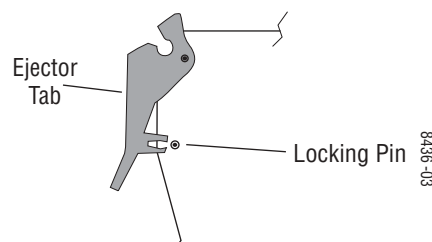
1. Unscrew the blank rear adapter cover **without removing the screws**.
2. Remove the two retainers and the blank rear adapter cover using a needlenose plier.
3. Insert the corresponding rear module in the slot.
4. Replace both retainer rear shields on each side of the rear module and tighten the screws to secure the rear module.

Front Module Installation

After installing the rear module:

1. Unscrew and remove the front cover.
2. Insert the front module in the guides of the corresponding slot.
3. The module ejector tab ([Figure 3](#)) must be locked in its locking pin.

Figure 3. Module Ejector Tab Locking Pin



Cabling

Cabling to the 8945EDA or 8945EDA-D module is done on the BNCs on the rear module. Refer to [Figure 4 on page 11](#) for a detailed illustration of the rear connections referenced below.

The 8945EDA or 8945EDA-D will accept any of the video standards listed in the Input specifications in [Table 4 on page 23](#). Connect a video input to BNC J9 or J10.

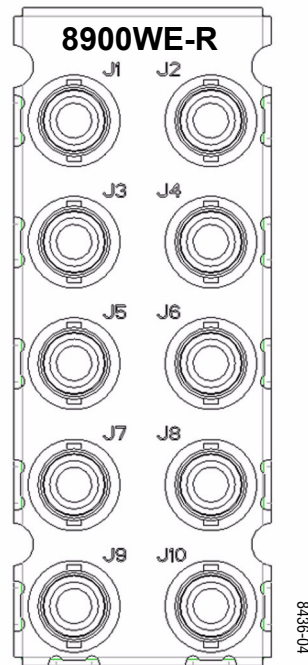
The 8945EDA or 8945EDA-D outputs conform to the video standards listed in the Output specifications in [Table 4 on page 23](#).

[Table 1](#) below gives the inputs and the possible video output connections for the 8945EDA and 8945EDA-D in [Figure 4](#).

Table 1. Cabling Inputs and Outputs

	Inputs	Outputs
8945EDA	J9 J10 is not used	J1, J2, J3, J4, J5, J6, J7, J8
8945EDA-D	J9 and J10	J1, J3, J5 and J7 J2, J4, J6 and J8
	J9 (only)	eight outputs
	J10 (only)	eight outputs

Figure 4. 8945EDA or 8945EDA-D Rear Module



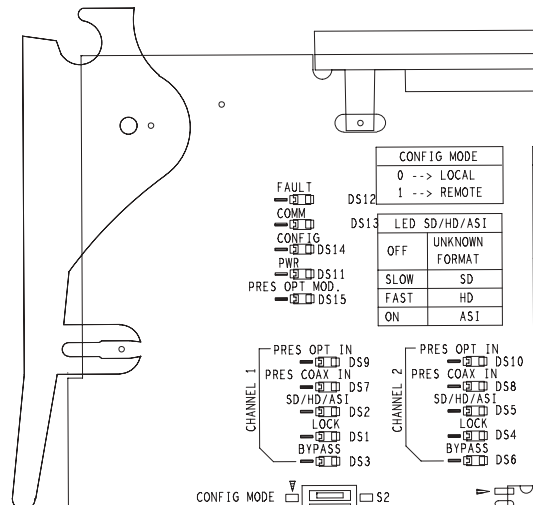
Power Up

The on-board LED (DS11) indicators are illustrated in [Figure 5](#). Upon power-up, the green PWR LED should light and the CONFIG (DS14), FAULT (DS12) and COMM (DS13) LEDs should illuminate for the duration of module initialization.

Operation Indicator LEDs

With a valid input signal connected, the green on-board PWR LED, PRES IN LED should be on. Refer to [Table 2 on page 13](#) to see a complete list of possible operating conditions and the resulting indicator status.

Figure 5. LEDs Significations - Part of the 8945EDA or 8945EDA-D module



Unused LEDs list on the 8945EDA and 8945EDA-D modules:

- PRES OPT IN (DS9 and DS10),
- PRES OPT MOD (DS15),
- SD/HD/ASI (DS2 and DS5), and
- LOCK (DS1 and DS4).

A red FAULT LED indicates an error situation and, when noted with the other indicator LEDs, can indicate a specific problem area. [Table 2](#) describes signal output and LED indications for the various input/reference combinations.

Table 2. Indicator LEDs and Conditions Indicated

LED	Indication	Condition
FAULT (red)	Off	Normal operation
	On continuously	Module has detected internal fault
COMM (yellow)	Off	No activity on frame communication bus
	Long flash	Location Command received by the module from a remote control system
	Short flash	Activity present on the frame communication bus
CONFIG (yellow)	Off	Module is in normal operating mode
	On continuously	Module is initializing, changing operating modes or updating firmware
	Long flash	Location command received by the module from a remote control system
PWR (green)	Off	No power to module or module's DC/DC converter failed
	On continuously	Normal operation, module is powered
PRES COAX IN	Off	Indicates no signal present on the coax
	On continuously	Indicates signal present on the coax
BYPASS	Off	No bypass of the equalizer
	On continuously	Bypass of the equalizer

[Table 3](#) provides the possible input and output conditions that result from different input signals and conditions.

Table 3. Input and Output Conditions

Input Condition	Output Condition
Serial Digital Component (SDI)	Serial Digital Component (SDI)
HD Digital Component (SDI)	HD Digital Component (SDI)
Other carrier	Other carrier
No input	Passing

Remote Configuration

The 8945EDA/8945EDA-D configuration and monitoring can be also performed using a web browser GUI interface or a networked Newton Control Panel when the 8900NET Network Interface module is present in the video frame (Gecko Flex 8900FFN) . Each of these interfaces is described below.

8900NET Module Information

Refer to the 8900NET Network Interface Module Instruction Manual for information on the 8900NET Network Interface Module and setting up and operating the Gecko Flex 8900 frame network.

Note Upgrade software and instructions for the 8900NET can be downloaded from the Grass Valley web site.

Newton Control Panel Configuration

A Newton Control Panel (hard or soft version) can be interfaced to the Gecko Flex frame over the local network. Refer to the documentation that accompanies the Newton Modular Control System for installation, configuration, and operation information.

Control panel access offers the following considerations for module configuration and monitoring:

- Ability to separate system level tasks from operation ones, minimizing the potential for on-air mistakes.
- Ability to group modular products—regardless of their physical locations—into logical groups (channels) that you can easily manipulate with user-configured knobs.
- Update software for applicable modules and assign frame and panel IP addresses with the NetConfig Networking application.
- Recommended for real-time control of module configuration parameters, providing the fastest response time.

Note Not all module functions are available with the control panel, such as factory default recalls.

An example of the Newton Configurator is shown in [Figure 6](#).

Figure 6. Newton Configurator Example

Module (drag and drop from Device View)

Module Name: 8945EDA-D

Slot: 9

Frame Name: QA Ameiva\GeckoFlex

Frame IP Address: 141 . 11 . 154 . 200

Buttons: Reset, Select Module

Label	Description	Type	PID	IID
Rout Mod 1	Routing Mode DA 1	switch	802	1
Rout Mod 2	Routing Mode DA 2	switch	802	2
InReport 1	Input Reporting	switch	804	1
InReport 2	Input Reporting	switch	804	2
Car Dtct 1	Carrier Detect DA 1	switch	806	1
Car Dtct 2	Carrier Detect DA 2	switch	806	2
SgnFormat1	Signal Format DA 1	switch	810	1
SgnFormat2	Signal Format DA 2	switch	810	2
Equal 1	Equalizer Mode DA 1	switch	812	1
Equal 2	Equalizer Mode DA 2	switch	812	2

Buttons: Configure Knob 1, Configure Knob 2, Configure Knob 3, Configure Knob 4

Web Browser Interface

The web browser interface provides a graphical representation of module configuration and monitoring.

Use of the web interface offers the following considerations:

- Web access will require some normal network time delays for processing of information.
- Configuration parameter changes may require pressing **Apply** button or **Enter**, upload processing time, and a manual screen refresh to become effective.
- Web interface recommended for setting up module signal and slot names, and reporting status for SNMP and monitoring.

Refer to the Status web page shown in [Figure 7 on page 16](#). The 8900 modules can be addressed by clicking either on a specific module icon in the frame status display or on a module name or slot number in the link list on the left.

In general, graphics and text colors used indicate the following:

- Green = Pass – signal or reference present, no problems detected.
- Red = Fault – fault condition.
- Yellow = Warning – signal is absent, has errors, or is mis-configured.
- Gray = Not monitored.
- White = Not present.

Note The physical appearance of the graphics on the web pages shown in this manual represent the use of a particular platform, browser and version of 8900NET module software. They are provided for reference only. Web pages will differ depending on the type of platform and browser you are using and the version of the 8900NET software installed in your system.

- For information on status and fault monitoring and reporting shown on the Status page, refer to *Status Web Page on page 17*.

Figure 7. Main Menu

The link section lists the frame and its current modules. The selected link's Status page is first displayed and the sub-list of links for the selection is opened. The sub-list allows you to select a particular information page for the selected device.

Content display section displays the information page for the selected frame or module (frame slot icons are also active links).

Refresh button for manual update of page

Status

Model: 8900FFN Description: Module Frame
 Frame Location: Modular Lab
 Frame Health Alarm WARN Temperature Status PASS
 Power Status PASS

Empty	Module	Module	Empty	Module	Module	Empty	Empty	Module	Module	Net Card	Empty	Power Supply
-------	--------	--------	-------	--------	--------	-------	-------	--------	--------	----------	-------	--------------

Front Cover No Cover

Properties
 Vendor Thomson, Grass Valley Software Version 4.0.0
 Media Slots 10 Network Config Network configuration stored on frame

QA_Ameiva\GeckoFlex
[Status](#)
[Configuration](#)
[Connections](#)
[Frame Alarm Reporting](#)
[SNMP Reporting](#)
[Power Supply/Demand](#)
[1 Media Slot 1](#)
[2 8947RDA-FR](#)
[3 8947RDA-FR](#)
[4 Media Slot 4](#)
[5 8947RDA-D](#)
[6 8947RDA-D](#)
[7 Media Slot 7](#)
[8 Media Slot 8](#)
[9 8945EDA-D](#)
[10 8945EDA](#)
[11 8900NET](#)
[12 Power Supply 1](#)
[13 Power Supply 2](#)

Note Refresh button must be clicked to update the page after any changes.

8945EDA and 8945EDA-D Links and Web Pages

The 8900 GUI provides the following links and web pages for the 8945EDA and 8945EDA-D modules (Figure 8):

- Status – reports input signal and frame bus communication status and module information (page 17),
- Settings – allows the configuration of the inputs and outputs (page 19),
- Slot Config – provides the slot identification, the memory slot and the reports for the frame health and the SNMP trap.(page 21).

Figure 8. 8945EDA-D Web Page Links

2 8945EDA-D
[Status](#)
[Settings](#)
[Slot Config](#)

Status Web Page

Use
this
link

[Status](#)
[Settings](#)
[Slot Config](#)

The Status web page (Figure 9 on page 18 and Figure 10 on page 18 for 8945EDA and 8945EDA-D) shows the signal status of the input signal(s) and communication with the frame bus. Color coding of the display indicates the signal status. Refer to *Web Browser Interface on page 15* for an explanation of the color coding.

Note On the 8945 module, input signals are represented by one or two input signal arrows. If the status of either input signal changes, it will be reflected in the color status of the arrow and the Status LED on the module web pages. To determine specific signal status for DA 1 or DA 2, refer to the Status web page or the on-board LED.

Under the “Status” title are given the model, the description and the frame location. Below, the graphic shows the input and output signals. If the status of either input or output changes, it will be reflected in the color status of the arrow and the status LED on the module web page.

Information about the module, such as part number, serial number, hardware revision, software version, and Asset Tag number are given in a Properties section at the bottom of the display.

Note

1. The double-bar gives the error message (if applicable).
2. The color of the LED present on the top left of each web page is managed by the 8900NET accordingly to alarms status.

Figure 9. Status Web Page for 8945EDA Module

QA Ameiva\GeckoFlex

- [1 Media Slot 1](#)
- [2 8947RDA-FR](#)
- [3 8947RDA-FR](#)
- [4 Media Slot 4](#)
- [5 8947RDA-D](#)
- [6 8947RDA-D](#)
- [7 Media Slot 7](#)
- [8 Media Slot 8](#)
- [9 8945EDA-D](#)
- [10 8945EDA](#)
- [Status](#)
- [Settings](#)
- [Slot Config](#)
- [11 8900NET](#)
- [12 Power Supply 1](#)
- [13 Power Supply 2](#)

Status

Model: 8945EDA Description: HD Equalizing DA
 Frame Location: Modular Lab , Slot: 10

Gecko Flex Module Physical Structure

BNC Input 1
 BNC Outputs
 Frame Bus

Part Number: 671-6696-30
Serial Number: RN05420103
Hardware Revision: A
Software Version: 1.0.0
Asset Tag:

Figure 10. Status Web Page for 8945EDA-D Module

QA Ameiva\GeckoFlex

- [1 Media Slot 1](#)
- [2 8947RDA-FR](#)
- [3 8947RDA-FR](#)
- [4 Media Slot 4](#)
- [5 8947RDA-D](#)
- [6 8947RDA-D](#)
- [7 Media Slot 7](#)
- [8 Media Slot 8](#)
- [9 8945EDA-D](#)
- [Status](#)
- [Settings](#)
- [Slot Config](#)
- [10 8945EDA](#)
- [11 8900NET](#)
- [12 Power Supply 1](#)
- [13 Power Supply 2](#)

Status

Model: 8945EDA-D Description: HD Dual EqualizingDA
 Frame Location: Modular Lab , Slot: 9

Gecko Flex Module Physical Structure

BNC Input 1
 BNC Input 2
 BNC Outputs
 Frame Bus

WARNING : Signal not Present on BNC Input 2

Part Number: 671-6696-40
Serial Number: RN05420100
Hardware Revision: A
Software Version: 1.0.0
Asset Tag:

Settings Web Page

Use
this
link

[Status](#)
[Settings](#)
[Slot Config](#)

The Settings web page for 8945EDA (Figure 11) and 8945EDA-D (Figure 12 on page 20) provides a reporting of signal control for both DA outputs group. This page gives the model, the description and the frame location. The input configuration is made on this web page.

The different parameters are explained below:

- Coax 1 and 2 – Choice of J9 or J10 inputs (only J9 for the 8945EDA module) and outputs.
- Input Reporting – Choose between **Enable** or **Disable**. The **Enable** parameter raises alarms towards 8900NET on the input signals (presence of signal). The color of arrows on the Status page will be automatically changed. The **Disable** parameter will change the color of arrows on the Status web page to grey to show they are not being monitored or reported to upper level control devices.
- Equalizer Mode – If the **Active** parameter is chosen, the equalizer is used. Otherwise, the equalizer is bypass.
- Signal Format – Indicates the input signal format. The choice is between **SD/ASI** and **HD**. This parameter acts on the rise and fall time value.
- Carrier Detect – Indicates the input signal detection of DA1 or DA2 (for 8945EDA-D).

Figure 11. Settings Page for 8945EDA Module

QA Ameiva\GeckoFlex

[1 Media Slot 1](#)
[2 8947RDA-FR](#)
[3 8947RDA-FR](#)
[4 Media Slot 4](#)
[5 8947RDA-D](#)
[6 8947RDA-D](#)
[7 Media Slot 7](#)
[8 Media Slot 8](#)
[9 8945EDA-D](#)
[10 8945EDA](#)
[Status](#)
[Settings](#)
[Slot Config](#)
[11 8900NET](#)
[12 Power Supply 1](#)
[13 Power Supply 2](#)

Settings

Model: 8945EDA Description: HD Equalizing DA
Frame Location: Modular Lab , Slot 10

DA	
DA Input : Coax In J9	DA Outputs : J1,J3,J5,J7,J2,J4,J6,J8
Input Reporting	Enable
Equalizer Mode	Active
Signal Format	<input type="radio"/> SD/ASI <input checked="" type="radio"/> HD
Carrier Detect	Present

Figure 12. Settings Page for 8945EDA-D Module

QA Ameiva/GeckoFlex
[1 Media Slot 1](#)
[2 8947RDA-FR](#)
[3 8947RDA-FR](#)
[4 Media Slot 4](#)
[5 8947RDA-D](#)
[6 8947RDA-D](#)
[7 Media Slot 7](#)
[8 Media Slot 8](#)
[9 8945EDA-D](#)
[Status](#)
[Settings](#)
[Slot Config](#)
[10 8945EDA](#)
[11 8900NET](#)
[12 Power Supply 1](#)
[13 Power Supply 2](#)

Settings
 Model: 8945EDA-D Description: HD Dual EqualizingDA
 Frame Location: Modular Lab , Slot: 9

	DA 1	DA 2
Routing Mode	DA Outputs J1,J3,J5,J7	DA Outputs J2,J4,J6,J8
Coax In 1 J9	<input checked="" type="radio"/>	<input type="radio"/>
Coax In 2 J10	<input type="radio"/>	<input checked="" type="radio"/>
Input Reporting	Enable ▾	Enable ▾
Equalizer Mode	Active ▾	Active ▾
Signal Format	<input type="radio"/> SD/ASI <input checked="" type="radio"/> HD	<input type="radio"/> SD/ASI <input checked="" type="radio"/> HD
Carrier Detect	Present	Not Present

Note See table 1 for routing mode capabilities.

Slot Config Web Page

Use
this
link



Use the Slot Config web page (Figure 13 on page 22) to perform the following functions on the module:

- **Locate Module** – selecting the **Flash** pulldown button flashes the yellow COMM LED on the front of the module so it can be located in the frame.
- **Slot Identification** – You may identify the module by typing a specific name in the **Name** field. The assigned name is stored on the 8900NET module and travels with the 8900NET module if it is moved to another frame. Select **Default** to enter the factory default module name.

An asset identification may be entered in the **Asset Tag** field. This will appear on the module Status web page and in the NetConfig inventory report.

- **Slot Memory** – the slot configuration for each media module is automatically saved periodically (once an hour) to the 8900NET module in that frame. You may also select the **Learn Module Config** button at any time to save the current configuration for this slot. The configuration is saved on the 8900NET module. If the 8900NET module is removed or powered down, the stored configurations are not saved.

When the **Restore upon Install** box has been checked, the current configuration saved to this slot is saved as slot memory. When the current module is removed and another module of the same type is installed, the configuration saved to the 8900NET module will be downloaded to the new module. The box must be checked before the current module with the saved configuration is removed.

- **Frame Health Reporting** – In the page of this function, the boxes must be checked. When there is a hardware problem the 8900NET software raises an alarm.
- **Slot SNMP Trap Reports** – displayed only when the SNMP Agent software has been installed on the 8900NET module. Slot SNMP traps can be enabled only when the hardware switches for Module Fault reporting and Asynchronous Status reporting are enabled on the 8900NET module (dipswitch S1 segment 5 and dipswitch S2 segment 1).

The enabled SNMP traps will be reported to any SNMP manager that is identified as an SNMP Report Destination in 8900NET configuration. Trap severity is read-only hard-coded information that is interpreted and responded to by the SNMP Manager software configuration.

Figure 13. Slot Config Web Page

The screenshot displays the 'Slot Config' web page for a Grass Valley device. On the left, a vertical list of navigation links includes '3A Ameiva\GeckoFlex', '1 Media Slot 1', '2 8947RDA-FR', '3 8947RDA-FR', '4 Media Slot 4', '5 8947RDA-D', '6 8947RDA-D', '7 Media Slot 7', '8 Media Slot 8', '9 8945EDA-D', '10 8945EDA', 'Status', 'Settings', 'Slot Config', '11 8900NET', '12 Power Supply 1', and '13 Power Supply 2'. The main content area features the 'Slot Config' title with a refresh icon, followed by model and location information: 'Model: 8945EDA Description: HD Equalizing DA' and 'Frame Location: Modular Lab , Slot: 10'. Below this are three sections: 'Locate Module' with a dropdown menu set to 'Off'; 'Slot Identification' with a 'Name' field containing '8945EDA' and a 'Default' button, and an 'Asset Tag' field; and 'Slot Memory' with a checkbox for 'Restore upon Install' and a 'Learn Module Config' button. At the bottom, there are links for 'Frame Health Reports' and 'SNMP Trap Reports'.

Specifications

Table 4. 8945EDA and 8945EDA-D Specifications

Parameter	Value
Input	
Number and type of inputs	1 or 2 BNCs
Input impedance	75 Ohm
Input signal type	Serial digital component conforming to the following formats: <ul style="list-style-type: none"> • SMPTE 292M • SMPTE 259M (143 Mbps, 177 Mbps, 270 Mbps, 360 Mbps) • SMPTE 344M (540 Mbps) • 4 Mbps to 1.5 Gbps with PN20 pseudonoise sequence, maximum ratio of 19/1 • DVB-ASI
Signal level	SDI 800 mV p-p $\pm 10\%$ max
Return loss	>15 dB 0.004 to 1.5 GHz
Equalization	Auto equalizing: HD signals up to 125 m Belden 1694a SD signals up to 330 m of Belden 1694a
Outputs	
Number and type of outputs	8 BNCs
Output impedance	75 Ohm
Signal type	Serial digital component conforming to the following formats: <ul style="list-style-type: none"> • SMPTE 292M • SMPTE 259M (143 Mbps, 177 Mbps, 270 Mbps, 360 Mbps) • SMPTE 344M (540 Mbps) • 4 Mbps to 1.5 Gbps with PN20 pseudonoise sequence, maximum ratio of 19/1 • DVB-ASI
Signal level	SDI 800 mV p-p $\pm 10\%$
Return loss	>15 dB 0.004 to 1.5 GHz
Error Checking	Transparent to embedded EDH
Signal polarity	Non-inverted
Power	
Input power maximum EDA EDA-D	2.6 W 2.9 W
Environmental	
Frame temperature range	0 to 45 °C
Operating humidity range	0 to 90% non condensing
Non-operating temperature	-10 to 70 °C
MTBF at 40°C 8945EDA 8945EDA-D	1 512 700 1 395 000

Service

The 8945EDA modules make extensive use of surface-mount technology and programmed parts to achieve compact size and adherence to demanding technical specifications. Circuit modules should not be serviced in the field unless otherwise directed by Customer Service.

Power-up Diagnostics Failure

If the module has not passed self-diagnostics, do not attempt to troubleshoot. Return the unit to Grass Valley (see *Module Repair on page 25*).

Troubleshooting

The Electronic Circuit Breaker

The electronic circuit breaker works during a fault condition or an overcurrent which stops the module.

Remove the module and replace it in the frame. If the problem persists, please refer to the Grass Valley Customer Service.

The Tables of Alarms

The table below describes the different type of alarms:

Table 5. List of Alarms

Alarm degree	Description	LED concerned	WEB page comments	Query status towards Netcard&SNMP
High	Hardware failure: no application code	Fault red on	Boot status page: Only this page is visible, software is downloading	
High	Bad rear module: if optical rear type on EDA and EDA-D	Fault: flashing	Status page: bad rear module PID_RES_DEVICE_STATUS: rear module in yellow color (green if OK)	YES
High	Electrical signal detect on DA 1 (DUAL or single mode2) only when electric selected	PRES COAX IN 1	STATUS PAGE: elec input arrow is green/red/yellow SETTING page: carrier detect : present / not present	YES
High	Electrical signal detect on DA 2(DUAL or single mode1) only when electric selected	PRES COAX IN 2	STATUS PAGE: elec input arrow are green/red/yellow SETTING page: carrier detect : present / not present	YES
	Equalizer 1 bypassed	Bypass	SETTING page: equalizer mode : BYPASS	No
	Equalizer 2 bypassed	Bypass	SETTING page: equalizer mode : BYPASS	No

Table 5. List of Alarms

Alarm degree	Description	LED concerned	WEB page comments	Query status towards Netcard&SNMP
	INPUT 1 REPORTED: previous described alarms reported	No impact on LED status	Status page: corresponding input arrow color green or yellow Setting page: input reporting: enable/disable	YES
	INPUT 1 NOT REPORTED: previous described alarms are not reported	No impact on LED status	Status page: corresponding input arrow color green or yellow Setting page: input reporting: enable/disable	NO
	INPUT 2 REPORTED: previous described alarms reported	No impact on LED status	Status page: corresponding input arrow color green or yellow Setting page: input reporting: enable/disable	YES
	INPUT 2 NOT REPORTED: previous described alarms are not reported	No impact on LED status	Status page: corresponding input arrow color green or yellow Setting page: input reporting: enable/disable	NO

Module Repair

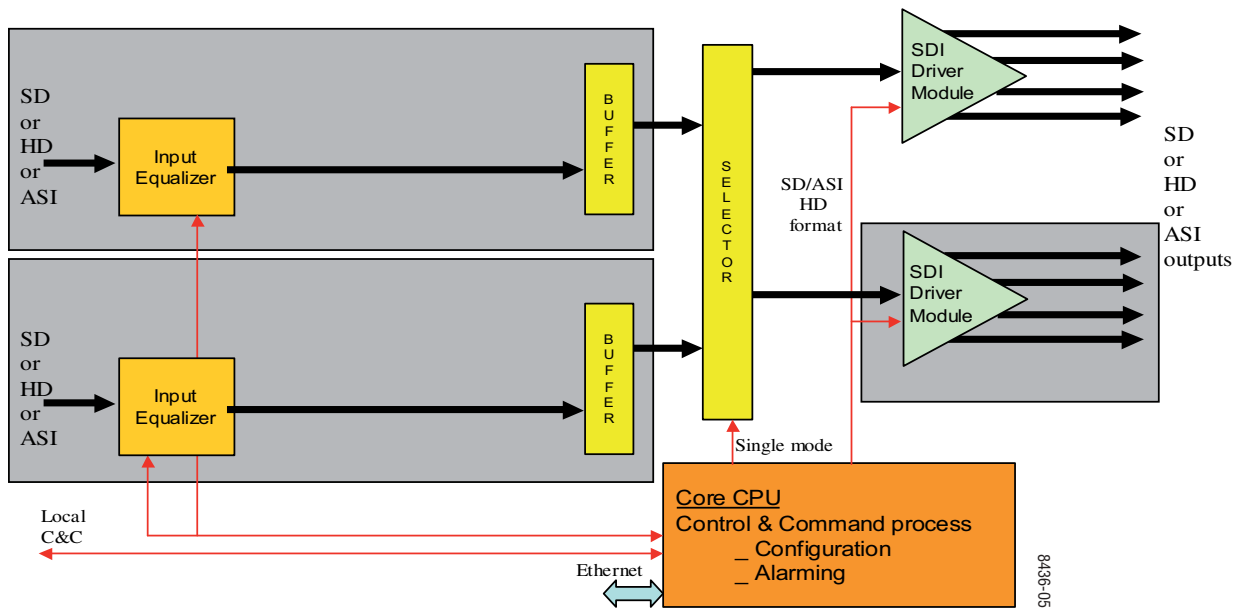
If the module is still not operating correctly, replace it with a known good spare and return the faulty module to a designated Grass Valley repair depot. Call your Grass Valley representative for depot location.

Refer to [Contacting Grass Valley](#) at the front of this document for the Grass Valley Customer Service Information number.

Functional Description

A block diagram of the 8945EDA is shown in [Figure 14](#).

Figure 14. 8945EDA and 8945EDA-D Block Diagram



Input Processing

The wideband serial SD/ASI or HD signal enters the module from rear BNC J9 or J10 to an input amplifier. It is then equalized for the specified cable lengths in the equalizer circuit.

Output Processing

The SDI driver modules feed the outputs. That ensures the rise and fall time adjustment regarding the signal format selection (SD/ASI or HD mode).

Microprocessor

The main functions of the microprocessor include:

- Providing remote control and monitoring capability for the module (through ethernet),
- Communicating with equalizer IC to monitor signal present status,
- Relaying module status through on-board LEDs, and
- Configuring module components at power up.

Power Supply

Power is fed from +12 V rails of the frame's switching power supply. Each stage of the module receives its own, separate, highly regulated and filtered power source. The power input is protected by hot swap function.

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