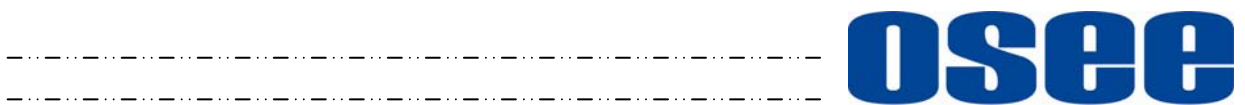


SDA680xN SD-SDI Equalizing
Distribution Amplifier

USER MANUAL



Product Information

Model: SDA680xN SD-SDI Equalizing Distribution Amplifier
Version: V010002
Release Date: November 9th, 2010

Company

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SDA680xN SD-SDI Equalizing Distribution Amplifier

Chapter 1 Introduction

Overview

In this manual, the different types of models for SDA680xN are introduced as follows:

SDA6801N: supports 1 channels of SDI inputs, and the input corresponds to 8 channels of SDI outputs

SDA6802N: supports 2 channels of SDI inputs, and each input corresponds to 4 channels of SDI outputs

All these modules can be installed in 6800N series frame.

General Description

The SDA680xN modules provide a low-cost solution of digital video signal distribution without the need of restoring the clock. It can amplify and distribute one or two SDI signal, and compensate 300m cable loss during transmission.

Features

The SDA680xN offers the following features:

- ✓ one or two channel SDI input
- ✓ up to 8 channel SDI output
- ✓ low-cost scheme
- ✓ equalize up to 300m of cable loss, and can regulate equalizing distance continuously
- ✓ support hot-plugging

FCC Caution:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device,

pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

Module Descriptions

The Front Part of Module

Figure 1-1 shows the boards of SDA6801N (up) / SDA6802N (down)

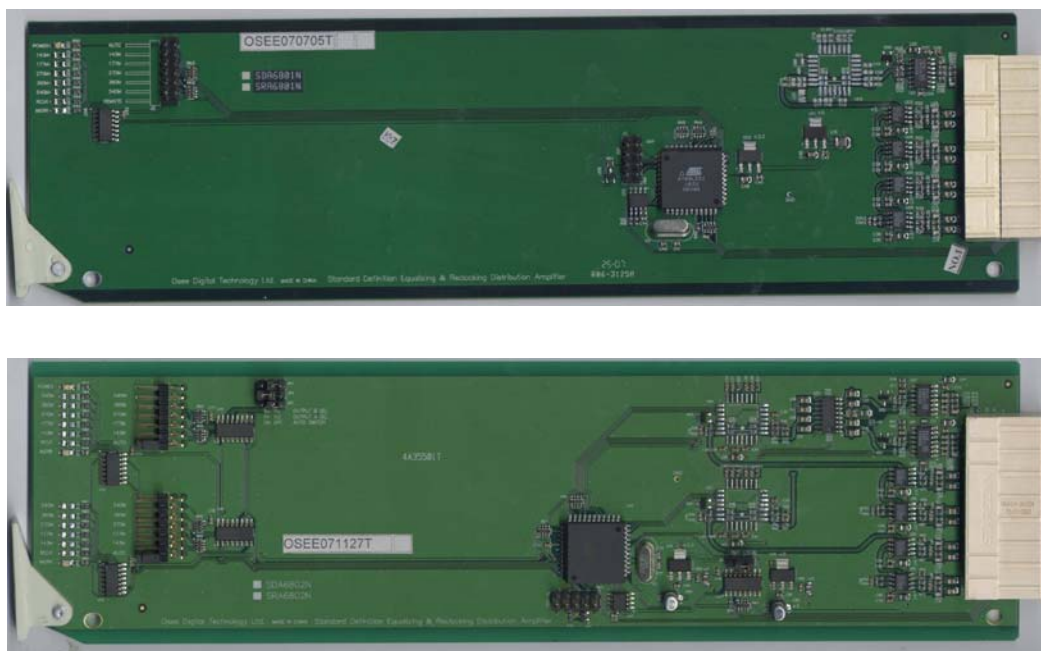


Fig. 1-1 the boards of SDA6801N (up) / SDA6802N (down)

Back Connector



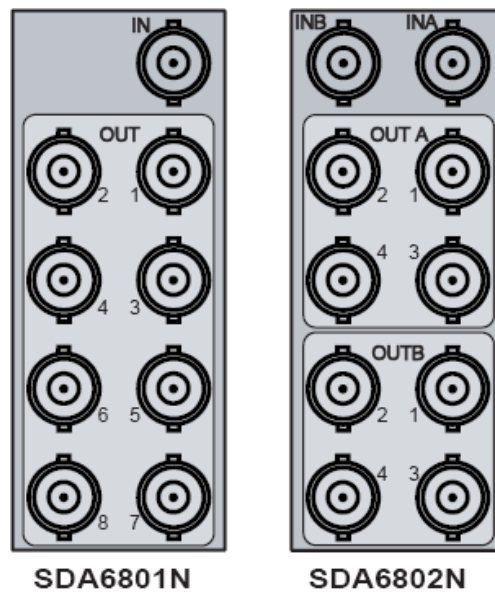


Fig.1-2 Back Connector of SDA6801N (left) / SDA6802N (right)

Tab. 1-1 description of SDA6801N Back Connector

Item	Description
IN	SDI input
1~8	SDI output

Tab. 1-2 description of SDA6802N Back Connector

Item	Description
INA	SDI input, channel A
INB	SDI input, channel B
OUTA1	SDI output, channel A
OUTA2	SDI output, channel A
OUTA3	SDI output, channel A
OUTA4	SDI output, channel A
OUTB1	SDI output, channel B
OUTB2	SDI output, channel B
OUTB3	SDI output, channel B
OUTB4	SDI output, channel B

Signal Flow

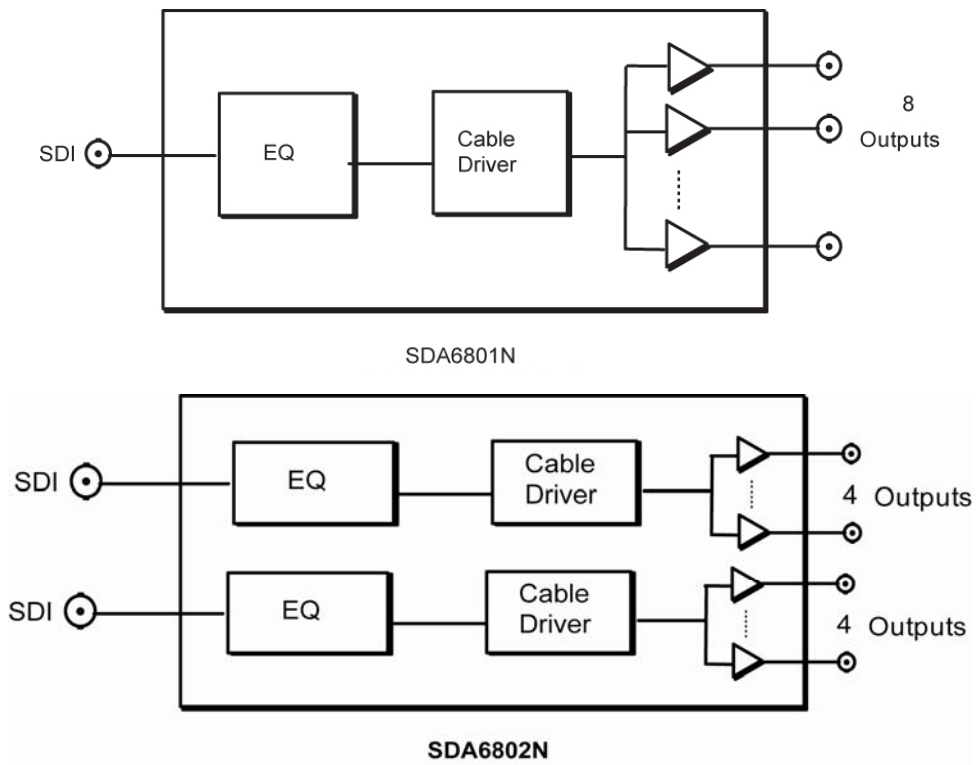


Fig. 1-3 Signal Flow of SDA6801N (up)/ SDA6802N (down)

Chapter 2 Installation

Overview

The power consumption for module and the maximum power ratings that frame can sustain have to be confirmed before installing the module.

In this chapter, the following topics on installation process for SDA680xN are discussed below:

- Unpacking the module
- Setting Jumper
- Installing the module
- Making the connections
- Removing the module

Maximum Power Ratings for Frame

The maximum power ratings that different types of frames can sustain are listed in the Table 2-1

Tab. 2-1 Maximum Power Consumption

Frame	Maximum Voltage	Redundant Power Supplies	Numbers of Slots
6800N-1U	40W	No	4

Frame	Maximum Voltage	Redundant Power Supplies	Numbers of Slots
6800N-2U	60W	Yes	10

Unpacking the Module

Preparing the Product for Installation

Contact your dealer right now if any items are missing.

Follow the procedures below before installing the module:

- Check the equipment for any invisible damage that may have occurred during transit.
- Confirm all the items listed on the packing list have been received.
- Remove all the packing material including electrostatic-resistant packing.
- Retain these packing for future use.

Check the Packing List

Tab. 2-2 Packed Components

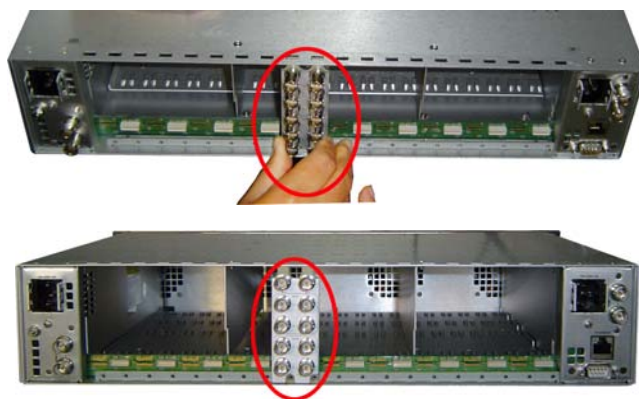
Model Name	Description
SDA6801N	SDA6801N module (1pc); BNC (1pc), and other accessories
SDA6802N	SDA6802N module (1pc); BNC (1pc), and other accessories

Installing the Module

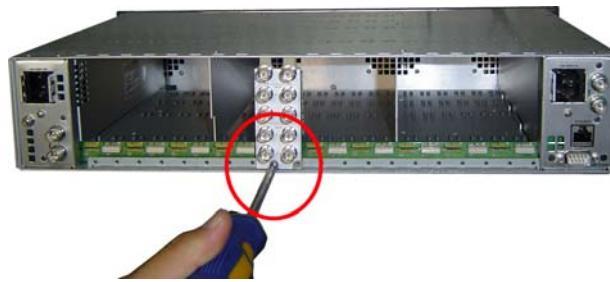
Caution: Static electricity may cause sensitive semiconductor out of order. Avoid installing or removing the module in the electrostatic-induced environment.

Follow the next steps to install the module:

Step 1



Step2



Step3



Step 4



Step5



Fig. 2-1 Installation of 2U Frame of 6800N Series

- ✓ Locate the position for back connector and insert the back connector
- ✓ Fasten the screw to fix the back connector.
- ✓ Locate the slot for module.
- ✓ Get the module installed in the slot, push the module slightly along the slot, press module again to confirm that the module is installed firmly and then close swivel handle.
- ✓ Install the front panel.

Making the Connections

Please connect signals based on Fig. 1-2.

Removing the Module

Follow the following steps to remove SDA680xN module:

1. Open the front part of frame.
2. Open the swivel handle to the full.



3. First make sure the frame stands firmly, and then pull the module gently along the slot till out of frame.
4. Install the front panel.

Chapter 3 Operation and Control

Tab. 3-1 LED Status

Item	Description
INERR (red)	On: error or no signal
POWER (green)	On: power is on

Chapter 4 Specifications

Digital Video Input

Tab. 4-1 Digital Video Input Specifications

Content	Parameter
Standard	SMPTE 259M-C; 270 Mbps, 525/625 digital component
Quantizing	10-bit
Connector	BNC (IEC169-8)
Impedance	75Ω
Return Loss	18dB to 270MHz
Cable Equalization	230m (754.59 feet) Belden 8281 cable

Digital Video Output

Tab. 4-2 Digital Video Output Specifications

Content	Parameter
Standard	SMPTE 259M-C; 270 Mbps, 525/625 digital component
Quantizing	10-bit
Connector	BNC (IEC169-8)
Impedance	75Ω
Return Loss	18dB to 270MHz
Signal Level	800 mV ± 10%
DC Offset	0 V ± 0.5 V
Rise & Fall Time	400 to 1500ps (20% to 80% amplitude)
Overshoot	<10%
Jitter	<0.2 UI (740ps) peak

Note: Specifications are subject to change without notice !

Warranty for osee product

What the warranty covers:

osee warrants its products to be free from defects in material and workmanship during the warranty period of two year from purchase date. If a product proves to be defective in material or workmanship during the warranty period, osee will, at its sole option, repair or replace the product with a similar product. The replacement unit will be covered by the balance of the time remaining on the customer's original limited warranty.

No sales personnel of the seller or any other person is authorized to make any warranties other than those described above, or to extend the duration of any warranties on behalf of osee, beyond the time period describe above.

This warranty is extended to the first consumer only, and proof of purchase is necessary to honor the warranty. If there is no proof of purchase provided with a warranty claim, osee reserves the right not to honor the warranty set forth above. Therefore, labor and parts may be charged to the consumer.

What the warranty does not cover:

1. Any product on which the serial number has been defaced, modified or removed.
2. Damage, deterioration or malfunction resulting from:
 - Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product
 - Repair or attempted repair by anyone not authorized by osee
 - Any damage of the product due to shipment.
 - Removal or installation of the product.
 - Causes external to the product, such as electric power fluctuations or failure.
 - Use of supplies or parts not meeting osee product's specifications.
 - Normal wear and tear.

Any other cause which does not relate to a product defect