
BDA6801N/UDA6801N

Digital Audio Distribution Amplifier

USER MANUAL

OSEE
时代奥视

Product Information

Model: BDA6801N/UDA6801N Digital Audio Distribution Amplifier
Version: V010000
Release Date: March 13th, 2009

Company

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Chapter 1 Introduction

1.1 Product Overview

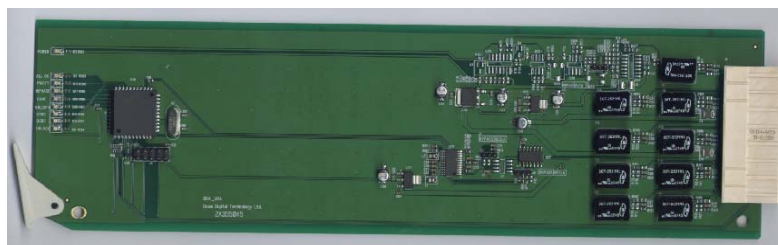
BDA6801N/UDA6801N digital audio distribution amplifiers are multi-channel digital audio distribution amplifier function modules.

BDA6801N has one channel balanced digital audio input, and 8 channels balanced digital audio outputs by distributing and amplifying.

UDA6801N has one channel unbalanced digital audio input and 8 channels unbalanced digital audio outputs, by distributing and amplifying.

Both of them support various alarm indications.

The module can be installed in 6800N series frame.



Tab. 1-1 Description of BDA6801N/UDA6801N

Module	Description
BDA6801N	one channel balanced digital audio input, and 8 channels balanced digital audio outputs
UDA6801N	one channel unbalanced digital audio input and 8 channels unbalanced digital audio outputs

1.2 Features

The BDA6801N/UDA6801N offers the following features:

- ☆ One channel balanced / unbalanced digital audio input, and 8 channels balanced / unbalanced digital audio outputs
- ☆ Low cost, high reliability, high quality audio distribution amplifier
- ☆ Support many kinds of alarm indication and hot-swappable

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.

1.3 Module Descriptions

1.3.1 6800-C2 Frame Back Panel Connector

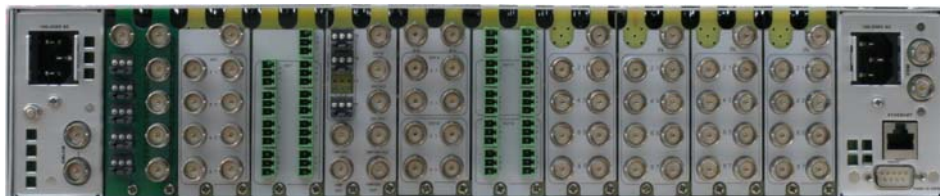


Fig.1-1 Back Connector of 6800-C2 frame

1.3.2 BDA6801N/UDA6801N Module Back Connector

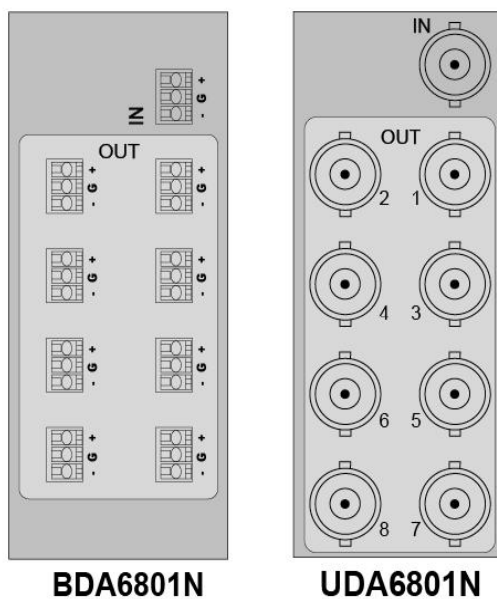


Fig.1-2 Back Connector of BDA6801N/UDA6801N

Tab. 1-2 Description of BDA6801N Back Connector

Position	Description
IN	AES balanced digital audio input
OUT	AES balanced digital audio output

Tab. 1-3 Description of UDA6801N Back Connector

Position	Description
IN	AES unbalanced digital audio input
1	AES unbalanced digital audio output
2	AES unbalanced digital audio output
3	AES unbalanced digital audio output
4	AES unbalanced digital audio output
5	AES unbalanced digital audio output
6	AES unbalanced digital audio output
7	AES unbalanced digital audio output
8	AES unbalanced digital audio output

1.3.3 Signal Flow

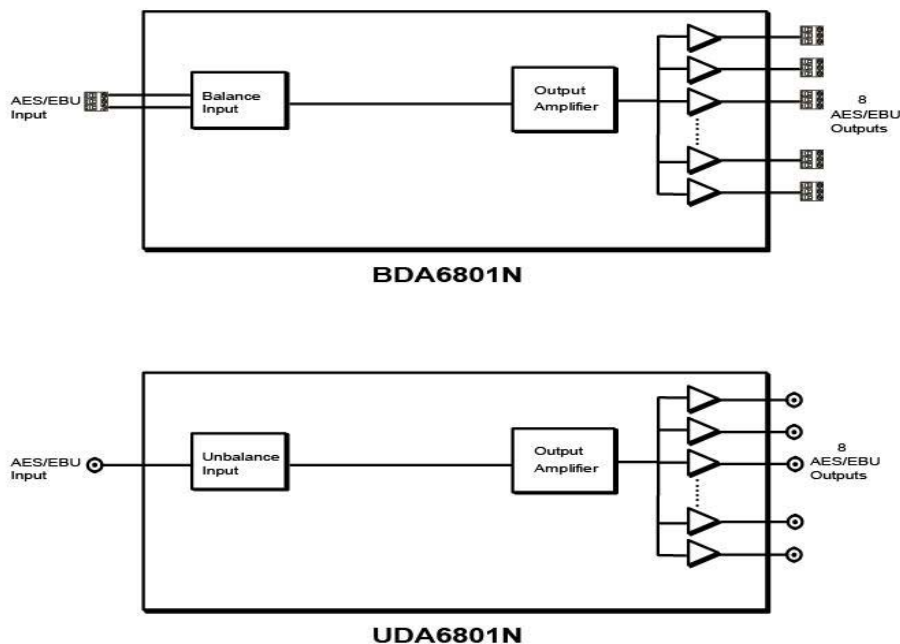


Fig. 1-3 Signal Flow of BDA6801N/UDA6801N

Chapter 2 Installation

2.1 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-C1	40W	Yes	4
6800N-C2	60W	Yes	10

2.2 Unpacking the Module

2.2.1 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.

2.2.2 Check the Packing List

Tab. 2-2 Packed Components

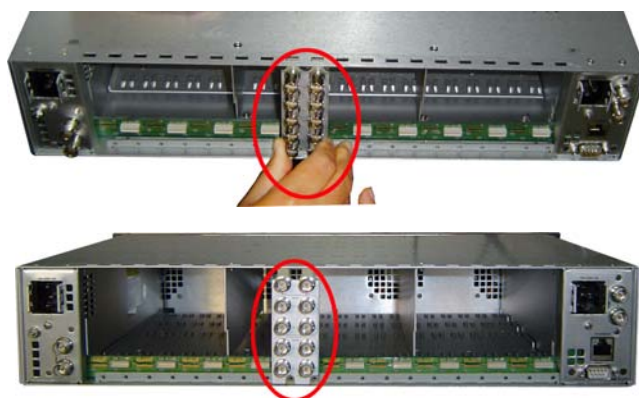
Model Name	Description
BDA6801N	BDA6801N module (1pc), Back Connector(1pc), other accessories
UDA6801N	UDA6801N module (1pc), Back Connector(1pc), other accessories

2.3 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 following steps to install the module:

Step 1



Step2



Step3



Step 4



Step 5



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.

2.4 Making the Connections

Please connect AES audio signals based on the types of module input signal and the connectors showed in Fig. 1-2.

2.5 Removing the Module

Follow the following steps to remove BDA6801N/UDA6801N 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 Description of LED Alarm Indicator

The chapter will show the description of LED indicators. Read the module silk-screen to check the LED names. The LED indicators include: Power, All OK, QCRC, CCRC, UNLOCK, V, CONF, BIP, PAR.

When the module powers on, the Power LED indicator will light up in green.

If any one of the following 7 errors occurs, the corresponding indicator will show in red, and “All OK” indicator will go off. If there is none of the following 7 errors, the “All OK” indicator will light up in green.

The definitions of 7 types of errors which the receiver may occur are as follows:

1. QCRC – CRC error in Q sub-code data.
2. CCRC – CRC error in channel status data.
3. UNLOCK – PLL is not locked to incoming data stream.
4. V – Data Validity bit is set.
5. CONF – The logical OR of UNLOCK and BIP. The input data stream may be near error condition due to jitter degradation.
6. BIP – Bi-phase encoding error.
7. PAR – Parity error in incoming data.

Chapter 4 Specifications

4.1 Digital AES Audio Inputs

Table 4-1 Balanced Digital AES Audio Input Specifications (applicable to BDA6801N)

Item	Parameter
Connector	3-pin connector (male)
Impedance	110Ω
Standard	AES 3: 1992, AES3id: 1995, SMPTE276M
Rise and fall time	5 to 30ns

Table 4-2 Unbalanced Digital AES Audio Input Specifications (applicable to UDA6801N)

Item	Parameter
Connector	BNC (IEC 169-8)
Impedance	75Ω
Standard	AES 3: 1992, AES3id: 1995, SMPTE276M
Rise and fall time	30 to 44ns

4.2 Digital AES Audio Outputs

Table 4-3 Balanced Digital AES Audio Output Specifications (applicable to BDA6801N)

Item	Parameter
Connector	3-pin connector (male)
Output level	2.0 to 7.0 V (peak to peak)
Jitter	+/-20 ns
Rise and fall time	5 to 30 ns (10% to 90% of amplitude)
Impedance	110Ω+/- 20% (0.1 to 6 MHz)
CMR Ratio	>30 dB below output signal (0 to 6 MHz)

Table 4-4 Unbalanced Digital AES Audio Output Specifications (applicable to UDA6801N)

Item	Parameter
Connector	BNC (IEC 169-8)
Output level	1.0 V +/-10% (peak to peak)
DC offset	0.0V ± 50.0mV
Rise and fall time	30 to 44 ns (10% to 90% of amplitude)
Impedance	75Ω
Return Loss	>25 dB, 0.1 to 6.0 MHz

Chapter 5 Versions

The descriptions of modified version are as follows:

Version No.	Release Date	Modify Description
V1.1	2009-3-13	

Note: Specifications are subject to change without notice

Chapter 6 Warranty for osee product

6.1 What the warranty covers:

osee warrants its products to be free from defects in material and workmanship during the warranty period of two years 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.

6.2 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.