

# **OPERATION MANUAL**

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**USF-111DDA-12G**  
Digital Distribution Amplifier

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1<sup>st</sup> Edition

# Precautions



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## Important Safety Warnings


### [Power]

 Stop	Do <b>not</b> place or drop heavy or sharp-edged objects on the power cord. A damaged cord can cause fire or electrical shock hazards. Regularly check the power cord for excessive wear or damage to avoid possible fire / electrical hazards.
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### [Circuitry Access]

 Stop	Do <b>not</b> touch any parts / circuitry with a high heat factor. Capacitors can retain enough electric charge to cause mild to serious shock, even after the power has been disconnected. Capacitors associated with the power supply are especially hazardous.
 Hazard	Unit should <b>not</b> be operated or stored with cover, panels, and / or casing removed. Operating the unit with circuitry exposed could result in electric shock / fire hazards or a unit malfunction.

### [Potential Hazards]

 Caution	If abnormal odors or noises are noticed coming from the unit, immediately turn the power off and disconnect the power cord to avoid potentially hazardous conditions. If problems similar to the above occur, contact an authorized service representative <b>before</b> attempting to operate the unit again.
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### [Consumables]

 Caution	Consumable items that are used in the unit must be periodically replaced. For further details on which parts are consumables and when they should be replaced, refer to the specifications at the end of the Operation Manual. Since the service life of the consumables varies greatly depending on the environment in which they are used, such items should be replaced at an early date. For details on replacing consumable items, contact your dealer.
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# Upon Receipt

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Congratulations! By purchasing a USF-111DDA-12G Digital Distribution Amplifier, you have entered the world of FOR-A and its many innovative products.

Check your received items against the packing list below. Check to ensure no damage has occurred during shipment. If damage has occurred, or items are missing, inform your supplier immediately.

◆ **USF-111DDA-12G**

ITEM	QTY	REMARKS
USF-111DDA-12G	1	USF-111DDA-12G Front Module USF-111DDA-12G Rear Module
DVD-ROM	1	Operation Manual (PDF)
Screw (for Rear Module Installation)	4	

- \* This Product can be installed into the following frame:  
USF-212AS  
USF-105AS

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# 1. Prior to Starting

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## 1-1. Overview

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The USF-111DDA-12G is a multi-bit rate video distribution amplifier that can be installed in a USF frame. The USF-111DDA-12G supports 12G-SDI, 3G-SDI, HD-SDI, SD-SDI and DVB-ASI, and is capable of producing up to 11 outputs from 1 input.

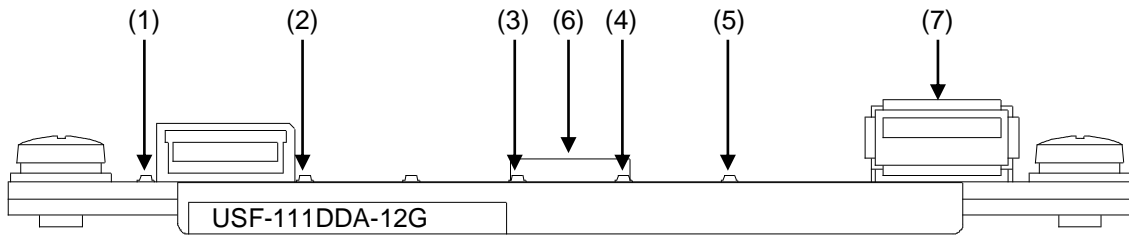
## 1-2. Features

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- Installs into a USF-212AS/ USF-105AS frame.
- 1 input 11 distribution outputs.
- Supports SDI 12Gbps, 3Gbps, 1.5Gbps, 270Mbps signals. (Automatic)
- 12G/3G/HD/SD-SDI equalizer and re-clock functions.
- Detection of input signal and identification of 12Gbps/3Gbps/1.5Gbps/270Mbps.
- Supports DVB-ASI (270Mbps) signal.
- SNMP monitoring and syslog supported.

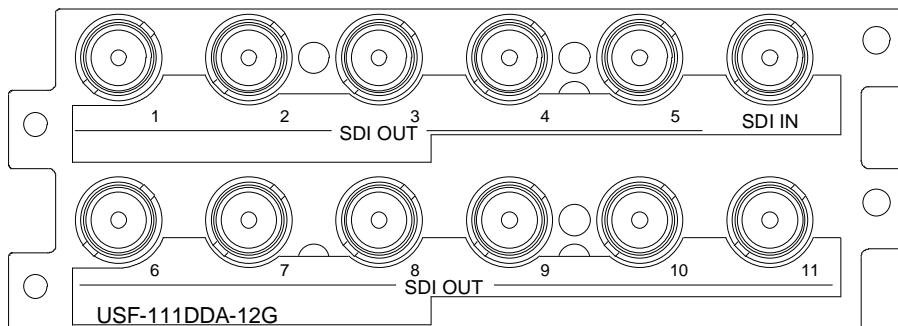
## 2. Panel Descriptions

### 2-1. Front Panel



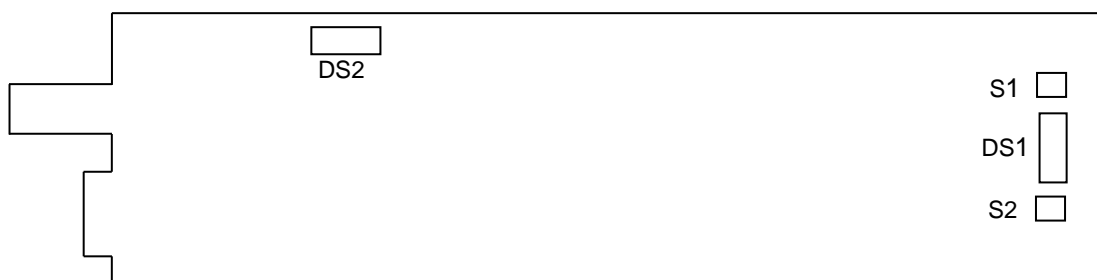
No.	Name	Description
(1)	OPERATE LED	Lights green when power is supplied by USF frame.
(2)	12.0Gb/s LED	Lights green when input SDI signal is 12G b/s.
(3)	3.0Gb/s LED	Lights green when input SDI signal is 3G b/s.
(4)	1.5Gb/s LED	Lights green when input SDI signal is 1.5G b/s.
(5)	270Mb/s LED	Lights green when input SDI signal is 270M b/s.
(6)	DIP switch	Sets Reclock settings.
(7)	USB connector	Used to upgrade USF-111DDA-12G software. (Do not connect USB devices.)

### 2-2. Rear Panel



Name	Description
SDI IN	SDI signal input. Accepts an SD/HD/3G/12G-SDI signal.
SDI OUT 1 – 11	SDI signal outputs. Distributes the SDI IN input to 11 outputs.

### 3. Switch Settings



SW No.	Function
S1	Reboot Switch (Do not change settings in normal operation.)
S2	CPU Reset Switch (Do not change settings in normal operation.)

#### DS1

SW No.	Function	Setting		Factory Setting
		OFF	ON	
1	-	-	-	OFF (Do not change the setting.)
2	-	-	-	OFF (Do not change the setting.)
3	-	-	-	OFF (Do not change the setting.)
4	-	-	-	OFF (Do not change the setting.)
5	Reclock	Reclock Bypass	Reclock	ON (Normal use setting.)
6	-	-	-	ON (Do not change the setting.)
7	-	-	-	OFF (Do not change the setting.)
8	-	-	-	OFF (Do not change the setting.)

#### DS2

SW No.	Function	Setting		Factory Setting
		OFF	ON	
1	-	-	-	OFF (Do not change the setting.)
2	-	-	-	OFF (Do not change the setting.)
3	-	-	-	OFF (Do not change the setting.)
4	-	-	-	OFF (Do not change the setting.)
5	-	-	-	OFF (Do not change the setting.)
6	-	-	-	OFF (Do not change the setting.)
7	-	-	-	OFF (Do not change the setting.)
8	-	-	-	OFF (Do not change the setting.)

## 4. Web GUI

Status parameters of USF-111DDA-12G can be displayed on the Web display if the module is installed in a USF-212AS/USF-105AS frame. SNMP monitoring is also available. Refer to the USF-212AS/USF-105AS Operation Manual for details on displaying the Web GUI window.

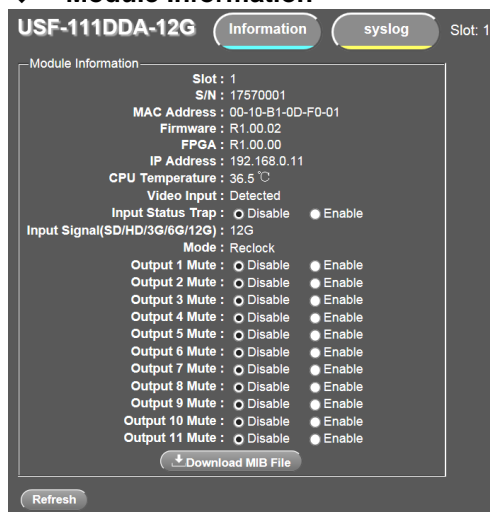
### NOTE

USF-111DDA-12G does not support simultaneous Web GUI access from multiple PCs. Use the SNMP function to simultaneously monitor a USF-111DDA-12G from multiple PCs.

### 4-1. WEB Display Information

Start the Web GUI and click on a USF-111DDA-12G from slot 1 to 12 of USF-212AS/USF-105AS to open the window as shown below.

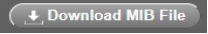
#### ◆ Module Information



Item	Description
Slot	Slot no. of the USF-212AS/USF-105AS in which USF-111DDA-12G is installed.
S/N	Serial number of the USF-111DDA-12G.
MAC Address	MAC address of the USF-111DDA-12G.
Firmware	Firmware version of the USF-111DDA-12G.
FPGA	FPGA of the USF-111DDA-12G.
IP Address	IP address of the USF-111DDA-12G.
CPU Temperature	Temperature of the CPU on the USF-111DDA-12G front card.
Video Input	Displays video input status. <b>Detected:</b> Normal video input. <b>Not Detected:</b> No video input, or input level is low.
Input Status Trap	Sets the SNMP trap setting when monitoring USF-111DDA-12G via SNMP Manager. <b>Enable:</b> Sends input status traps. <b>Disable:</b> Sends no traps.
Input Signal (SD/HD/3G/12G)	Displays the bit rate of SDI input: <b>SD (270Mbit/sec), HD (1.5Gbit/sec), 3G (3.0Gbit/sec), 12G (12.0Gbit/sec)</b> <b>Not Detected:</b> No input signal
Mode	Displays the re-clock function mode.
Output 1-11 Mute	If not connecting video output signal via SDI OUT1-11, set <b>Enable</b> for unused ports. (Recommended use)

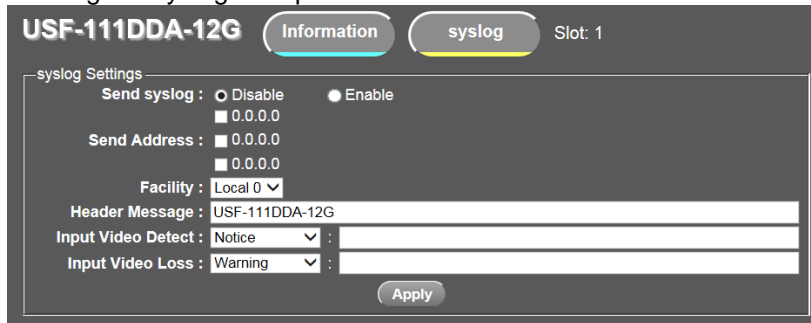


◆ **Downloading MIB files**

- (1) Click  to download the MIB (Management Information Base) for your SNMP manager.
- (2) Select **Save** (S) from the opened dialog box.
- (3) FORA-USF111DDA12G-MIB.zip File is downloaded.
- (4) Unzip the file and load it into your SNMP manager.

## 4-2. syslog Functions

The USF-111DDA-12G supports log monitoring and message transmission using syslog protocol. Clicking the syslog tab opens a window shown as below.



Item	Description
Send Syslog	Select <b>Enable</b> to send syslog messages to the management terminal.
Send Address	Check the IP address to send syslog messages. The IP address is the same as the SNMP trap address. Refer to the USF-212AS/USF-105AS Operation Manual for details on setting the SNMP trap address.
Facility	Sets syslog logging facilities in Local 0 through Local 7.
Header Message	Sets syslog header messages up to a maximum of 63 alphanumeric characters. Factory setting: USF-111DDA-12G
Input Video Detect	Sets detection messages for video input into USF-111DDA-12G. Maximum of 63 alphanumeric characters. Sets priority in 9 steps. Factory setting: <b>Notice</b>
Input Video Loss	Sets detection messages for video input into USF-111DDA-12G being lost. Maximum of 63 alphanumeric characters. Sets priority in 9 steps. Factory setting: <b>Warning</b>

\* Click **Apply** when settings are changed.

## 5. About SNMP

The USF-111DDA-12G can be monitored using an external SNMP monitoring system that supports SNMPv2C. MIB (Management Information Base) files that are required for SNMP monitoring systems can be downloaded from the Web GUI. (Refer to the prior page “Downloading MIB files” for details.) Refer to the USF-212AS/USF-105AS Operation Manual for details on SNMP settings.

### ◆ GET List

Object group	Item Name	Object name in MIB file	Value	OID	Type	TRAP Function
OID : 1.3.6.1.4.1.20175.1.340.1.						
Unit Status	Product Name	usf111Dda12gProductName	USF-111DDA-12G	1	OCTET STRING	
	Product Code	usf111Dda12gProductCode	1023850	2	INTEGER	
	Serial Number	usf111Dda12gSerialNumber	1757****	3	INTEGER	
	Soft Version	usf111Dda12gFirmwareVersion	R**. **	4	OCTET STRING	
	FPGA Version	usf111Dda12gFpgaVersion	R**. **	5	OCTET STRING	
	Slot Number	usf111Dda12gSlotNumber	1-12	6	INTEGER	
	CPU Temperature	usf111Dda12gCpuTemperature	** degree Celsius	7	INTEGER	
	Input Video Status	usf111Dda12gInputStatus	-1:cannotDetect 0: not Detected 1: detected	8	INTEGER	✓
	Input SDI Bit Rate	usf111Dda12gSdiRate	-1:cannotDetect 0: not Detected 1: sdi SD 2: sdi HD 3: sdi 3G 4: sdi 6G 5: sdi 12G	9	INTEGER	
	Reclock Bypass Setting	usf111Dda12gReclockBypass	0:reclocking 1:reclock Bypass	10	INTEGER	
	Output 1-11 Mute	usf111Dda12gOutput1Mute	0:disable 1:enable	11	INTEGER	
		usf111Dda12gOutput2Mute	- ditto -	12	INTEGER	
		usf111Dda12gOutput3Mute	- ditto -	13	INTEGER	
		usf111Dda12gOutput4Mute	- ditto -	14	INTEGER	
		usf111Dda12gOutput5Mute	- ditto -	15	INTEGER	
		usf111Dda12gOutput6Mute	- ditto -	16	INTEGER	
		usf111Dda12gOutput7Mute	- ditto -	17	INTEGER	
		usf111Dda12gOutput8Mute	- ditto -	18	INTEGER	
		usf111Dda12gOutput9Mute	- ditto -	19	INTEGER	
	usf111Dda12gOutput10Mute	- ditto -	20	INTEGER		
	usf111Dda12gOutput11Mute	- ditto -	21	INTEGER		

\* No item can be set from SNMP.

### ◆ TRAP List

Object Group	Item Name	Object name in MIB file	OID	Reference object	Type
OID : 1.3.6.1.4.1.20175.1.340.0.					
TRAP	SDI Input	usf111Dda12gInputStatusChanged	1	usf111Dda12gSlotNumber	INTEGER
				usf111Dda12gInputStatus	INTEGER

## 6. Specifications and Dimensions

### 6-1. Specifications

Video Input	12G-SDI: 12Gbps 3G-SDI: 3Gbps HD-SDI: 1.5Gbps SD-SDI: 270Mbps DVB-ASI: 270Mbps 75Ω BNC x 1
Video Output	12G-SDI: 12Gbps 3G-SDI: 3Gbps HD-SDI: 1.5Gbps SD-SDI: 270Mbps DVB-ASI: 270Mbps 75Ω BNC x 11
Cable Compensation	Automatic Cable Compensation 12G-SDI: Max. 70m (L-5.5 UHDC-equivalent cable) 3G-SDI: Max. 100m (5C-FB-equivalent cable) HD-SDI: Max. 100m (5C-FB-equivalent cable) SD-SDI: Max. 200m (5C-2V-equivalent cable)
SNMP	SNMP Monitoring available SNMP version v2C
Temperature	0°C to 40°C
Humidity	30% to 90% (no condensation)
Power	+12V DC (Supplied by a USF frame)
Power Consumption	12.7 VA (12.7W)
Dimensions	Front module: 106 (W) x 356 (D) mm Rear module: 114 (W) x 40.7 (H) mm
Weight	280 g
Required Slots	2 Slots

### 6-2. External Dimensions

(All dimensions in mm)

