

D2WARN Quick Start Guide

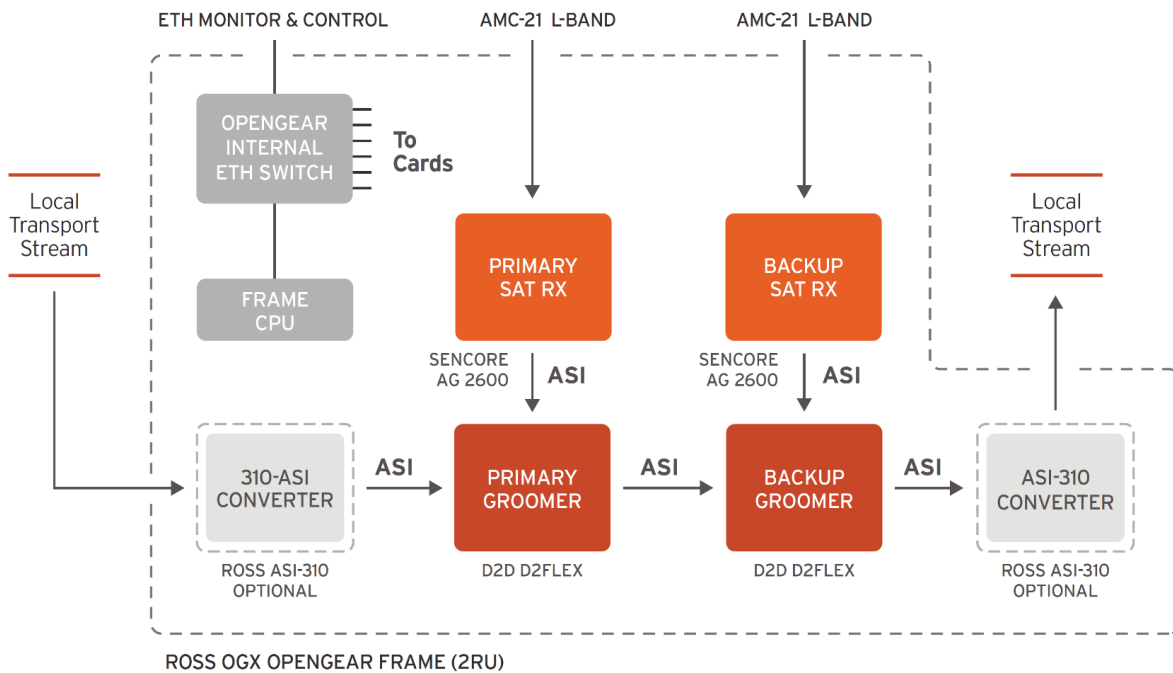
The steps below explain how to mount the D2WARN System in a rack, apply power, and access the GUI using a PC. The system may then be connected in to the station’s broadcast chain, and operated in Internal Failover mode providing full compliance with FCC Rules and Regulations. For other configurations or changing the system’s IP addresses to connect to the station’s LAN, please refer to the user manual which is accessible using the system’s GUI and connected PC.

1. Definitions

Internal Failover: Single transport stream input/output and groomer cards perform failover.

External Failover (Please refer to the User Manual for configuration instructions): Two independent and separate groomer cards each with its own transport stream input/output. Groomer cards operate independently, and any failover is handled downstream. Useful for “chain redundancy.”

Input Source None (Please refer to the User Manual for configuration instructions): No transport stream source is provided. Groomers generate null packets at approximately 150 kbps to be used for Alert Message insertion. Useful for when Alert Messages are to be inserted by a downstream multiplexer.



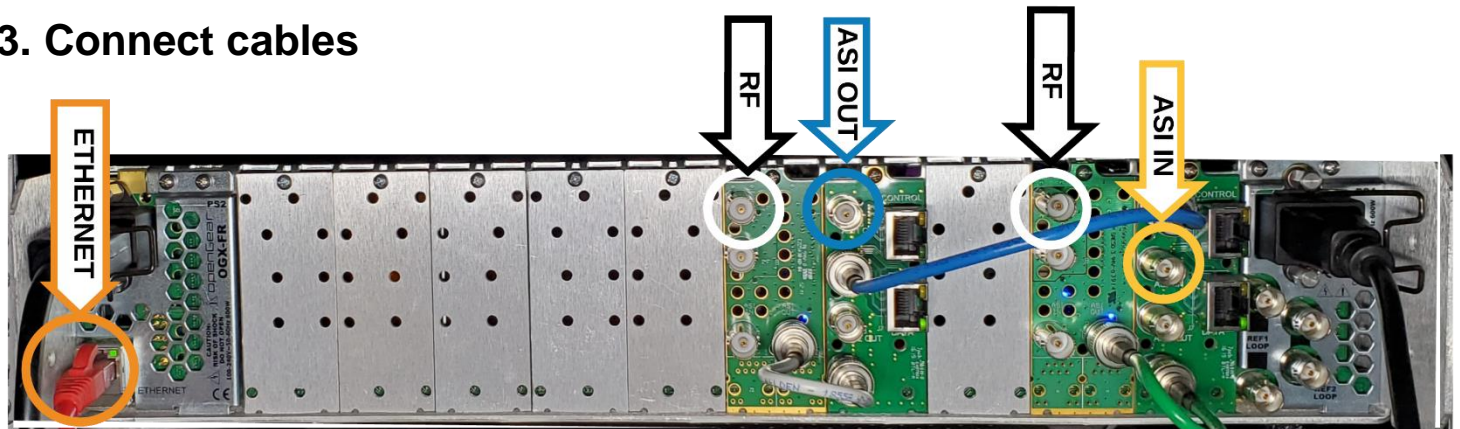
Broadcast signal flow, internal redundancy scenario

Note: The D2WARN system as received is configured in Bypass Mode. It will pass the ASI transport stream directly, with no WARN messages inserted.

2. Requirements

- 2 rack spaces, at least 16” deep with redundant power to install the openGear frame.
- 2 RF feeds from AMC-21 Ku Vertical (a user supplied splitter can be used to feed both)
- A PC or MAC with Chrome, Firefox or Edge.
- ASI of the facility’s broadcast stream immediately after the encoder and any PSIP generation, prior to any other data inserting devices (Datacasting, Water-markers, Nielson boxes, etc.).

3. Connect cables



- Connect both power supplies to an AC source with the power cords provided.
- Connect a user supplied Ethernet cable to the back of the openGear chassis (shown above, orange circle).
- Connect an L-Band satellite feed from AMC-21 Ku into the RF A input of each satellite receiver card (white circles) with a user provided splitter and cables.
- Connect the station's ASI broadcast stream to ASI 1 IN of the Groomer A card (yellow circle). The recommended location of the WARN system is immediately after the encoder and any PSIP generation, prior to any other data inserting devices (Datacasting, Water-markers, Nielson boxes, etc.).
- Connect the broadcast stream output from ASI 1 OUT of Groomer B card (blue circle) to the station's downstream equipment.
- All the other necessary cables are pre-installed.

4. Power up the openGear Frame

Once powered on, the openGear front panel Light Bar will be flashing red. The ASI inputs are initially in bypass and will not be monitored or modified by the D2WARN system during setup. The front panel Light Bar will be flashing red until the system is taken out of Bypass Mode and the system sees a valid incoming transport stream.

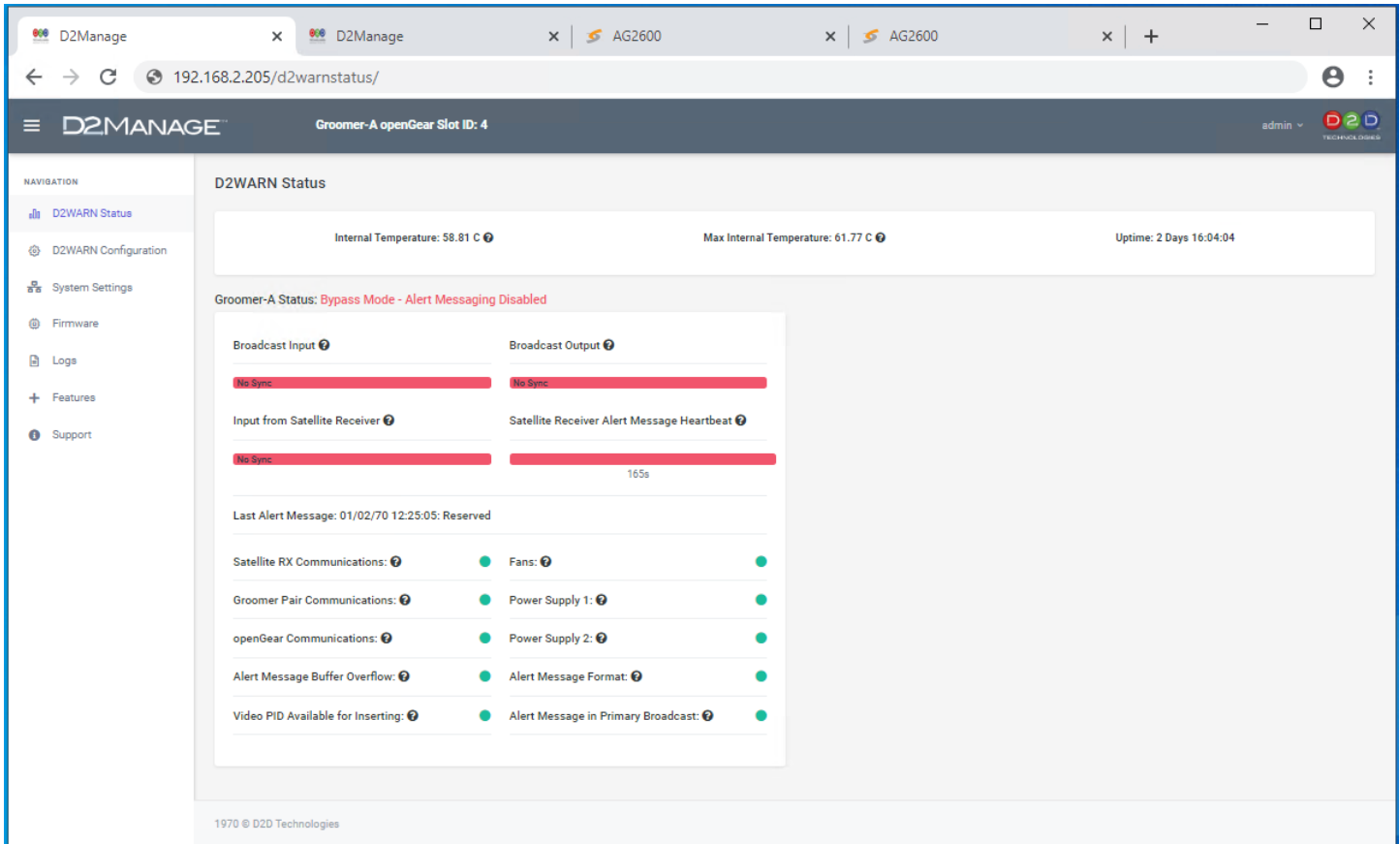
5. Default System IP Settings

The openGear frame has an internal network hub. All cards communicate through the openGear frame Ethernet port (shown above). Listed below are the default IP addresses and login credentials:

- The D2WARN Groomer-A card in slot 2: 192.168.2.205 admin/admin
 - The Satellite Receiver-A card in Slots 3 and 4: 192.168.2.207 admin/password [blank]
 - The D2WARN Groomer-B card in slot 8: 192.168.2.206 admin/admin
 - The Satellite Receiver-B cards in Slots 9 and 10: 192.168.2.208. admin/ password [blank]
 - OpenGear chassis: 192.168.2.209
- Connect a PC configured to static IP 192.168.2.150, subnet mask 255.255.255.0 to the openGear frame Ethernet port.
 - With a PC connected to the Ethernet port on the frame's back panel (see picture above), log in to Groomer A and Groomer B by entering their default IP addresses into a compatible browser. Log into each satellite receiver using their default IP addresses. You may open four browser tabs to view Groomer A, Groomer B, Receiver A, and Receiver B. The supported browsers are Chrome, Firefox, and Microsoft Edge.

Verify the System is Connected Correctly

- View each satellite receiver's **Main** page and confirm that the receiver is locked, with adequate link margin.
- View each groomer and confirm that there are no alarms. The data rate bars for the Broadcast Input, Input from Satellite Receiver, etc. will be red. This is normal in Bypass mode.



6. Take the System out of Bypass and Configure it for ASI IN/OUT

- Refer to the screen shots below.
- On Groomer A's GUI go to the **D2Warn Configuration** page.
- From the **Standard Configurations** drop down menu select **ASI Flow-Failover Role Primary** to set Groomer A as the Primary. Scroll to the bottom of the page and click **Save**.
- On Groomer B's GUI go to the **D2Warn Configuration** page.
- From the **Standard Configurations** drop down menu select **ASI Flow-Failover Role Backup** to set Groomer B as the Backup. Scroll to the bottom of the page and click **Save**.
- On Groomer A's GUI go to the **D2WARN Status** page. Verify that there are no alarms, and the data rate bars are green.
- On Groomer B's GUI go to the **D2WARN Status** page. Verify that there are no alarms, and the data rate bars are green. The front panel Light Bar should be green.
- If a transport stream analyzer is available you can verify that the station's broadcast stream is exiting the D2WARN system and PID 911 is inserted. However, PID 911's data rate is very low and may only be detected once every two minutes.
- You may now place the system on the air. If you want to change the IP addresses or configuration, complete instructions are provided in the manual which is available by clicking on the **Support** button in the left margin.

D2MANAGE Groomer-A openGear Slot ID: 4 admin

D2WARN Configuration

Cards this Groomer Communicates With

Device Type	Device Name	IP Address	Connection Test (click Save before clicking Check)
Satellite Receiver	Receiver-A	192.168.2.207	Check 192.168.1.201
Groomer	Groomer-B	192.168.2.208	Check 192.168.1.164

Broadcast Stream Flow and Failover Settings for This Groomer

Standard Configurations:

- ASI Flow - Failover Role Bypass
- ASI Flow - Failover Role Primary**
- ASI Flow - Failover Role Backup
- ASI Flow - Failover Role None
- ASI Flow - Failover Role Bypass
- ASI Flow - Failover Role None - No Broadcast Video Input
- ASI Flow - Failover Role Primary - No Broadcast Video Input
- ASI Flow - Failover Role Backup - No Broadcast Video Input
- Manual Configuration

Failover Role: Bypass

Wireless Emergency Alert Message (WEA) Timeout & Insertion Settings

Alert Message Source: ASI-2

Alert Message Heartbeat Warning Timeout (seconds): 10

D2MANAGE Groomer-A openGear Slot ID: 4 admin

D2WARN Status

Internal Temperature: 57.09 C Max Internal Temperature: 61.77 C Uptime: 2 Days 17:01:48

Groomer-A Status: Alert Message Inserting

Metric	Value
Broadcast Input	18.820 / 19.390 Mbps (0.54)
Broadcast Output	18.820 / 19.390 Mbps (0.54)
Input from Satellite Receiver	0.010 / 66.825 Mbps
Satellite Receiver Alert Message Heartbeat	28s

Last Alert Message: 01/02/70 12:25:05: Reserved

Satellite RX Communications: ● Fans: ●

Groomer Pair Communications: ● Power Supply 1: ●

openGear Communications: ● Power Supply 2: ●

Alert Message Buffer Overflow: ● Alert Message Format: ●

Video PID Available for Inserting: ● Alert Message in Primary Broadcast: ●

Groomer-B Status: Alert Message Monitoring

Metric	Value
Broadcast Input	18.927 / 19.399 Mbps (0.47)
Broadcast Output	18.920 / 19.400 Mbps (0.47)
Input from Satellite Receiver	0.008 / 66.873 Mbps
Satellite Receiver Alert Message Heartbeat	27s

Revert Back to Primary Groomer

Last Alert Message: 09/07/20 10:21:02: Reserved

Satellite RX Communications: ● Fans: ●

Groomer Pair Communications: ● Power Supply 1: ●

openGear Communications: ● Power Supply 2: ●

Alert Message Buffer Overflow: ● Alert Message Format: ●

Video PID Available for Inserting: ● Alert Message in Primary Broadcast: ●

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