openGear Multi-Definition Digital Products Frame

DFR-8310-C w/ Cooling Fans
DFR-8310-BNC w/ Fixed 10-BNC Rear
DFR-8310-C-BNC w/ Fixed 10-BNC Rear and Cooling Fans

The most flexible frame for all your standard and high-definition terminal equipment.

The DFR-8310 is a 2RU modular frame, designed to accommodate up to 10 modules of our openGear Multi-Definition product family.

MODULAR FRAME ARCHITECTURE

The DFR-8310 blends the simplicity of a fixed rear connector frame and the flexibility of independent rear modules.

For applications which use BNC connectors, the DFR-8310 is available with preloaded 10-BNC rear modules. This frame configuration allows any openGear module using BNC connectors to be installed into any slot, without restrictions. Installation of separate rear modules is not required. Unused slots can be pre-wired into a facility, and installation of card modules can be done at any time without accessing the rear of the frame.

For applications where other types of I/O connections are necessary (such as twisted-pair audio or fibre interfaces), the frame also supports slot-dependent rear I/O modules. Rear modules can be ordered with card modules, and are quick and easy to install.

ROBUST POWER SUPPLIES

The DFR-8310 frame can accommodate two front-loaded PS-8300 power supplies. Although a single supply can fully power a loaded frame, the addition of a second (optional) supply gives the frame full power redundancy. Each supply is fed by a separate power cord, which is held in position to guard against accidental power loss.

Each power supply contains an independent cooling fan, status LED, and a front-mounted power switch.

The frame comes standard with one PS-8300 power supply.

Features

- 2RU frame houses up to 10 modules
- Can house any mix of analog, digital, video and audio modules in the same frame
- Available with preloaded 10-BNC rear modules, or modular I/O panels for connector flexibility
- Heavy-duty hinged front door panel lowers to allow easy card insertion
- Durable powder-coat paint finish
- Aluminum construction reduces overall weight
- Two independent looping Reference Inputs feed all module slots
- SMPTE alarm interface for simple monitoring
- Robust 150 watt power supply with integral cooling fan
- Optional redundant power supply is hot-swappable for 24 / 7 operation
- Power switch is accessible from the front of the rack frame
- Power supplies are replaceable from the front of the frame without requiring rear-frame access
- Separate power cords to each supply for power feed redundancy
- PowerLock cord retainer mechanism guards against accidental power loss
- Optional Cooling Fan Module for increased ventilation and enhanced reliability
- Fan Fail and Error Indicator LEDs on front of the frame (available with optional Cooling Fan Module)
- Optional Ethernet based frame controller for remote setup, monitoring, and control
- 5-year transferable warranty

OPTIONAL COOLING FANS

The frame has been designed with an advanced cooling architecture to increase ventilation. For applications where the total module load is less than 40 watts, the DFR-8310 can be used without cooling fans. Frames should be mounted with 1RU empty space between frames.

For applications where frames are mounted directly above or below other equipment, or where the total module power load is greater than 40 watts, an optional cooling fan kit can be added. These front-door mounted fans provide forced air cooling for all modules, and additional cooling for the power supplies. An intelligent fan controller adjusts fan speed with changes in frame power loading or temperature. Particular attention has been paid to frame acoustics in order to keep fan noise to a minimum.

Ordering

2RU, 10 Card Slot, Single Power Supply

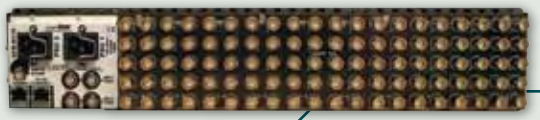
DFR-8310	w/ Modular Rear
DFR-8310-C	w/ Modular Rear and Cooling Fans
DFR-8310-BNC	w/ Preloaded 10-BNC Rear
DFR-8310-C-BNC	w/ Preloaded 10-BNC Rear and Cooling Fans
PS-8300	openGear Digital Products Redundant or Spare Power Supply
CFM-8310	openGear 2RU Cooling Fan Upgrade Kit
MFC-8320-N	openGear 2RU Frame Controller w/ Network Interface
FSB-8310	Rear Support Bars and Bracket

2RU Frame

The DFR-8310 is a 2RU modular frame, designed to accommodate up to 10 modules of our openGear Multi-Definition product family.

Modular Rear I/O Modules

For applications where a mix of BNC, twisted pair, or other connectors are needed, separate rear I/O modules can be ordered with card modules. These rear modules are quick and easy to install.



Preloaded 10-BNC Rear I/O Panel

For applications where only BNC connectors are used, the DFR-8310 is available with preloaded 10-BNC modules. This model eliminates the need for individual slot-dependent rear modules.

Common Frame Features

Two looping reference inputs are buffered and distributed to all module slots. A frame mounted Ethernet port allows a network control module to be added without occupying a module slot. A SMPTE 269M alarm monitoring connection is also provided. PowerLock cord retainers guard against accidental power loss.

openGear High Density Multi-Definition Frame

DFR-8321-C w/ Cooling
DFR-8321-CN w/ Cooling and Network Control
DFR-8321-CNS w/ Cooling, Network Control and SNMP

The most flexible frame for all your terminal equipment needs.

The DFR-8321 is a 2RU high density modular frame, designed to accommodate up to 20 openGear cards. The 21st slot is reserved for network control.

MODULAR FRAME ARCHITECTURE

The DFR-8321 offers the flexibility of independent rear modules for connectivity to a wide array of interfaces such as BNC, twisted-pair audio, and fiber. The DFR-8321 offers a full rear module that offers 10 BNCs per module, or a high density split rear module that offers 5 BNCs per module. Using the split rear module allows for up to 20 independent openGear solutions to be installed.

ROBUST POWER SUPPLIES

The DFR-8321 can accommodate two front-loaded PS-8300 power supplies. A single supply can fully power a loaded frame, the addition of a second (optional) supply gives the frame full power redundancy.

Each power supply contains an independent cooling fan, status LED, and a front-mounted power switch.

COOLING

The frame has been designed with an advanced cooling architecture with increased ventilation. The front-door mounted fans provide forced air cooling to all cards with front to back cooling. An intelligent fan controller adjusts fan speed with changes in power supply loading and temperature.

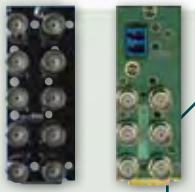
CONTROL

The DFR-8321 offers optional Ethernet connectivity for Control and Monitoring via DashBoard and optional SNMP.

Features

- 2RU frame houses up to 20 openGear cards
- Supports any mix of analog, digital, video and audio modules in the same frame
- Modular I/O panels for connector flexibility
- Removable front door for easy fan servicing
- Frames come standard with cooling
- 2 independent looping References with connection to each card slot
- Robust 150 watt power supply with integral cooling
- Optional redundant power supply, hot-swappable for 24/7 operation
- Power switch is accessible from front of rack frame
- Front loading power supplies
- Optional Ethernet based frame controller for remote setup, monitoring and control
- Optional SNMP control and monitoring
- Power Supply and Ethernet based frame controller common to DFR-8310
- 5-year transferable warranty

2RU Frame
The DFR-8321 is a 2RU modular frame, designed to accommodate up to 20 modules of our openGear Multi-Definition product family.



Modular Rear I/O Modules
Separate rear I/O modules are ordered with card modules offering a mix of BNC, twisted pair and other connections as required. These rear modules are quick and easy to install.

Common Frame Features
Two looping reference inputs are buffered and distributed to all module slots. A frame mounted Ethernet port allows a network control module to be added without occupying a module slot. PowerLock cord retainers guard against accidental power loss.

Ordering

2RU, 20 Card Slot, 1 Ethernet Control Slot, Single Power Supply

DFR-8321-C	w/ Cooling Fans
DFR-8321-CN	w/ Cooling Fans and Network Control
DFR-8321-CNS	w/ Cooling Fans, Network Control and SNMP
PS-8300	Redundant or Spare Power Supply
CFM-8321	Spare 2RU Cooling Fan Kit
MFC-8320-N	2RU Frame Controller w/ Network Control
FSB-8320	Rear Support Bars and Bracket

OPA-8380A General Purpose Adapter

OPA-8381 Analog Audio Adapter

openGear Adapters
Leaving no customer behind!

Designed to allow existing customers with RossGear 8000 series products to easily migrate existing solutions to the HD / SD 8300 openGear series frame.

- Distribution and Monitoring
- Synchronization and Delay
- Video Conversion
- Audio Conversion, Embedding / De-Embedding
- Keying

See page 68 for details.

OPA-8380A

General Purpose Adapter

Leaving no customer behind!

The OPA-8380A openGear adapter is designed to allow existing customers, with RossGear 8000 series products, to easily migrate existing solutions to the HD / SD 8300 openGear series frames.

The OPA-8380A can also be used in situations where cost effective SD only solutions are required.

The adapter supports the products listed and may be ordered separately or with an 8000 series card by using the –OG extension.

Note: The OPA-8380A is not controllable under the DashBoard Control System.

OPA-8381

Analog Audio Adapter

Leaving no customer behind!

The OPA-8381 openGear adapter is designed to allow existing customers, with RossGear Analog Audio 8000 series products, to easily migrate existing solutions to the HD / SD 8300 openGear series frames.

The OPA-8381 can also be used in situations where cost effective SD only solutions are required.

The adapter supports the products listed and may be ordered separately or with an 8000 series card by using the –OG extension.

Note: The OPA-8381 is not controllable under the DashBoard Control System.