

**19" Rack-mount
12-Slot Standalone
Media Converter Chassis**

NXF-719



User's Manual

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FCC WARNING

This equipment has been tested and found to comply with the limits for class A device, pursuant to part 15 of FCC rules. These limits are designed to provide reasonable protection against harmful interference in a commercial 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 communication. Operation of this equipment in a residential area is likely to cause harmful interference, in which case, the user will be required to correct the interference at the user's own expense.



CE

This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

Take special note to read and understand all content giving in the warning boxes



Warning

Table of Contents

1 Introduction	1
About This Guide.....	1
Welcome	1
Purpose.....	1
Terms/Usage	1
Features.....	2
Specifications.....	3
Package Contents	6
2 Hardware Description.....	7
Product Overview	7
Product Outlook.....	9
12-Slots.....	9
3 Installation	10
Installing the Bracket	10
Affixing Brackets.....	11
Installing the converter	12
12-Slots	13
Installing the Chassis.....	13
Rack-mount.....	13
Wall-Mount.....	13
Desktop.....	15
4 Power Supply	16
5 Rack Kit.....	19
6 LEDs Indicators.....	20
7 Cooling.....	21

1 Introduction

About This Guide

Welcome

Thank you for choosing the 19" Rack-mount 12-slot Standalone Media Converter Chassis. This device provides power and protection for media converters in one reliable package.

Purpose

This guide discusses how to setup and install your 19" Rack-mount 12-slot Standalone Media Converter Chassis.

Terms/Usage

In this guide, the term "Chassis" (first letter upper case) refers to your 19" Rack-mount 12-slot Standalone Media Converter Chassis, and "chassis" (first letter lower case) refers to other chassis'.

Features

- Supports two load sharing, hot swappable power supplies
- Three high volume cooling fans ensure perfect operating environment
- Status panel with fan and slot power status LEDs
- Supports slot power isolation – ensures each slot is electrically isolated from the next
- Supports 10/100/1000Base, Copper, Fiber,
- Single/Multi-mode, ST, SC, MT-RJ, VF-45, LC, WDM, RS-232, RS-422/485 connectors
- Avoids network downtime and protects your converter investments
- Ideal for mission critical networks such as Large Office Complex, Banks, Military etc.
- High quality 19" Rack-mount Chassis
- Supports up to 12 media converters

Specifications

Chassis Specs

Capacity:	12 slots - up to 12 converters
Chassis:	Aluminium, Steel
Power:	Up to two load sharing, hot swappable power supplies
LEDs:	3 Red for fan status, 12 Green for slot power status, 1 Red for each power supply
Cooling:	Three 42.5 cfm rear-mounted fans
Dimension:	440 x 290 x 133mm (L x W x H) (EIA 3U)
Weight:	7.6kg (with one power supply) 13kg (loaded with 12 standalone converters)

Power Supply Specs for AC

AC input:	100~240V AC @ 47~63Hz
DC Output:	Norm. +12V, Min. +11.88V, Max +12.12V, 75Watts
Load:	Min. OA, Full. 6.4A
Total Reg.:	+/- 1.0%, Rip. 120mV, Load 2.0%, Line 0.5%
Overload Protection:	All outputs protected against short circuit conditions, automatic recovery
Over volts Protection:	Output level exceeding + 13.2V Causes shutdown – automatic recovery
Temperature:	Operating: 0°C ~ 50°C, Storage: -55°C ~ 85°C
EMI:	FCC Part 15 Class A
Safety:	UL / cUL / TUV Approved

Power Supply Specs for DC -48V

DC input: -48V \pm 10%

DC Output: Norm. +12V, Min. +11.76V, Max +12.24V, 75Watts

Load: Min. OA, Full. 6.4A

Total Reg.: +/- 2.0%, Rip. 120mV, Load 2.0%, Line 1.0%

Overload Protection: Output protected against short circuit conditions, automatic recovery

Over volts Protection: Output level exceeding + 13.2v causes shutdown – automatic recovery

Temperature: Operation: 0°C ~ 50°C,
Storage: -55°C ~ 85°C

Fans Specs

Speed: 2510 rpm +/- 250, Delivery 42.5ft3
Per Min.

Noise Level: 36.5dB(A)(each fan)

Temperature: Operation: 10°C ~ 50°C
Storage: 40°C ~ 70°C

Bearing: Precise Ball Bearing

Safety: UL / cUL / TUV Approved

Package Contents

- One 12-slot Media Converter Chassis
- One power supply
- One power supply cable
- 19" rack mounting kit
- 12 blank panels (fitted)
- 24 Converter mounting panels
- Four self-adhesive pads
- Spare screws
- Spare fuses
- One user's manual

2 Hardware Description

Product Overview

The Converters Chassis offers the user a dedicated and secure environment for multiple media conversion applications. It also allows the user to utilize existing and new media converters either in the rack or in a stand-alone installation.

Flexibility - The Chassis supports up to 12 media converters covering 10Base-2, 10Base-T, 10Base-FL, 100Base-TX and 100Base-FX, FDDI, ATM, Gigabit 1000Base-T, Gigabit SX / LX, RS-232, RS-422/485 conversion. In addition, both Multi-mode and Single Mode options are supported too.

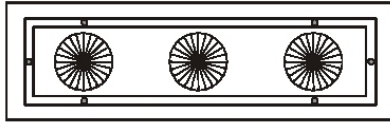
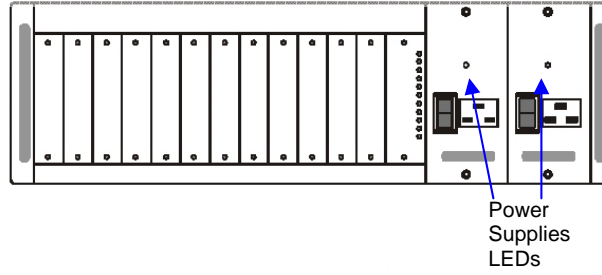
Reliability - The Chassis also supports two high quality hot swappable power supplies. Either power unit can be removed without disturbing the Chassis' operation – offering total efficiency, maximum redundancy and minimum down time. Each converter is supplied from a common shared power bus – but as an added precaution, each is individually protected in the event of a problem on the bus or from the power supply. Each converter can also be changed without powering down.

Functionality - The Chassis was carefully designed to offer a lifetime of operation. Incorporated into the Chassis are three long- life cooling fans to ensure a cool operating environment. The Chassis also features an LED status panel. Each fans and converter is monitored and connected to the LED status panel. This indicates that power is supplied to each converter and that the Fans are functioning correctly. The power supplies also feature a “trigger guard” to prevent the supply from being accidentally switched off.

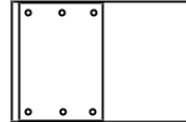
Product Outlook

12-Slots

Front View with 12 blank slots and two power supplies



Rear View showing 3 cooling fans



*Side View
with rack-
mount
assembly
fitted*

3 Installation

In this chapter, we will take a look at how to install converters into the Chassis and the different options available for placement of the Chassis system within its operating environment. First, it is important to unpack the Chassis and ensure that all the components listed on page 5 [Package Contents](#) are present. In some cases, the Chassis may come complete with certain converters already installed. You can either install the converters first and then the Chassis, or you can install the Chassis first and then the converters. We recommend that you do the latter as it is more convenient.

Installing the Bracket

All the converters are made using a standard case. This allows it to fit into the Chassis with ease. The converters can be mounted directly into the Chassis without using the supplied brackets but we strongly advise against this. We have supplied special brackets that easily attaches to the converters. This allows for the secure placement of the converters into the Chassis. The bracket also seals off the front of the Chassis and allows it's cooling system to function correctly.

Affixing Brackets

Step 1 Using a Phillips screwdriver; remove two screws from the side panels on the converter.



Step Place the converter and brackets on a flat horizontal surface as illustrated above. Secure the brackets by replacing the screws.



Ensure that the rails are flush-mounted with the underside of the converter. The converter is now ready for loading into the Chassis.

Installing the converter

Once the converters have been attached to the brackets, it can be installed into the Chassis. The converters can go into the Chassis in any order and can be placed in any available slot. Special care must be taken to ensure the correct mating of the power connector. Choose an available slot and align the converter so that it fits between the upper and lower guide rails.



Warning

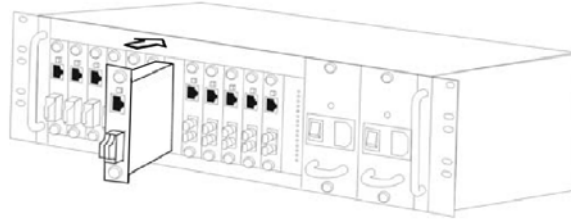
Always ensure that the converter's power socket is positioned at the base of the Chassis.



Warning

Never force the converter into the Chassis - check power socket position and alignment.

12-Slots



If necessary, you may gently move the converter up & down or left & right to ensure that the plug and socket align correctly

Installing the Chassis

The Chassis is made from a combination of steel and aluminum and is very sturdy in design. This allows the Chassis to be installed in the following ways.

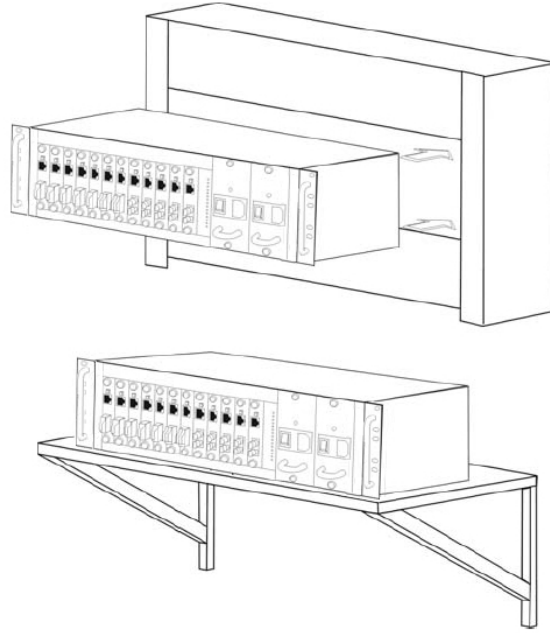
Rack-mount

The Chassis is built to established EIA Standards and as such will fit into any 19" EIA designed rack. Refer to the section "Rack-mount"

Wall-Mount

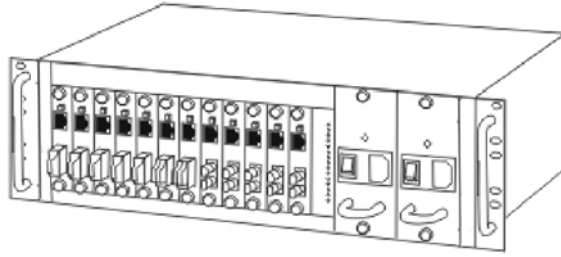
The Chassis can be mounted separately on a wall with the use of a shelf. This should be securely mounted on a suitable structure and must be able to hold at least 15kg. The shelf should also be big

enough to accommodate the Chassis whilst still offering space for adequate ventilation.



Desktop

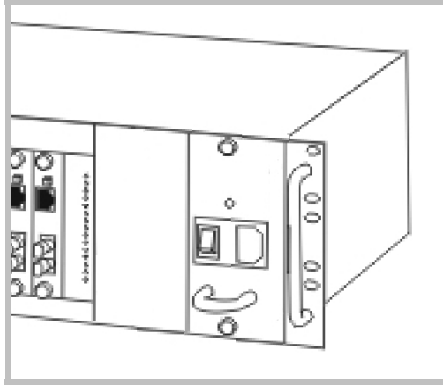
The Chassis can be situated on any suitable desktop. Simply attach the adhesive pads to the base of the Chassis and position where suitable, again, keep adequate space for ventilation.



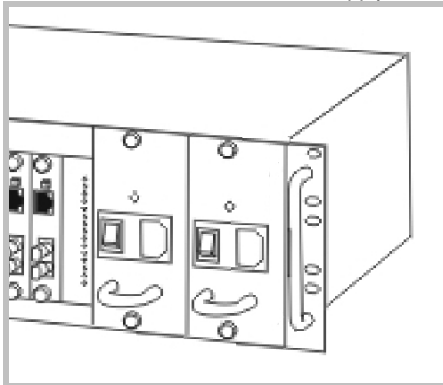
4 Power Supply

The Chassis is normally supplied with one redundant, hot – swappable power supply as shown below. The design of the power system is based around flexibility and maximum redundancy. For normal operation, one power supply is sufficient to operate with 12 converters fully loaded simultaneously. However, for critical applications, installing two power supplies is recommended.

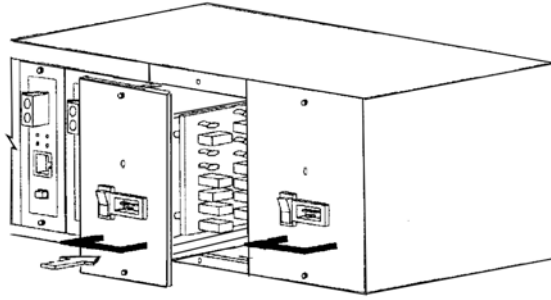
During 2-power operation, both power supplies will be switched on and will share the current load between them. In the event that a power supply should fail, the other supply will take 100% of the load. This will happen instantaneously and will have no adverse effects on the operation of the Chassis. Similarly, if a power supply is removed for servicing, it can be switched off and removed while the Chassis continues to function normally.




The Chassis shown as supplied with one Hot-swappable, Redundant 75Watt Power Supply



The Chassis shown as supplied with two Hot-swappable, Redundant 75Watt Power Supplies

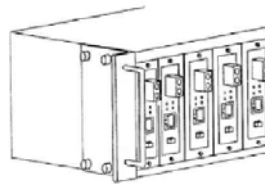
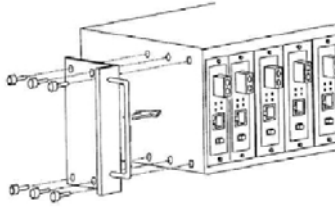


To remove the Power Supplies from the Chassis, simply undo the securing screws, and then pull the power supply unit out from the Chassis by the handles.

Warning
 Always exercise Caution when removing supplies
Always switch Power Supply off before removing
Always remove Power Cable from Supplies before removing
Do not touch Power Supply components after removal - they may hold residual electrical charges

5 Rack Kit

The Chassis comes with a 19" Rack Mounting Kit. This basically comprises of two brackets and a set of screws. The brackets are fitted to the Chassis via six screws. It is strongly recommended that you use all six screws supplied with the Chassis. This will ensure that stress is not unnecessarily endured by the Chassis or the brackets. Each bracket has EIA standard mounting holes and is symmetrical so that either bracket can be used on either side of the Chassis.



6 LEDs Indicators

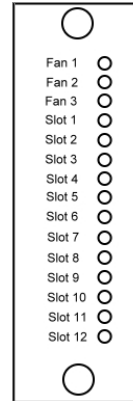
To enable the MIS personnel to establish the operational status of the Chassis, a simple LED display panel is installed. Its simplicity hides the fact that the Chassis employs a sophisticated power distribution system. All converters are supplied from the one hot-swappable Power Supply. However, this is where their common connection stops. Each slot has its own protection system that isolates each converter from any problems that might occur with either the power supplies or another faulty converter. This offers the best possible protection to your investment in the various media converters.

Fan Indicator LED's

These should illuminate under normal operating conditions

Slot Power LED's

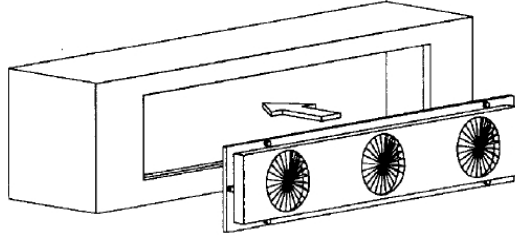
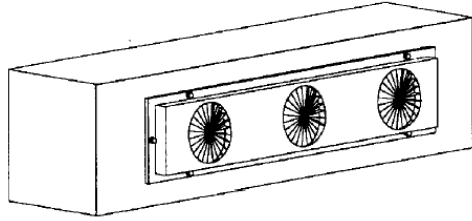
These will illuminate when converters are loaded into the Chassis' slot. The LEDs will extinguish if converters are not installed or if there is a problem with the power supply.



7 Cooling

The Chassis holds up to two power supplies and twelve media converters, so it needs to have reliable form of cooling. This Chassis has three fans located at the rear of the Chassis, and draws air into the Chassis. Each fan is connected to the Status Monitoring Panel on the front of the Chassis. Even with only one fan working, the Chassis is capable of operating under normal operating temperatures.

For the purpose of cleaning, the Fan panel assembly can be removed for periodic maintenance. Switch both power supplies off, and remove the six securing screws. Disconnect the three power cables supplying DC to the fans. The fans can then be cleaned with a dry cloth. Replace the fan panel by reversing the above procedure.



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