DS3/STS-1 Repeater Products

With over a decade of proven design and manufacturing expertise in the repeater market, ADC provides both the DS3 Intraoffice (IOR) and Bridging Office Repeater (BOR). Built for reliability, modularity and density, ADC repeaters provide the distinctive switch-selectable capability, allowing either DS3 or STS-1 signal rates with a flip of a switch.

The IOR enhances network flexibility by allowing the extension of cable distance between network elements. A typical application for intraoffice repeaters is signal extension between multiple floors within a central office. This repeater also extends cross-connect cable distances within long line-ups on the same floor.

The BOR products allow for in-service patch and roll functions when in-service rerouting or patching of DS3 or STS-1 signals at the DSX-3 bay are required. Repeater cards can be added as needed to the chassis and the convenient portable unit with its lightweight design allows easy use in multiple locations.

ADC has a proven track record and has been designing and manufacturing a reliable line of intraoffice repeaters and bridging office repeaters since 1988.

Features:

- Highest Standards - Meets NEBS Level 3 standards
- Highest Density - Up to 16 modules in a 6"H x 23"W chassis
- Modular System - Flexibility to add modules as network grows
- Compatibility - Chassis design fits into same DSX-3 bay systems

DS3/STS-1 Repeater Products

To provide maximum long-term value, ADC offers a wide variety of modules and features for repeater applications. The repeater products reflect ADC's emphasis on practical design. They follow a modular scheme that allows service providers to add modules one at a time to meet their service requirements with peak efficiency.

The DS3/STS-1 intraoffice and bridging office repeaters are available in non-protected or in fully protected hot stand-by configurations. The protected modules contain redundant generators. In the event of a failure in the working module, an error condition is detected, and the working module switches over to its dedicated "protect module" in less than 20 milli-seconds.

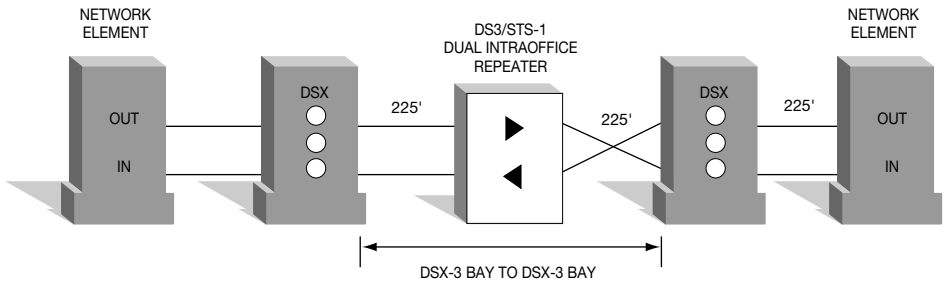
Dual Intraoffice Repeater

Using ADC's DS3/STS-1 Dual Intraoffice Repeater (IOR), which supports bi-directional transmission, service providers can extend the normal cross-connect range between DSX modules from 21 feet to 450 feet. Similarly, the distance from DSX modules to network elements can be extended from 225 feet to 675 feet. Modules are available in non-protected or fully protected hot stand-by mode versions.

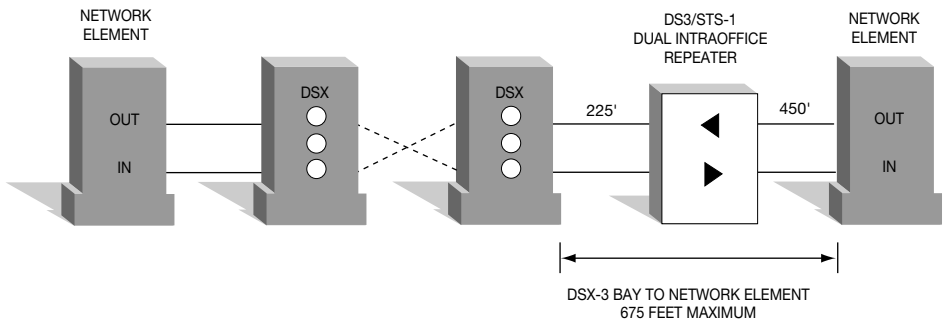
Features and Benefits

- Ideal for co-location applications and multiple floor central office environments
- Migrating to a higher bandwidth is greatly simplified by use of front access signal rate switch
- Repeaters regenerate superior signal quality ensuring network elements receive proper signal levels in extended cable arrangement

Application for DSX-3 Bay to DSX-3 Bay



Application for DSX-3 Bay to Network Element



DS3/STS-1 Repeater Products

Dual Intraoffice Repeater

RP3-A10000

Ordering Information

Description	Catalog Number
Dual Intraoffice Modules	
Non-Protected Dual Intraoffice Repeater (IOR)	RP3-A10000
Non-Protected Dual Intraoffice Repeater with Individual Alarm Disable Switch (IOR)	RP3-A20000
Protected Dual Intraoffice Repeater (PIOR)	RP3-F10000

Specifications

ELECTRICAL

Power

Input Voltage:	-42 to -56 Vdc
Input Current:	76/105 mA maximum IOR; 85/125 mA maximum PIOR
IN/OUT Impedance:	75 Ohms
Recommended Fusing:	IOR: 2.5A* PIOR: 3.0A*

DS3 CIRCUIT

Input/Output Impedance:	75 Ohms
Input Signal	
Input Level:	-8 dBm to 4.7 dB IOR/PIOR
Frequency:	44.736 Mbps ± 20 ppm
Output Signal	
Drive Distance (Short):	0 to 200' (0 to 61 m) using 734-type cable 0 to 100' (0 to 30.48 m) using 735A-type cable
Drive Distance (Long):	200 to 450' (0 to 144.2 m) using 734-type cable 100 to 225' (30.48 to 68.6 m) using 735A-type cable
Output Power:	Per TR-TSY-000499
Pulse Amplitude:	Per TR-TSY-000499

STS-1 CIRCUIT

Input/Output Impedance:	75 Ohms
Input Signal	
Input Level:	-5.5 to 4.7 dB
Frequency:	51.840 Mbps ± 20 ppm
Output Signal	
Drive Distance (Short):	0 to 200' (0 to 61 m) using 728-type cable
Drive Distance (Long):	0 to 450' (0 to 137 m) using 728-type cable
Output Power:	Per T1.102.1993
Pulse Amplitude:	Per TR-TSY-000499

* Based on 23" chassis/16 repeaters

DS3/STS-1 Repeater Products

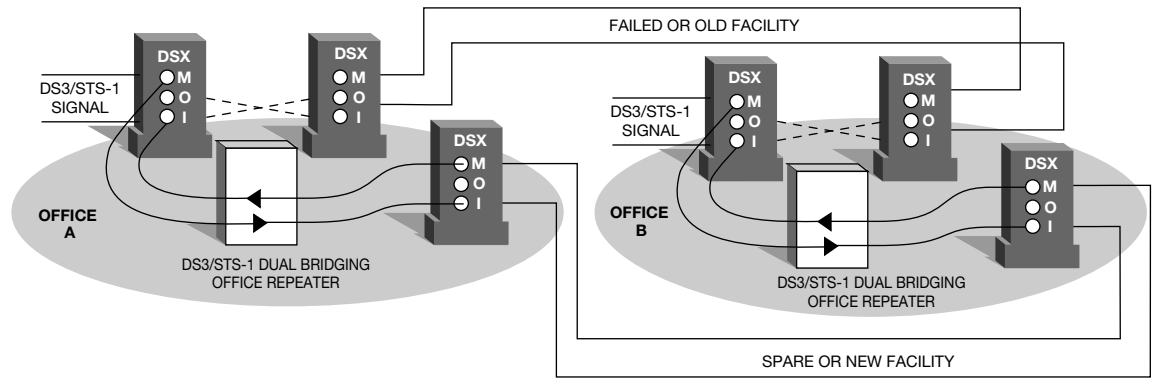
Dual Bridging Office Repeater

ADC's DS3/STS-1 Dual Bridging Office Repeater (BOR) and fully Protected Bridging Office Repeater (PBOR) adds the capabilities that service providers need to reconfigure circuits without disrupting service. It supports in-service "patch-and-roll" functions in which a new parallel configuration is established by bridging off a small portion of the signal from the existing network and boosting it to full power with a BOR. Once the new circuit is fully functional, new cross-connect jumpers can be run and the old ones removed.

Features

- In-service patching capabilities allow continuous service to customers while reconfiguring circuits
- DS3 or STS-1 switch-selectable
- BOR module can be used in either rack-mount or portable chassis
- Available in non-protected, fully protected, and non-protected extended output range module versions

In-service Patching Application



DS3/STS-1 Repeater Products

Dual Bridging Office Repeater

RP3-B10000

Ordering Information

Description	Catalog Number
Dual Bridging Office Modules	
Non-Protected DS3/STS-1 Dual Bridging Office Repeater (BOR)	RP3-B10000
Non-Protected Dual Bridging Office Repeater with Extended Output Range (BOR)	RP3-B20000
Protected Single Bridging Office Repeater (PBOR)	RP3-G10000

Specifications

ELECTRICAL

Input Voltage:	-42 to -56 Vdc
Input Current:	85/125 mA maximum BOR; 95/140 mA maximum PBOR
IN/OUT Impedance:	75 Ohms
Recommended Fusing:	BOR: 3.0A* PBOR: 3.5A*

DS3 CIRCUIT

Input Signal	
Input Level:	-26 dBm to -15 dBm
Frequency:	44.736 Mbps ± 20 ppm
Output Signal	
Drive Distance (Short):	0 to 200' (0 to 61 m) using 734-type cable** 0 to 100' (0 to 30.48 m) using 735A-type cable
Drive Distance (Long):	200 to 450' (61 to 137 m) using 734-type cable*** 100 to 225' (30.48 to 68.6 m) using 735A-type cable
Output Power:	Per TR-TSY-000499
Pulse Amplitude:	Per TR-TSY-000499

STS-1 CIRCUIT

Input Signal	-26 dBm to -15 dBm
Input Level:	51.840 Mbps ± 20 ppm
Frequency:	
Output Signal	
Drive Distance (Short):	0 to 200' (0 to 61 m) using 728-type cable**
Drive Distance (Long):	200 to 450' (61 to 137 m) using 728-type cable***
Output Power:	Per T1.102.1993
Pulse Amplitude:	Per TR-TSY-000499

* Based on 23" chassis/16 repeaters
** RP3-B10000 and RP3-B20000 modules
*** RP3-B20000 module only (extended output range)

DS3/STS-1 Repeater Products

IOR/BOR Repeater Chassis

RP3-2A0000
Front View

RP3-2A0000
Rear View

A variety of repeater chassis offer capacity, termination and mounting features to fit your system requirements. ADC's repeater chassis offers a connectorized backplane which supports pre-cabling operations in order to defer cost of repeater module plug-ins until needed for circuit turn-up.

The repeater chassis is powered from two separate 48 Vdc office battery power sources. An onboard DC to DC converter within each repeater module produces the voltage required for powering signal regeneration.

Features

- The 23" chassis holds 16 non-protected modules, eight pairs of protected modules or a combination of protected and non-protected modules.
- The 19" chassis holds 12 non-protected modules, six pairs of protected modules, or a combination of protected and non-protected modules.
- Chassis connectorized backplane supports pre-termination operations

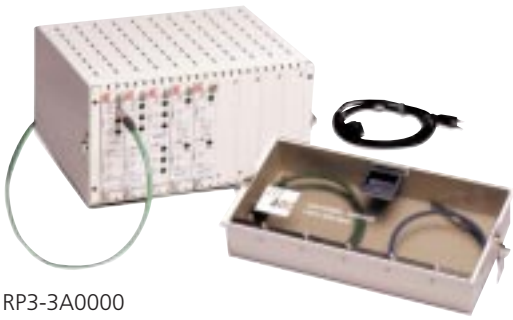
Ordering Information

Description	Dimensions (H x W x D)	Catalog Number
16 Position Rack Mount Chassis	6" x 23" x 12" (15.2 x 58.4 x 30.5 cm)	RP3-2A0000
12 Position Rack Mount Chassis	6" x 19/23" x 12" (15.2 x 48.2/58.4 x 30.5 cm)	RP3-1A0000
3 Position Horizontal Rack Mount Chassis	1.75" x 23" x 12" (0.7 x 58.4 x 30.5 cm)	RP3-5A0000
1 Position Wall Mount Chassis	7.5" x 2" x 8.75" (19.1 x 5.1 x 22.2 cm)	RP3-4A0000

NOTE: Repeater Modules can be used in any chassis listed above.

DS3/STS-1 Repeater Products

DS3 Portable Bridging Office Repeater



RP3-3A0000
Front View

RP3-3A0000
Front View with Cover Attached

With its lightweight design, the compact Bridging Office Repeater (BOR) portable unit is easy to carry and allows use in multiple locations. The chassis features a removable lid with a storage area for patch cords. It is also versatile because it is powered by a 110V AC power, and can easily be plugged into any 120V/60 cycle outlet. This portable unit holds a total of nine BOR or PBOR modules - the same repeater modules that are used in the rack-mount chassis.

Features

- 110V AC power input provides convenient means of powering the chassis
- Accommodates up to 9 BOR or PBOR modules
- Lightweight and compact unit has an ergonomically-designed handle for easy transport
- Portable chassis has a cover for protection of the modules during transport and provides convenient storage for patch cords, accessories and the power cord.

Ordering Information

Description	Dimensions (H x W x D)	Catalog Number
9 Position Portable Bridging Office Repeater	7.6" x 13.5" x 13"* (19.3 x 34.3 x 33.0 cm)	RP3-3A0000

* With unit cover attached

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