FORCE
Optical Broadcast Systems

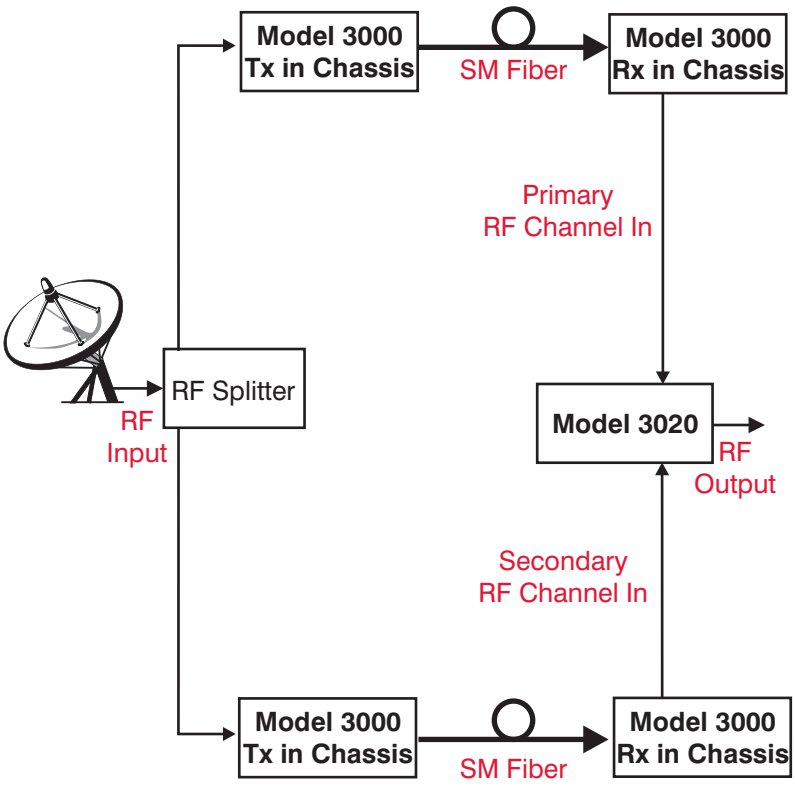
SNMP RF Switch
Model 3020

RF Switch

- SNMP enabled.
- Provides for redundant RF signals to the headend, increasing system reliability.
- Redundant RF signals guarantee system operation even in cases of rain, snow, or other signal fading effects.
- Module options include L-Band 950-2250 MHz transport or IF 10-200 MHz transport.
- Operates with the 3000 Series transport links using the Model 3000 3RU rack chassis.
- 75 Ohm or 50 Ohm operation.
- SNMP features report the unit's status and configuration for enhanced system monitoring.

Model 3020 RF Switch

The Force Model 3020 RF Switch module is designed to work with the 3000 Series Teleport links to provide RF signal redundancy. Used in combination with the 3000 Series Teleport System, the Model 3020 RF Switch module is available in 75 Ohm and 50 Ohm configurations. The Model 3020 may be ordered to work with L-Band 950-2250 MHz signals or IF 10-200 MHz signals. A front panel switch allows the user to select the primary or secondary signal path, or a low-level threshold detect may be used to allow the unit automatically switch from the primary path to the secondary in the case of a signal path failure. The low-level threshold is user-selectable via UP/DOWN buttons and a low-level test point. LEDs for SNMP control, and Primary and Secondary signal paths allow the user to quickly assess the units configuration. The Model 3020 occupies one of the eight slots in the 3000 Series Rack Chassis. The 3000 chassis also accommodates two redundant power supplies. All 3000 Series modules are hot-swappable ensuring easy replacement and maximizing system uptime. As part of the 3000 Series L-Band family, the Model 3020 provides the professional satellite operator a high performance solution for satellite communications.



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Specifications and Ordering Information

Performance Characteristics

	Min	Typ	Max	Units
L-Band 50 Ohm Specs				
Frequency Range	950		2250	MHz
RF Input Range	-50		+10	dBm
RF Insertion Loss		3.5	4	dB
Impedance		50		Ohm
IMD (-3 dB Input)			-65	dBc
VSWR		1.5:1	1.8:1	
Group Delay (Full Band)			1.5	ns
Isolation		55		dB
Threshold Set Range	-35		+10	dBm
Third Order Intercept Point	+32	+35		dBm
Switching Speed (off-on)			100	μs
Switching Speed (on-off)			50	μs
L-Band 75 Ohm Specs				
Frequency Range	950		2250	MHz
Flatness (full Band)	-1.25		+1.25	dB
RF Input Range	-50		+10	dBm
RF Insertion Loss		4	5.0	dB
Impedance		75		Ohm
IMD (-3 dB Input)			-65	dBc
VSWR		1.5:1	1.8:1	
Group Delay (Full Band)			1.5	ns
Isolation	38	45		dB
Threshold Set Range	-35		+10	dBm
Third Order Intercept Point	+32	+35		dBm
Switching Speed (off-on)			100	μs
Switching Speed (on-off)			50	μs
IF 50 and 75 Ohm Specifications				
Frequency Range	10		200	MHz
Flatness (full band)	-0.5		+0.5	dB
Return Loss	18			dB
Group Delay (any 36 MHz)	-0.1		+0.1	ns
VSWR	1.3:1			
Isolation		75		dB

1. Impedance is specified when the unit is ordered.
2. This product conforms to the Electromagnetic Compatibility Requirements in accordance with European Community Directive

Switch Module P/N

3020 RF Switch Options	L-Band 950-2200 MHz	IF 10-200 MHz
3RU, 75 Ohm	3020SA-NN	3020SC-NN
3RU, 50 Ohm	3020SB-NN	3020SD-NN

Electrical Characteristics

	Min	Typ	Max	Units
Power Supply Voltage		+20		VDC
Supply Current		105		mA
Power Dissipation		2		W

Physical Characteristics

	Min	Typ	Max	Units
Module Weight		1		lb.
		.45		kg
Module Dimensions		5.06 x 1.39 x 12.00		in.
		129 x 35 x 305		mm

Environmental Characteristics

	Min	Typ	Max	Units
Operating Temp. Range	-10		+55	°C
Storage Temp. Range	-40		+60	°C
Humidity (RH, non-condensing)	5		95	%

The following conditions will trigger a summary fault on the 3000 Chassis DB-25 connector: System Over Temp, System Under Temp, RF Input Low (Primary Path)

Model 3020 Front and Rear Panels

3RU Chassis and Power Supplies

Chassis, Power Supply and Panel Options	Part Number
3RU Chassis, Holds 8 Modules and 2 P.S.	3000CB-NN
3RU Power Supply, Universal AC, SNMP Interface	3000UB-NN
3RU Power Supply, Universal AC	3000UC-NN
3RU Power Supply, -48 Volts DC, SNMP Interface	3000UD-NN
3RU Power Supply, -48 Volts DC	3000UE-NN
3RU Blank Panel for Unused Module Slots (optional)	3000EA-NN
3RU Blank Panel for Unused P.S. Slot (optional)	3000EB-NN

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