

Short Range IF Transport

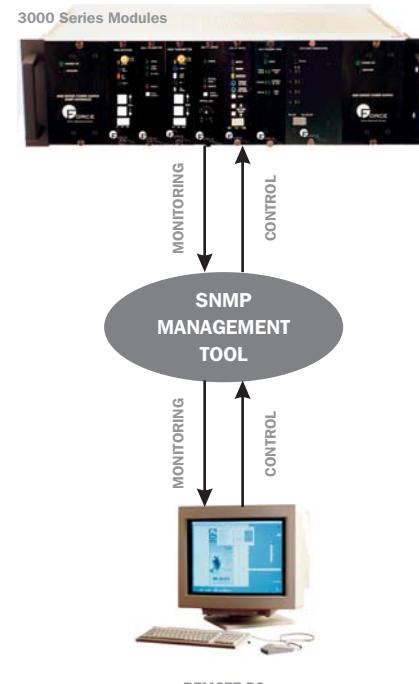
- SNMP for remote monitoring and control of all modules.
- Transmits all 50 Ohm video, audio, and data formats up to 2 km.
- Offers flat frequency response from 10 to 200 MHz.
- 1310 nm FP laser optics; 50 Ohm operation in 3RU rack-mount or stand-alone configurations.
- Rugged stand-alone enclosures and weatherproof connectors can withstand the extreme environments experienced by satellite installations.
- 3RU rack chassis accommodates eight transmitters and/or receivers and two power supplies for system reliability.

The Force Smart IFL™ Model 3079 Short Range IF 70/140 MHz Optical Transmitter is designed to work with the Model 3080 Receiver to transport 50 Ohm signals in the 10 to 200 MHz range, specifically 70 or 140 MHz signals for satellite uplink or downlink applications up to 2 km. The link may be ordered in a stand-alone or 3RU rack-mount configuration. The 3RU configuration rack-mounts up to eight hot-swappable 3079 transmitters and/or 3080 receivers and two power supplies in a 3RU 19" rack chassis for increased system reliability. The Model 3080 receiver provides the user with manual gain control which allows the user to tailor the module input and output levels to maintain consistent performance. Available with 1310 nm Fabry-Perot (FP) optics, the Model 3079 transmitter can be configured to meet almost any short range design need. Indicator LEDs for Laser Status, RF Level, and Local/Remote Operation (Tx), as well as an indicator for No Optical (or low optical) input (Rx) allow the user to quickly assess the link's operational status. The 3RU version may be used with Force's SNMP compatible power supplies for SNMP monitoring and control of the link. As part of the 3000 Series L-Band and IF family, the Model 3079 provides the professional satellite operator a high performance solution for satellite communications.



3RU Model 3079T/3080R Short Range 50 Ohm IF Optical Link

Monitoring and Control of RF/Optical Systems



3000 Series Modules with 3000 3RU Chassis and SNMP Power Supply

Specifications and Ordering Information

Optical and RF Characteristics

	Min	Typ	Max	Units
Tx Optical Output Power	+2	+3	+4	dBm
Rx Optical Input Power	-4		+4	dBm
Optical Loss Range (1)	0		6	dB
Operating Wavelength	1280	1310	1340	nm
Impedance		50		Ohms
Frequency Range	10		200	MHz
Flatness (10-200 MHz)		±0.75	±1.0	dB
Flatness (at any 36 MHz)		±0.25		dB
RF Gain Variation Over Temp	-2	0	+2	dB
Link RF Gain Sm. Ap.(2)		+10		dB
Link RF Gain Lg. Ap. (2)		0		dB
RF Input Range Sm. Ap. (3)	-40		-15	dBm
RF Input Range Lg. Ap. (3)	-25		0	dBm
Input 1 dB Compression Point	-7	-5		dBm
Output 1 dB Compression Point	+8	+10		dBm
Noise Figure (0 dB Opt. Loss)		20	22	dB
SFDR (0 dB Opt. Loss) (4)	106	109		dB/Hz
Input/Output Return Loss	30			dB
Input/Output VSWR			1.1:1	
Group Delay Variation (5)			1.0	ns
IMD3		-50	-55	dBc

Electrical Characteristics

	Min	Typ	Max	Units
Power Supply Voltage		+20		VDC
Tx Supply Current	140		185	mA
Rx Supply Current	180		220	mA

Physical Characteristics

	Min	Typ	Max	Units
3RU Module Weight		8		oz
		227		g
3RU Module Dimensions	5.06	x 1.39	x 12.00	in.
	129	x 36	x 305	mm
Stand-alone Module Weight		2		lbs.
		0.91		kg
Stand-alone Module Dimensions	4.36	x 1.26	x 11.50	in.
	111	x 32	x 292	mm

Environmental Characteristics

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

1. Link gain can be adjusted to specified limits up to a maximum loss of 2 dB (2 km).
2. The Optical Loss knob controls the link gain over the full optical loss range.
3. Optimal ranges are: -15 to -35 dBm, small aperture and 0 to -20 dBm, large aperture.
4. SFDR = 2/3 (Input Third Order Intercept (dBm) - Equivalent Input Noise (dBm/Hz)).
5. Group delay specification is for 30-200 MHz.

Medium Range IF Tx and Rx P/N

3079 Tx and Rx Options	3RU Rack-mount Small Aperture	Stand-alone Small Aperture	3RU Rack-mount Large Aperture	Stand-alone Large Aperture
Tx, 50 Ohm, 1310 nm, SM, SC/APC	3079TA-SCSP ¹	3079TB-SCSP ¹	3079TC-SCSP ¹	3079TD-SCSP ¹
Rx, 1310/1550 nm, SM, SC/APC	3080RA-SFSP ¹	3080RB-SFSP ¹	3080RA-SFSP ¹	3080RB-SFSP ¹

1. FC/APC connectors are also available. Replace SP in the part number with AP.

3RU Chassis and all Power Supplies

Chassis, Power Supply and Panel Options	Part Number
3RU Chassis, Holds 8 Modules and 2 PS.	3000CB-NN
3RU Power Supply, Universal AC	3000UC-NN
3RU Power Supply, -48 Volts DC	3000UE-NN
Wall-mount Power Supply, +20 Volts DC, 1.5A, Used with Stand-alone Units	PS3000
3RU Blank Panel for Unused Module Slots (optional)	3000EA-NN
3RU Blank Panel for Unused PS. Slot (optional)	3000EB-NN



3RU Model 3079 Transmitter and Model 3080 Receiver Panels



Stand-alone Model 3079 Transmitter

