

980 Integrated Satellite Router Board



Powerful satellite remote module architected specifically for integration into defense and government aircraft. The 980 is designed to integrate into a ARINC 600 enclosure or other customized solutions, facilitate compliance with WGS, DO-160G and ARINC 791 standards and is manufactured to strict aerospace AS9100 standard for quality. It supports operations in an ultra high-speed COTM environment with dual DVB-S2/ACM receivers and an ATDMA transmitter. The 980 includes TRANSEC support with fast beam switching, spread spectrum returns and skew angle compensation to support defense grade aeronautical operations and antennas on both the Evolution® and iDirect Velocity™ platforms.

Network Configuration*

Network Topology	DVB-S2 with Adaptive TDMA Returns	
	Downstream: DVB-S2/ACM	Upstream: Adaptive TDMA
Modulation	QPSK, 8PSK, 16APSK	BPSK, QPSK, 8PSK
Max. Symbol Rate	45 Msps x2	15 Msps
Spread Spectrum (Max Rate Mcps)		BPSK SF: 2, 4, and 8 Up to 15 Mcps
FEC	LDPC 1/4-8/9	2D 16-State 1/2-6/7
	<i>Maximum downstream and upstream data rates cannot be achieved simultaneously. Max rates are achieved under optimal conditions.</i>	

Interfaces

SATCOM Interfaces	Tx Out: 950-2050 MHz, Composite Power +5 dBm to -30 dBm, MCX 50Ω Rx1 In: 950-2150MHz, -5 dBm (max) composite to -130+10*Log10(Sym rate) dBm (min) single carrier, MCX 50Ω Reference Clock Out: 10/50 MHz, +/-5ppm stability, 0 dBm -3/+4 dB power, MCX 50Ω
Data Interfaces	All digital I/O via backplane connector LAN: Dual 10/100/1000 Mbps Ethernet; Console: RS-232; BUC Management: RS-422 Variety of discrete interfaces for aeronautical integrations – see integration guide for details
Protocols Supported	TCP, UDP, ICMP, IGMP, RIP Ver2, Static Routes, NAT, DHCP, DHCP Helper, Local DNS Caching, OpenAMIP, cRTP, and GRE
Security	FIPS 140-2 Level 3 Certified (#3056) TRANSEC module (E0002268), AES Link Encryption (256-bit)**, X.509 Digital Certificates, Automatic Key Management
Traffic Engineering	Group QoS, QoS (Priority Queuing and CBWFQ), Strict Priority Queuing, Application Based QoS, Minimum CIR, CIR (Static and Dynamic), Rate Limiting
Features	Built-in Automatic Uplink Power, Frequency and Timing Control, Authentication, Ultra High-Speed COTM

Mechanical/ Environmental

Size	30.63 cm x 17.65 cm x 2.69 cm (12.06 in x 6.95 in x 1.06 in)
Weight	1.8 kg maximum (3.0 lbs.)
Operating Temperature	-40° to +70° C (-40° to +158°F) with adequate airflow and thermal integration <i>Refer to integration guide for thermal design guidelines.</i>
Survival Temperature	-55° to +85° C (-67° to +185° F)
Altitude	Up to 16,764 m (55,000 ft.) <i>Not designed for simultaneous maximum temperature at maximum altitude. Refer to integration guide for thermal design guidelines.</i>
Input Voltage	+15 to +32 VDC
Power Consumption	35 Watts Maximum
Certifications	RoHS Compliant

*Please note that the integrator is responsible for certifications at the terminal level.
For more information, please see www.idirect.net/doc.*

*Above specs are Evolution only and software dependant.

** Applies to iDirect Velocity only and is software dependent.