CX780
Integrated Board

Powerful satellite remote module architected specifically for operation on commercial aircraft. The CX780 is designed to integrate directly into a ARINC 600 enclosure, facilitate compliance with DO-160G and ARINC 791 standards and is manufactured to strict aerospace AS9100 standard for quality. It supports operations in a high speed COTM environment with dual DVB-S2/ACM receivers and an ATDMA transmitter. The CX780 includes fast beam switching, spread spectrum returns and skew angle compensation to support aeronautical operations and antennas on both the iDirect Evolution® and Velocity™ platforms.

Network Configuration

Network Topology	Star, 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	7.5 Msps
Max. Info Rate	150 Mbps x2	18 Mbps
Spread Spectrum (Max Rate Mcps)		BPSK SF: 2, 4, 8, 16* Up to 7.5 Mcps
FEC	LDPC,1/4-8/9	2D 16-State 1/2-6/7
	Maximum downstream and upstream data rates cannot be achieved simultaneously. Max rates are achieved under optimal conditions.	

Interfaces

SatCom Interfaces	Tx Out: 950-1950 MHz, Composite Power +5 dBm to -30 dBm, MCX 50Ω Rx1/Rx2 In: 950-2150MHz, -5 dBm (max) composite to -130+10*Log10(Fsym) dBm (min) single carrier, MCX 50Ω Reference Out: 10/50 MHz, 0 dBm nominal, +/-5 ppm, MCX 50Ω
Data Interfaces	All digital I/O via backplane connector LAN: Dual 10/100/1000 Mbps Ethernet 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*	256-bit AES Link Encryption (optional), X.509 certificate authentication, 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	Transmit Keyline, Built-in Automatic Uplink Power, Frequency and Timing Control, Authentication

Mechanical/ Environmental

Size	12.08 in x 6.95 in x 1.06 in (30.68 cm x 17.65 cm x 2.69 cm)
Weight	1.09 kg (2.4 lbs)
Operating Temperature	-40° C to +70° C (-40° F to +158° F) with adequate airflow and thermal integration *Refer to integration guide for thermal design guidelines.*
Survival Temperature	-40° C to +85° C (-40° to +185°F)
Altitude	Up to 55,000 ft; Not designed for simultaneous maximum temperature at maximum altitude. *Refer to integration guide for thermal design guidelines.*
Input Voltage	+15 to +32 VDC
Power Consumption	35 Watts Maximum
EMC Standards	Designed to meet required EN 55022: Class B, EN 55024, FCC Part 15: Class B, ICES-003: Class B compliance standards with appropriate enclosure and power supply design.
Certifications	RoHS Compliant *Please note that the integrator is responsible for all certifications at the terminal level.*

** Feature/license availability is release dependent.*