

CX780 Board Satellite Modem



ST Engineering iDirect's X-Series modems support DVB-S2/ACM and Adaptive TDMA and are designed for broadband applications. The X-Series provides performance, efficiency and security in a variety of form factors for reliable IP-based satellite communications.

The CX780 Aero Modem Board is a powerful satellite modem 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 Adaptive TDMA transmitter.

The CX780 supports advanced mobility features such as fast beam switching, spread spectrum returns, skew angle compensation, and OpenAMIP® to support aeronautical operations and antennas on the iDirect Velocity® platform.

Markets

Commercial Aero
Business Jets

Main Features:

- DVB-S2 up to 45 Msps
- Adaptive TDMA up to 7.5 Msps
- Dual demodulators
- Two Gigabit Ethernet ports
- 256-bit AES Link Encryption (optional)

VELOCITY

powered by

Newtec 



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Network Configuration

Network Topology	Rx1 and Rx2	Tx
	DVB-S2	Adaptive TDMA
Modulation	QPSK, 8PSK, 16APSK	BPSK, QPSK, 8PSK
FEC Rates	LDPC, 1/4 - 8/9	2D 16-State, 1/2 - 6/7
Symbol Rates	Up to 45 Msps	Up to 7.5 Msps
Spread Spectrum		BPSK SF: 2, 4, 8, 16*; Up to 7.5 Mcps

Interfaces

Tx Interface

Connector	MCX 50Ω
Frequency range L-band	950 - 1950 MHz
TX level	+5 dBm to -30 dBm
BUC reference	10/50 MHz

Rx1/Rx2 Interface

Connector	MCX 50Ω
Frequency	950-2150 MHz
LNB reference	10/50 MHz

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

Mechanical and Environmental

Size	30.68 cm x 17.65 cm x 2.69 cm (12.08 in x 6.95 in x 1.06 in)
Weight	1.09 kg (2.4 lbs)

Temperature

Operating	-40° C to +70° C (-40° F to +158° F) with adequate airflow and thermal integration <i>Refer to integration guide for thermal design guidelines.</i>
Survival	-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.

Power Supply

Input Voltage	+15 to +32 VDC
Power Consumption	35 Watts Maximum

For more details please refer to the CX780 Integration Guide.

* Feature/license is release dependent.

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