

9800 AR Satellite Modem



ST Engineering iDirect's 9-Series defense aero modems are optimized for airborne communications-on-the-move (COTM) and provide a superior level of IP broadband capability with dual DVB-S2/ACM receivers for make-before-break connectivity and an Adaptive TDMA transmitter. The 9-Series defense aero modems include a FIPS 140-2 Level 3 Certified (#3056) TRANSEC module (E0002268) and feature fast beam switching, spread spectrum returns and skew angle compensation to support defense grade aeronautical operations and antennas on both the Evolution® and Velocity® platforms.

The 9800 AR is a powerful satellite rackmount modem architected specifically for defense and government aircraft for operations in an ultra high-speed COTM environment. The 9800 AR is ideal for roll-on/roll-off applications and meets the rigorous environmental test standards for MIL-STD 810G and DO-160G.

The 9-Series defense aero modems are also available as a board-level product, 980 Modem Board, and with an ARINC 600 4MCU enclosure, 9800 AE Modem.

EVOLUTION DEFENSE

VELOCITY

Markets

Government / Defense
Aero

Main Features:

- DVB-S2 up to 45MSPS
- Adaptive TDMA up to 15 MSPS
- Dual demodulators for make-before-break connectivity
- FIPS 140-2 Level 3 Certified (#3056) TRANSEC module (E0002268)
- Extended frequency ranges for WGS constellations





Network Configuration*

Network Topology	Rx1 and Rx2	Tx
	DVB-S2/ACM	Adaptive TDMA
Modulation	QPSK, 8PSK, 16APSK	SS-BPSK, 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 15 Msps
Spread Spectrum		SF: 2, 4, 8; Up to 15 Mcps

Modem Interfaces

Tx Interface

Connector	Type-N, 50Ω
Frequency range L-band	950-2050 MHz
Tx level	Composite Power +5 dBm to -30 dBm
BUC reference	10 MHz and 50 MHz

Rx1 and Rx2 Interfaces

Frequency	950-2150 MHz
Connector	TNC, 50Ω
LNB LO selection	22 kHz on/off

Data Interface

LAN: Two Gigabit Ethernet; 1-front, 1-back
Two 10/100 Mbps Ethernet; 2-D38999
Console: RS-232

Management Interface

USB – front panel
KVM – rear panel
Serial Com 1 – (RS-232) – rear panel
Serial Com 2 – (RS-485) – rear panel

* Specifications are Evolution only and software dependent

**Applies to Velocity only and is software dependent



Management

Protocols Supported

TCP, UDP, ICMP, IGMP, RIPv2, Static Routes, NAT, DHCP, DHCP Helper, Local DNS Caching, OpenAMIP, cRTP, GRE

Security

FIPS 140-2 Level 3 Certified (#3056) TRANSEC module (E0002268), AES Link Encryption (256-bit)**, X.509 Digital Certificates, Automatic Key Management

Mechanical and Environmental

Size	W 48.26cm x D 52.71cm x H 4.39cm (W 19.00 in x D 20.75 in x H 1.73 in)
Weight	6.11 kg (13.47 lbs)
Temperature:	
Operating	-20° to +55°C (-4° to +131°F)
Altitude:	
Operating	Up to 7,620m (25,000 ft.)

Power Supply

Input Voltage	100-240VAC, 50-60Hz; 115VAC, 400Hz 22-36VDC
Power Consumption	AC: 4.0A maximum at 110VAC, 60Hz DC: 7.0A maximum at 28VDC