

980 Board 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 980 is a powerful satellite modem board architected specifically for integration into defense and government aircraft for operations in an ultra high-speed COTM environment. 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.

The 980 modem board is available as a roll-on/roll-off rackmount unit with the 9800 AR and with an ARINC 600 4MCU enclosure with the 9800 AE.

Markets

Government / Defense
Aero

Main Features:

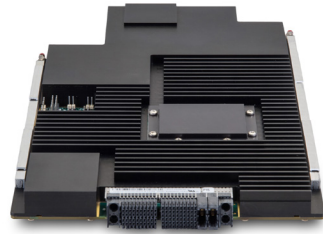
- DVB-S2 up to 45 Msps
- Adaptive TDMA up to 15 Msps
- Dual demodulators for make-before-break connectivity
- FIPS 140-2 Level 3 Certified (#3056) TRANSEC module (E0002268)
- Extended frequency ranges for WGS constellations

EVOLUTION DEFENCE

VELOCITY

powered by

Newtec 



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 | MCX, 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 | MCX 50Ω |
| LNB pwr supply | +13V to +19V, 0.45A |
| LNB LO selection | 22 kHz on/off |

Data Interface

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

Management Interface

RS-232 Console, RS-422 Keyline, RS-422 BUC control, RS-422 Filter select

*Specifications are Evolution only and software dependent

**Applies to Velocity only and is software dependent

Management

Protocols Supported

TCP, UDP, ICMP, IGMP, RIP Ver2, Static Routes, NAT, DHCP, DHCP Helper, Local DNS Caching, OpenAMIP, 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

Mechanical and 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 1.36 kg maximum (3.96 lbs)

Temperature:

Operating -40° to +70° C (-40° to +158°F) with adequate airflow and thermal integration

Altitude:

Up to 16,764 m (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 |

[Request A Quote](#)