# 900 Board Satellite Modem



ST Engineering iDirect's 9-Series modems provide a superior level of IP broadband capability, supporting DVB-S2/ACM and Adaptive TDMA and are designed for high-bandwidth fixed and mobility applications. The 9-Series has enhanced performance, efficiency and security with FIPS 140-2 Level 3 certification and supports both one-way and two-way TRANSEC to enable mission-critical communications.

The 900 modem board features dual DVB-S2 demodulators for networks utilizing multiprotocol encapsulation (MPE) traffic, as well as an 8-port Gigabit switch to securely segregate user traffic. The 900 is designed to meet MIL-STD 810G when placed in a properly engineered enclosure. Optimized for integration into both fixed and mobile terminals, the 900 is a powerful board-level solution.

The 900 modem board feature set is also available in a rackmount form factor. The 9350 Modem comes in a 1RU chassis and features an LCD screen, allowing the user to view modem configuration and statistics as well as a zeroize button for added security.

## Markets

Government / Defense

## Main Features:
- DVB-S2 up to 45 Msps
- Adaptive TDMA up to 29 Msps
- Dual demodulators to support two data streams
- Ideal for both fixed and mobility applications
- FIPS 140-2 Level 3 Certified (#3056) TRANSEC module (E0002268)
- Extended frequency ranges for WGS constellations

EVOLUTION DEFENSE

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VELOCITY

## Network Configuration*

| Network Topology | Rx1 and Rx2 | Tx |
|---|---|---|
| | DVB-S2/ACM | Adaptive TDMA |
| Modulation | QPSK, 8PSK, 16APSK, 32APSK | 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 29 Msps |
| Spread Spectrum | | SF: 2, 4, 8; Up to 29 Mcps |

## Modem Interfaces

### Tx Interface

| | |
|---|---|
| Connector | SMA, 50Ω |
| Frequency range L-band | 950-2400 MHz |
| Tx level | Composite Power +3dBm/-35dBm |
| BUC power supply | +24V, 5A max<br>+48V, 5A max |
| BUC reference | 10 MHz and 50 MHz |

### Rx1 and Rx2 Interfaces

| | |
|---|---|
| Frequency | 950-2150 MHz |
| Connector | SMA, 50Ω |
| LNB pwr supply | +13V to +19V, 0.45A |
| LNB LO selection | 22 kHz on/off |

### Data Interface

LAN: 8-port switch, 10/100/1000, 802.1q VLAN

### Management Interface

RS-232 Console, RS-232 Serial NEMA GPS Input, RS-422 Keyline, RS-422 BUC control, RS-422 Filter select

## Management

### Protocols Supported

TCP, UDP, ACL, ICMP, IGMP, RIPv2, Static Routes, NAT, DHCP, DHCP Helper, Local DNS Caching, OpenAMIP™, OpenBMIP, 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 | W 28.44 cm x D 22.22 cm x H 2.54 cm (W 11.2 in x D 8.75 in x H 1.0 in) |
| Weight | 0.77 kg (<1.7 lbs) |
| Temperature: | |
| Operating | -40˚ to +60˚C (-40˚ to +140˚F) |
| Humidity: | |
| Operating | 95% non-condensing humidity |

*Refer to integration guide for thermal design guidelines.*

## Power Supply

| | |
|---|---|
| Input Voltage | 24VDC |
| Power Consumption | <20 Watts without LNB and BUC<br><41 Watts with LNB max<br><170 Watts with LNB and BUC |

*Specifications are Evolution only and software dependent

**Applies to Velocity only and is software dependent