



Intraplex® DV-600A

Secure Digital Voice Module



The Intraplex DV-600A secure digital voice module provides digital transmission of one or two full-duplex Motorola SECURENET™ channels or other encrypted mobile radio traffic up to 12 kbps.

The DV-600A is a plug-in module designed to be used in Intraplex T1 (1.5 Mbps), E1 (2 Mbps), ISDN and variable rate access products, where SECURENET traffic may be combined with other voice and data traffic for transport on high-speed digital circuits. Two full-duplex SECURENET channels can be transported over one basic rate ISDN circuit, up to 24 on one T1 circuit, and up to 30 on one E1 circuit.

Key Features

- Transparent transmission of full-duplex clear and encrypted radio channels without the need for configuration adjustments and realignment.
- Eliminates the need for Motorola Digital Voice Modems (DVMs) and analog 3002 lines, providing reduced operational cost and maintenance, with improved voice quality and reliability.
- Sophisticated data compression algorithm (split-band ADPCM) providing 4:1 compression, which allows each radio channel to be carried in only one 64 kbps timeslot for efficient use of the transmission link.
- Three types of loopback for testability.
- Loopback timeout.

Specifications

Specifications and designs are subject to change without notice

| General | |
|-----------------------------------|--|
| System Compatibility | The DV-600A is compatible with Intraplex T1, E1, ISDN, and variable-rate access products |
| Operating Mode | <ul style="list-style-type: none">• Selectable: one or two full-duplex radio channels per module• Transports encrypted or clear traffic — transparent to user• Loopbacks |
| Clear Channel Voice | |
| Frequency Response | <ul style="list-style-type: none">• 7.5 kHz nominal• 5 Hz to 7.5 kHz, +/- 3.0 dB• 100 Hz to 7.0 kHz, +/- 0.5 dB |
| Digital Input Capability | Accepts up to 12 kbps |
| Maximum Full Load Level | +15 dBm (0 dBm = 0.775 Vrms) |
| Dynamic Range | > 70 dB |
| Crosstalk | < -80 dB |
| Input Impedance | 600 ohms or > 10,000 ohms |
| Output Impedance | < 30 ohms |
| Compression Algorithm | Split-band Adaptive Differential Pulse Code Modulation (ADPCM) provides 4:1 data compression |
| Digital Encrypted Voice | |
| Data Rate | Accepts Motorola SECURENET signal as well as other encrypted traffic up to 12 kbps |
| Input/Output Modules | |
| Connectors | Terminal screws on an MA-506 module adapter, 50-pin Telco MA-507 |
| Network Interface | |
| Line Error Tolerance | No audible degradation at 10 ⁻⁵ random bit error rate |
| Timeslot Assignments | One DS0 (64 kbps) per active channel |
| Status and Diagnostics | |
| LED Indicators | <ul style="list-style-type: none">• Decoder sync—channel 1, 2• Normal input level—channel 1, 2• Over input level—channel 1, 2• Service• Fail |
| Physical and Environmental | |
| Nominal Power Consumption | 7.8 watts with both channels active |
| Temperature | 0 °C – 50 °C operating |
| Humidity | 0% – 90% noncondensing |