

NSGDatacom Inc.

Model 4000

- *Multi-Mode PSK or FSK*
- *Full / Half Duplex*
- *Synchronous or Asynchronous*
- *Front Panel or Remote Control*
- *Built-in Test*
- *Excision Filtering*
- *Transmit Clock Recovery*
- *Flash Memory*

HF High Speed Data Modem

NSGDatacom's Model 4000 High Speed Data Modem is a powerful, state-of-the-art serial tone modem capable of transmitting and receiving up to 4800 bits per second in a standard 3 kHz single sideband HF radio channel.

A powerful adaptive equalizer eliminates the detrimental effects of multipath associated with HF transmissions, and convolution coding with soft decision Viterbi decoding provides error detection and correction. Protection against interference is provided by excision filtering, which automatically removes unwanted interfering signals.

The Model 4000 is designed to meet the performance requirements of MIL-STD-188-110A, STANAG 4285, STANAG 4529, and STANAG 4481, and provides flexibility through its interoperability with other widely used FSK modems. It features full-duplex/ half-duplex operation, and a synchronous or asynchronous DTE interface.

Additional operational modes can be supported with the modems powerful Digital Signal Processing (DSP) design, and expanded memory. Standard flash memory provides the ability to perform software upgrades in the field.



Model 4000 Specifications

Model 4000

Dimensions

Size: 1.72" H x 8.37" W x 12" D

Weight: 5 lbs

Serial Tone Mode

Data Rates:

75, 150, 300, 600, 1200, 2400, and 4800 bps

Interoperability:

- MIL-STD-188-110A
- STANAG 4285
- STANAG 4529

Modulation:

8-ARY PSK at 2400 symbols per second

Error Detection and Correction:

Convolutional coding with soft decision
Viterbi decoding

Interleaving:

Selectable at 0.6 or 4.8 seconds or no interleaving

FSK Mode

Data Rates:

50, 75, 100, 150, 300, 600, and 1200 bps

Modulation:

Phase continuous binary FSK

Mark/Space Frequency:

300 to 3000 Hz (selectable in 1 Hz increments)

Shift:

85 to 1200 Hz

All Modes

Power:

- Source: 85 to 265 Vac, 11-48 VDC
- Dissipation: 35 Watts maximum

Interface:

- Digital: MIL-STD-188-114, MIL-STD-188C, EIA-RS-422 and EIA-RS-423 compatible
- Audio: 600 ohms balanced and isolated

- **KG-84 / KG-84C Compatible**
- **MIL-STD-188-110A**
- **STANAG 4285**
- **STANAG 4529**
- **NATO BRASS Compatible**

