

NSGDatacom Inc.

Model D7222

Embedded HF Data Modem

- **Multi-Mode PSK or FSK**
- **Full / Half Duplex**
- **Synchronous or Asynchronous**
- **Excision Filtering**
- **Flash Memory**

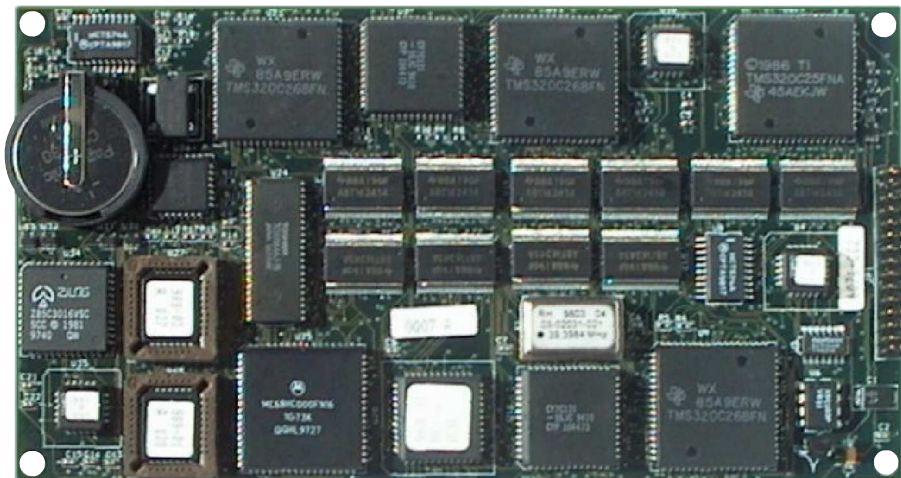
NSGDatacom's D7222 Embedded HF Data Modem is a powerful, firmware-controlled device designed to be installed within new or existing high frequency (HF) radio systems. Using state-of-the-art surface mount components and Digital Signal Processing (DSP) technology, the board is designed to meet the performance requirements of MIL-STD-188-110A, STANAG 4285 and STANAG 4529.

The D7222 is capable of transmitting and receiving up to 4800 bits per second in a standard 3KHz single sideband HF radio channel. In the FSK mode, the modem is interoperable with other FSK modems operating at data rates from 50 to 1200 bps. Protection against interference is provided by excision filtering, which automatically removes unwanted interfering signals.

To help simplify system integration, the modem has been designed as a completely self-contained system. It contains all the necessary hardware and software to perform modem functions without requiring extensive system interaction.

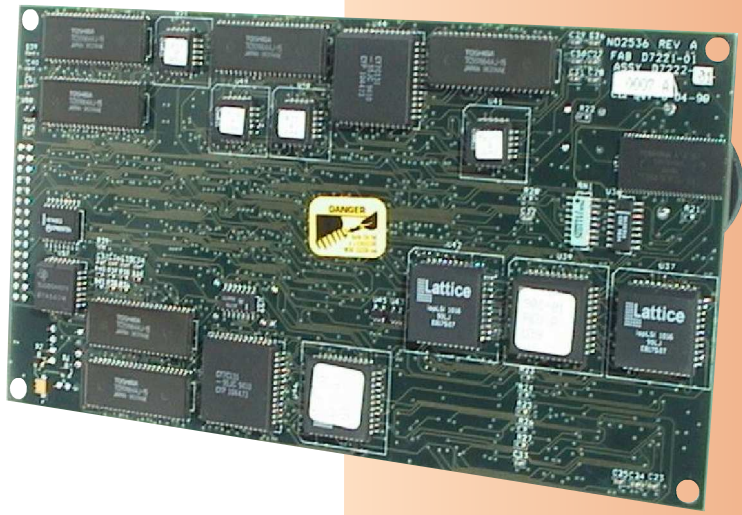
The D7222 is operated via a TTL remote serial bus, which controls all operations. Connections to the modem are via a 30-pin latch connector.

The standard modem board is 3.75" x 7", however boards may be customized by our technical staff to meet specific size and mounting requirements. Please contact our Sales Department for more information.



D7222 Specifications

Model D7222



Dimensions

7" x 3.75" x 0.6"

Power Supplies

+5V dc @ 1.1A
±12V dc @ 45mA

PSK Mode (MIL-STD-188-110A)

User Data Rate:
75, 150, 300, 600, 1200, 2400, and 4800 bps

Coding:
Convolutional constraint length 7

Interleaving:
Selectable between Short and Long
4800bps defaults to None

Interleaving Delay:
0.6 seconds (None and Short) and 4.8 seconds (Long)

PSK Mode (STANAG 4285)

User Data Rate:
75, 150, 300, 600, 1200, 2400, and 3600 bps

Coding:
Convolutional constraint length 7

Interleaving:
Selectable between Short, Long and None

Interleaving Delay:
0.853 seconds (None and Short) and 10.24 seconds (Long)

PSK Mode (STANAG 4529)

User Data Rate:
75, 150, 300, 600, 1200, 1800 bps

Coding:
Convolutional constraint length 7

Interleaving:
Selectable between Short, Long and None

Interleaving Delay:
1.706 seconds (None and Short) and 20.48 seconds (Long)

FSK Mode

User Data Rates:
50, 75, 100, 150, 300, 600, and 1200 bps

Mark/Space Frequency:
Selectable, 300 to 3000 Hz

Shift:
85 to 1200 Hz

Environmental

Temperature:
- Operating: 0 to +40 degrees C
- Storage: -40 to +75 degrees C

Humidity:
0 to 95% non-condensing

Altitude:
- Operating: 0 to 15,000 feet
- Storage: 0 to 25,000 feet

- MIL-STD-188-110A
- STANAG 4285
- STANAG 4529
- NATO BRASS Compatible

NSGDatacom Inc.

7435 New Technology Way, Frederick, Maryland 21703
Phone: 301.662.5926 Fax: 301.694.6279
www.nsgdata.com