



# NX1500

VHF / UHF Data Modem

## A REVOLUTION IN MOBILE COMMUNICATION SYSTEMS

Monitor systems - Control equipment  
Track vehicles - Send messages

Nexion Data System radio modems integrate easily into existing voice networks providing the benefits of both voice and data without major re-investment in radio hardware.

*Save time. Save money.*

### FEATURES\*

- **Uncompressed data to 14,400bps**
- **Standard 2.7KHz audio bandwidth**
- **Adaptive channel equalisation** (Patent pending)
- **Secure data encryption (optional)**
- **Variable data compression (optional)**
- **Over-The-Air programmability**
- **Multiple I/O ports**
- **Unique electronic serial number**
- **Field programmable**
- **Multiple module connections**
- **Battery backed Real time Clock & Calendar**
- **Wide operating voltage and temperature range**

The Nexion Mobile Data System (NMDS) is a complete high speed mobile communication solution featuring simple integration into virtually any radio based transmission system. As a member of the NMDS family, the NX1500 is a high performance DSP based VHF/UHF radio modem supporting over the air data rates of up to 14,400 bits per second.

Under software control, the NX1500 incorporates multiple features that can be individually tailored to meet most customer demands. Advanced features include 48bit or 128bit data encryption, automatic transceiver control and selective and broadcast addressing. Intelligent over the air data protocols maximise data throughput and reduce data collision.

Superior design, built in intelligence and modular upgradeability make the NX1500 the new standard in high speed radio modems.

Integration of the NX1500 can be accomplished without expensive modifications to existing transceivers.

**SPECIFICATIONS\***

<b>Data Transfer Rate</b>	Variable to 14,400 bps (model dependant)
<b>Error Correction and Detection</b>	FEC, CRC
<b>Address Range</b>	48 bit
<b>Address Types</b>	Broadcast, Fleet, Group, Individual
<b>Data Encryption</b>	48 bit or 128 bit (Optional)
<b>Link Establishment Time</b>	Typical <200mS
<b>Compression Ratio</b>	Variable: 2:1 to 10:1, Typically 4:1 (Optional)
<b>Processor</b>	52 MIPS DSP
<b>Memory</b>	2Mb Flash 1Mb SRAM
<b>Transceiver Interface</b>	Audio input range from 100mVpp to 1Vpp (Impedance 20K ohms, maximum input level 1.5Vpp) Audio output range from 138mVpp to 1.6Vpp (Minimum resistive load 150 ohms) Audio bandwidth: 300-3000 Hz $\pm$ 6dB
<b>Serial Ports</b>	3 programmable RS-232 ports for PC, GPS, Data Loggers, etc.
<b>Status LED's</b>	Power, TX, RX
<b>Digital Inputs</b>	4 (minimum 1 used by transceiver)
<b>Digital Outputs</b>	8 (minimum 1 used by transceiver)
<b>Audio Inputs</b>	2 (minimum 1 used by transceiver)
<b>Audio Outputs</b>	2 (minimum 1 used by transceiver)
<b>Module Interconnection</b>	RS-485 serial port
<b>Other</b>	Battery Backed onboard Real Time Clock / Calendar Individual Electronic Serial Number
<b>Operating Temperature</b>	-20° to +70°C
<b>Primary Power</b>	12 V DC nominal @ 50mA 10-30 V DC operating range
<b>EMC / EMI Compliance</b>	Australian C tick compliance
<b>Size</b>	110mm W x 75mm D x 26mm H (including connectors)
<b>Weight</b>	180g

**\*Note:** Features and specification vary according to firmware release schedule.  
Please check [www.nexiondata.com](http://www.nexiondata.com) for current version functionality.