



## MSN8100 SERIES SOFTWARE DEFINED RADIO (SDR)

**MSN8100  
SOFTWARE DEFINED RADIO (SDR)**  
Part Number 608800-01 (4 channel)  
Part Number 608800-00 (3 channel)

- Multi-channel, Multi-mode Operation
- Embedded Modem
- Open Standard, Menu-driven GUI
- Networked via SNMP over Ethernet
- Software Configurable, Ready for In-service Upgrade
- Standard Interfaces Support Legacy Integration
- Supports Joint and Coalition Interoperability
- Fully Compatible with the Series 6000 Range of Naval Products

### STANDARDS

The HF Naval SDR is compliant to and compatible with the following functional and performance standards:

STANAG 4197\* • STANAG 4198\* • STANAG 4203 • STANAG 4285 • STANAG 4529 • STANAG 4538 (RF Reqs.) • STANAG 4539 Annex B • STANAG 5066 V1\* • STANAG 5511\* ed. 3 • STANAG 4415 • STANAG 4481 ed. 1 (Annex B/C) • STANAG 5031 ed. 1 • STANAG 5522\* Annex 2 • MIL-STD-188-110A/B • MIL-STD-188-141A/B (App A) • MIL-STD-188-203-1/1A

\*modern and/or control functions provided externally



PS8100 Pre/Post-Selector



MSN8100 Software Defined Radio  
4-Channel Transceiver



MSN8100 HF Transceiver  
Front View

### GENERAL

#### Stored Channels

- 1-, 2-, 3-, or 4-channel variants
- 1024 pre-sets per channel

#### Frequency Accuracy

- 3 parts in 10<sup>7</sup> (0°C to 35°C)

#### External Frequency Input

- 1, 5, or 10 MHz

#### Modes of Operation

- CW (A1A, A1B); MCW (A2A, A2B); AM (H3E); FAX (F1G, F3C); FSK (F1A, F1B, J2B); USB/LSB (H2A, H2B, J2A, J2B, J3E, R2A, R2B, R3E); ISB (B7B, B8E, B9W); Link-11 TADIL-A (G7B); Link-11 STANAG (B7B, B8E, B9W)
- The SDR is configurable to support both half duplex and full duplex operation (in data modes using a combination of two channels)

#### Tuning Time

- <5 ms to within 20 Hz

### ENVIRONMENTAL/PHYSICAL

#### Temperature

- MIL-STD-810F, Methods 501.4 and 502.4
  - Operation: 0°C to +49°C
  - Storage: -30°C to +70°C

#### Humidity

- MIL-STD-810F Method 507.4

#### Vibration

- MIL-STD-167-1 (Ships) Type 1

#### Shock

- MIL-STD-810D 30g, 25ms (in a shock-mounted cabinet)

#### EMC/EMI

- MIL-STD-461E

#### MTBF

- MIL-HDB K-217F at 25°C NS > 4000 hours

#### Size (H x W x D)

- 7 x 19 x 19.5 in (178(4U) x 483 x 495 mm)

#### Weight

- 37.5 lbs max (17 kg) (depending on configuration)

### RECEIVER

#### Frequency Range

- 10 kHz to 30 MHz in 1 Hz steps

#### Sensitivity

- LSB, USB, ISB; a signal of -113 dBm (1µV emf) in a 3 kHz bandwidth gives a (S+N)/N of 10 dB
- A high sensitivity position is provide

### EXCITER

#### Frequency Range

- 1.5 MHz to 30 MHz in 1 Hz steps

#### Carrier Suppression

- >60 dB

#### Unwanted Sideband Suppression

- >60 dB

#### Spurious Emissions

- Better than -80 dB at all frequencies removed by more than 5% from the tuned frequency (with PPS)

### OPTIONS

- External Pre/Post-selector