NAV25 MW Transmitter

phone +1.902.823.3900 nav@nautel.com www.nautelnav.com

GENERAL

Transmitter Type

Medium-wave, solid-state transmitter platform for NAVDAT / NAVTEX service.

Application

Engineered to address NAVDAT's demands, NAV Series transmitters are designed for coastal authorities seeking to upgrade their NAVTEX infrastructure with a future-ready path to NAVDAT transmission or to implement NAVDAT.

Configuration

- Two RF power modules, each including an integrated RF amplifier
- Optional redundant digital single board exciters with automatic changeover

RF Power Modules

- Digital-optimized linear design
- Module level short-circuit protection
- Hot-pluggable operation

RF PERFORMANCE

RF Output Power

- NAVTEX: Up to 5 kW
- NAVDAT: 25 kW peak power
- Ideal for NAVDAT applications up to 2.5 kW average power**
- Output level stabilized against AC supply voltage variations

RF Output Connection

7/8" EIA or 1-5/8" EIA, at top of transmitter

RF Output Impedance

50 ohms, unbalanced

Efficiency

86% typical AC-in to RF-out

RF Load VSWR

- 800 peak reflected watts results in instantaneous power shutback
- 200 reflected watts RMS results in a graceful power reduction

Frequency Range

- NAVDAT: 500 kHz.
- NAVTEX: 490 kHz and 518 kHz

Frequency Stability

±2 ppm/year over temperature range

±0.3 ppm/year with GPS option*

Spurious and Harmonic

NAVDAT

- Meets ITU-R M2010-3

NAVTEX

- Spurious emissions not exceeding -60dB relative to carrier
- Harmonic levels not exceeding –80 dB relative to carrier when used in conjunction with an Nautel ATU-HP-TT into a standard antenna load.

AC INPUT

Voltage

208 Vac or 380 Vac nominal, 3-phase, 50/60 Hz

Power Supply Variation

±10% voltage, 47 Hz to 63 Hz

ENVIRONMENTAL

Cooling

Forced air

Temperature Range

0°C to +50°C

Derate 3°C per 500 m above sea level (2°C per 1,000 ft)

Humidity Range

0% to 95% non-condensing

Altitude

0 m to 4,000 m (0 ft to 13,000 ft)

SAFETY

Meets EN60215: 1996 Safety Requirements for Radio Transmitting Equipment

PHYSICAL

Dimensions

184.2cm H x 58.7cm W x 86.4cm D

(72.5" H x 23.1" W x 34" D)

Weight

261 kg (573 lbs)

CONTROL AND MONITORING

- Extensive Module-level monitoring
- Direct wired optically isolated inputs and open collector outputs
- **Local Control:** LCD display
- **Remote Control:** Advanced User Interface (AUI)

COMPLIANCE

Conforms with all essential requirements of Radio European Directive 2014/53/EU

* SFN applications require the GPS Synchronization option. Please contact Nautel to confirm application-specific requirements.

** Please contact your Nautel representative to discuss your specific NAVDAT average power requirement.

NAVDAT MODULATOR

Standards

Engineered to meet ITU standards (R-REC-M.2010)

QAM Modes

- TIS: 4-QAM, 16-QAM.
- DS: 4-QAM, 16-QAM, 64-QAM.

Supports NAVDAT Modes A, B, and C

Channel Bandwidth

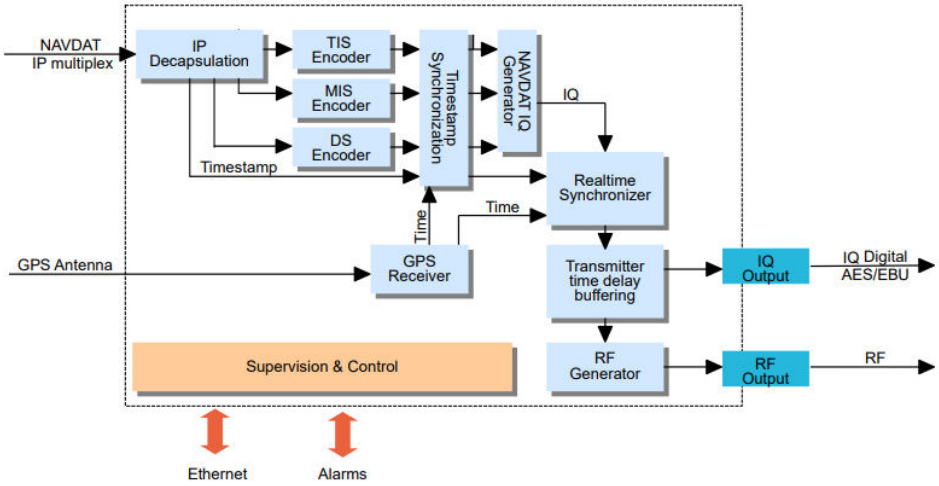
Supports NAVDAT channel bandwidths of 1 kHz, 3 kHz, 5 kHz, and 10 kHz

Reconfiguration

Dynamic reconfiguration capability to adapt to different operational requirements

Remote Supervision

- Web interface
- SNMPv3 support

SYSTEM ARCHITECTURE

- NAVDAT IP multiplex architecture
- Input: DCP over IP support
- GPS receiver included
- Outputs: IQ Digital AES/EBU and RF output