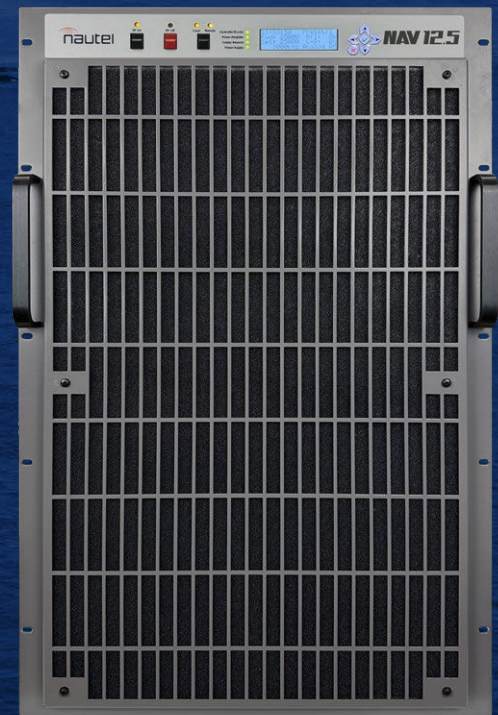
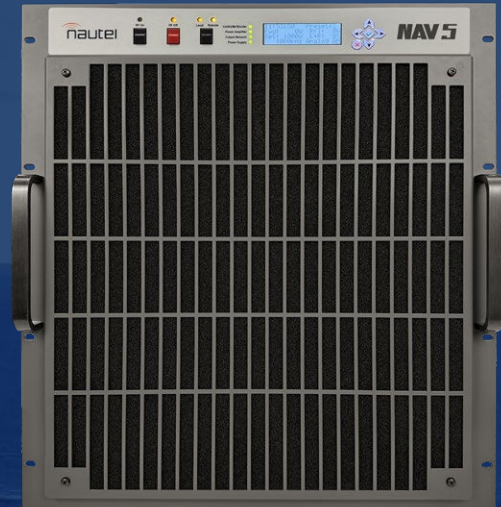




NAV Series

NAV5, NAV12.5, NAV25
NAVDAT/NAVTEX MW

NAUTEL, the world's largest supplier of NAVTEX systems, has been addressing coastal challenges, improving geographic coverage, modernizing outdated and unreliable systems, and meeting the safety demands arising from coastal border migration since 1969. With the introduction of the NAV Series transmitters, Nautel expands its capabilities to support both NAVTEX and NAVDAT, offering a comprehensive solution that significantly enhances the safety and effectiveness of coastal communications.

WHY NAVDAT?

NAVDAT provides several key advantages over NAVTEX. It offers flexible and robust digital transmission, supporting reliable communication across the intended coverage area. With a higher data capacity, NAVDAT can deliver more comprehensive safety messages, including text, images, and potentially video, enhancing clarity and understanding. Additionally, NAVDAT can operate across various frequency bands and integrate with existing maritime communication systems, making it a versatile solution for evolving maritime communication needs.



NAV SERIES FOR NAVTEX AND NAVDAT

Introducing the NAV Series, a family of solid-state medium-wave transmitters designed for NAVTEX and NAVDAT service. Available in three power levels, NAV5, NAV12.5 and NAV25, NAV Series transmitters are engineered to address the peak-power and linearity demands of NAVDAT. They are designed for coastal authorities seeking to modernize their NAVTEX transmission capability, prepare for NAVDAT implementation or conduct NAVDAT signal-propagation trials.

Whether transmitting navigational alerts and meteorological warnings via NAVTEX, or delivering detailed weather forecasts and safety information via NAVDAT, NAV Series transmitters are built to handle both with the reliability demanded by critical coastal communications.

DESIGNED FOR LONG-TERM OPERATIONAL VALUE

Robust, Field-proven platform

Built on Nautel's established solid-state transmitter technology, the NAV Series applies a familiar, proven platform foundation to the specific operating requirements of maritime communication systems.

Flexibility across three power levels

NAV5, NAV12.5 and NAV25 provide distinct NAVTEX output and NAVDAT peak-power capabilities, enabling transmitter selection tailored to specific range and data capacity requirements.

Digital-Optimized RF Performance

A linear RF architecture, combined with high peak-power capability, addresses the wider bandwidth and higher signal peaks associated with NAVDAT transmission.

Hot-pluggable RF Power Modules

Each RF power module incorporates an integrated RF amplifier and supports hot-pluggable operation, enabling servicing and replacement to be performed at the individual module level.

RF protection and module-level monitoring

Individual RF power modules include short-circuit protection, while the transmitter responds to excessive reflected power through protective shutback or controlled power reduction and provides extensive module-level monitoring.

Local and remote control

An integral LCD supports local transmitter control, while the web-based Advanced User Interface provides remote access to transmitter operation and status.

Optional Exciter redundancy

An optional redundant digital exciter with automatic changeover provides a secondary excitation path for applications where additional operational resilience is required.

Stable Efficient Operation

RF output level is stabilized against AC supply-voltage variations, while typical AC-input to RF-output efficiency ranges from 78% to 86%, depending on the selected transmitter model.



NAV5



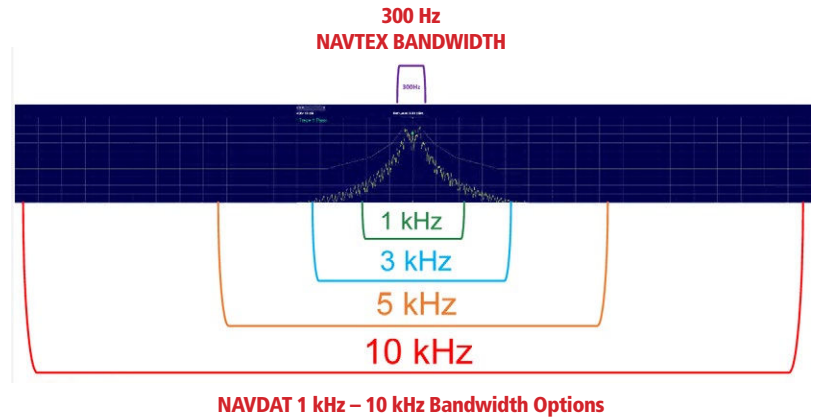
NAV12.5



NAV25

NAV SERIES HIGH POWER FOR RICH NAVDAT CONTENT

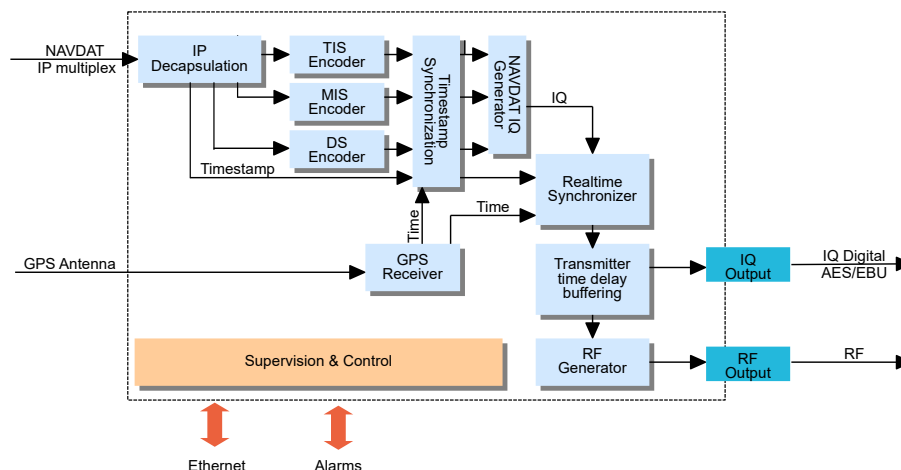
To achieve superior data transmission capacity, NAVDAT utilizes a complex digital signal and wider bandwidth than the narrowband NAVTEX signal. NAVDAT also produces higher signal peaks and requires linear amplification across its wider channel bandwidth. To address these challenges, the NAV Series draws on Nautel's long-established solid-state RF heritage and extensive high-power digital wide-band, linear RF transmission broadcast experience. Designed specifically for digital broadcasting, the NAV Series transmitters utilize their high peak power capabilities to deliver on NAVDAT's promise of rich media safety and navigational information. The advanced digital designs ensure vessels receive accurate and comprehensive data, maintaining reliable performance even under challenging conditions.



NAVDAT MODULATOR

The NAVDAT modulator is engineered to meet ITU standards (R-REC-M.2010 / R-REC-M.2058), ensuring high reliability in maritime communications. It supports various QAM modes (TIS: 4-QAM, 16-QAM; DS: 4-QAM, 16-QAM, 64-QAM) and operates across modes A, B, and C.

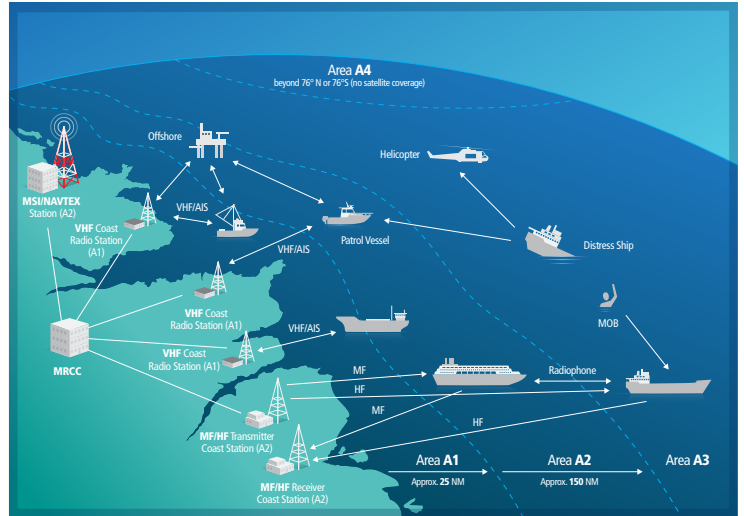
With support of multiple NAVDAT channel bandwidths (1, 3, 5, 10 kHz) and dynamic reconfiguration capabilities, the modulator adapts seamlessly to different operational requirements. Additionally, it features a web interface for remote management, DCP over IP input, and SNMPv2 monitoring, providing efficient and effective control.



PRELIMINARY

NAUTEL: COMBINING DECADES OF MARITIME EXPERTISE

Nautel is a leading manufacturer of sonar amplifiers, sonar transducers, navigational beacons, eLORAN, NAVTEX, weather radio, and broadcast transmitters. Nautel's Kenta GMDSS expertise and solutions address Telephony or Voice, DSC, AIS, NAVTEX applications as well as complete solutions for MF, HF and VHF systems (transmitters and receivers). Both coastal stations and MRCC software (Server, VoIP, and DSC operator console, NAVTEX operator console etc.) can be provided as a complete project from the coverage study to the supply and the installation of Turnkey Radio Communication Projects.



More than 20,000 customers in 177 countries rely on Nautel solutions. See www.nautelnav.com

NAV SERIES QUICK SPECS

NAV Series	NAV25	NAV12.5	NAV5
Power Modules	2	10	4
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	NAVTEX: Up to 2.5 kW NAVDAT: 12.5 kW peak power Ideal for NAVDAT applications up to 750 W average power* Output level stabilized against AC supply voltage variations	NAVTEX: Up to 1 kW NAVDAT: 5 kW peak power Ideal for NAVDAT applications up to 500 W 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	7/8" EIA	Type-N
Efficiency	86%	79%	78%
Frequency Range	NAVDAT: 500 kHz ; NAVTEX: 490 kHz and 518 kHz		
AC Input	208 Vac or 380 Vac nominal, 3-phase, 50/60 Hz	185-264 Vac, 1 phase, 47 Hz to 63 Hz	185-264 Vac, 1 phase, 47 Hz to 63 Hz
Dimensions	184.2 cm H x 58.7 cm W x 86.4 cm D (72.5" H x 23.1" W x 34" D)	75.6 cm H x 48.3 cm W x 58.4 cm D (29.75" H x 19" W x 23" D)	53.3 cm H x 48.3 cm W x 58.4 cm D (21" H x 19" W x 23" D)
Weight	261 kg (573 lbs)	57 kgs (125 lbs) - all components installed 34 kgs (75 lbs) - power modules & power supply/filtering components removed	35 kgs (77 lbs) - all components installed 25 kgs (54 lbs) - power modules & power supply/filtering components removed

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



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PRELIMINARY