

VX Series FM Transmitter



The Nautel VX Series of transmitters is a range of compact, solid state FM transmitters focused on maintainability, power density, and affordability.

MODELS

VX150: 150 WVX300: 300 WVX600: 600 W

VX1: 1 kWVX1.5: 1.5 kWVX2: 2 kW

GENERAL

- · Analog FM transmitter
- · High power density
- Compact size: 2 RU height, 20"/50.8 cm depth
- · AC to RF efficiency up to 77%
- · Single-phase AC
- Orban Inside audio processor (option)

USABILITY

- Front Panel User Interface
 - Full color, 3.5" TFT display
 - Rotary/push button navigation
 - Dedicated RF and Remote ON/ OFF buttons
 - USB port (2.0 Type A)
- · Fast software updates
- Variable speed fans for improved acoustics and efficiency

SERVICEABILITY

- Solderless power amplifier replacement
- Hot-swappable PA power supply
- · Removable, washable air filter
- Front-supported chassis for rail-free rack installation
- · Maintainable with common tools

REDUNDANCY

- Automatic audio input failover to a backup source
- Support for main/standby and N+1 configurations

SOFTWARE

- HTML5 remote control and monitoring (AUI)
- · Encrypted network communications
- SNMP v2c
- RDS Encoder with scrollable 64character PS
- · Analog SFN support
- NTP support

AUI (ADVANCED USER INTERFACE)

- HTML5 responsive design (desktop, tablet, & smartphone)
- Comprehensive dashboard featuring meters, alarms, audio, and modulation data
- Instrumentation

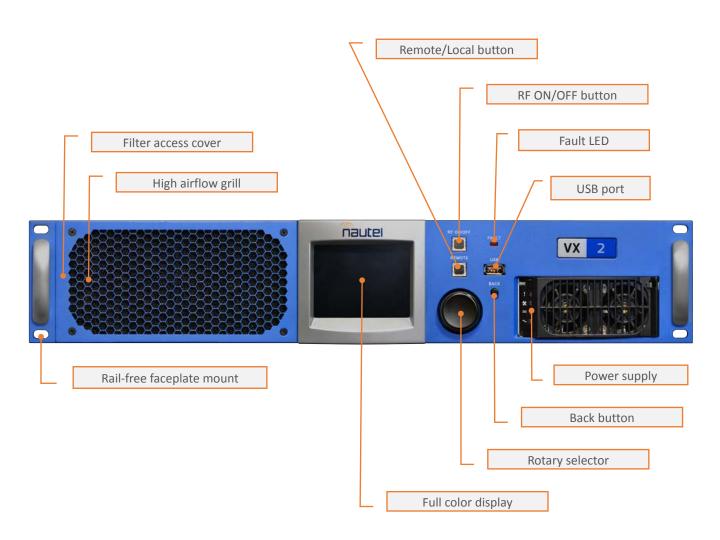
SUPPORT

- 4-Year Warranty
- Phone, online, and email support

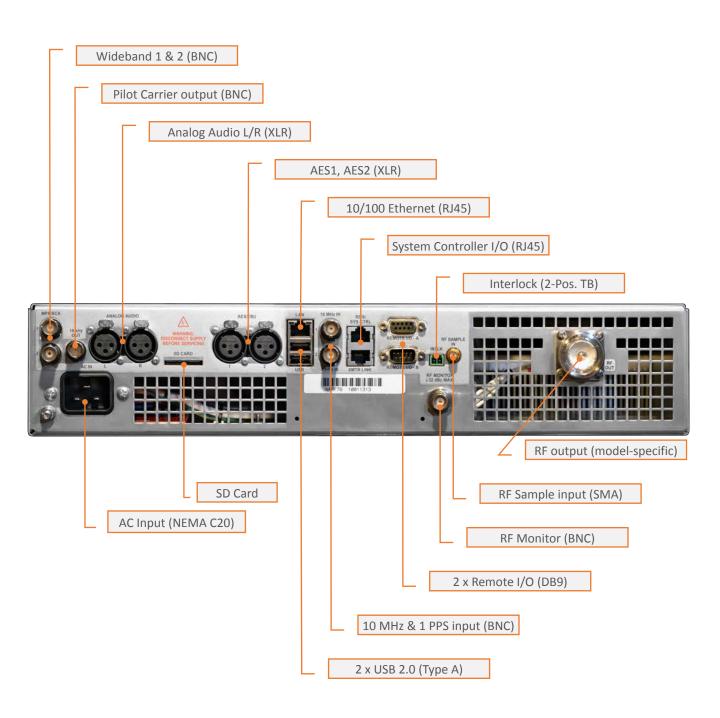
REGULATORY

- FCC / ISED / CE compliance
- LPFM certification (VX150 & VX300)











GENERAL	VX150	VX300	VX600	VX1	VX1.5	VX2	
Rated Output Power	150 W	300 W	600 W	1000 W	1500 W	2000 W	
Output Power Range	15-165 W	30-330 W	60-660 W	100-1100 W	150-1650 W	200-2100 W	
Power Amplifier	1	1	1	1	2	2	
PA power supply	1						
Pre-Amplifier	1						
Pre-Amplifier power supply	1						
Exciter/Controller	Integrated						
RF Output Connector	Type "N", female 7/16 DIN, female						
RF Terminating Impedance	50 ohms unbalanced						
	100% Rated Power into 1.5:1 VSWR						
RF Load VSWR	110% Rated Power into 1.2:1 VSWR 105% into 1:2:1						
	Automatic power reduction into higher VSWR Protected from open and short circuits at all phase angles						
RF Frequency Range	87.5 MHz to 108 MHz in 10 kHz steps						
	No tuning required						
Spurious and Harmonic	ISED specification BETS6 Issue 2						
	FCC CFR title 47 part 2, part 73, and part 74 FCC CFR title 47 part 2 and part 73						
	CE Radio Equipment Directive 2014/53/EU						
EXCITER/CONTROLLER							
Exciter/Controller	Integrated analog FM exciter using direct-to-channel digital modulation						
	Built-in RDS encoder, SCA encoder, and stereo generator 2 x AES						
Audio Sources	Analog L/R						
	2 x Wideband (suitable for composite, RDS, or SCA)						
Audio Backup	Automatic changeover to backup audio source in the event that main audio source fails						
FM Signal-to-Noise Ratio: Digital or Analog Stereo Input	80 dB below 100% modulation (reference 400 Hz, measured in 22 Hz to 22 kHz bandwidth with 75 μs de- emphasis and DIN 'A' weighting)						
FM Signal-to-Noise Ratio: Monaural Digital/Analog or Wideband Composite Operation	90 dB below 100% modulation (reference 400 Hz, measured in 22 Hz to 80 kHz bandwidth with 75 μs de- emphasis and DIN 'A' weighting)						



AC INPUT	VX150	VX300	VX600	VX1	VX1.5	VX2	
Voltage	90-265 VAC, 1PH, 47-66 Hz				185-265 VAC, 1PH, 47-66 Hz		
Power Consumption at Rated Output Power	286 W (295 VA) Typical	465 W (470 VA) Typical	811 W (819 VA) Typical	1322 W (1349 VA) Typical	2046 W (2067 VA) Typical	2650 W (2677 VA) Typical	
Typical Efficiency	51%	65%	74%	75%	73%	75%	
Power Factor	Unity Power Factor Corrected (0.97 typical at 120 VAC)	Unity Power Factor Corrected (0.99 typical at 120 VAC)	Unity Power Factor Corrected (0.99 typical at 120 VAC)	Unity Power Factor Corrected (0.98 typical at 208 VAC)	Unity Power Factor Corrected (0.99 typical at 208 VAC)	Unity Power Factor Corrected (0.99 typical at 208 VAC)	
Power Line Harmonics	IEEE 519-2014						
ID COMMECTIVITY	EN 61000-3-2						
IP CONNECTIVITY							
SNMP	Allows VX Series to be set up as part of a network and monitored remotely via a single control point SNMP v2c						
Remote AUI	Remotely connect to a VX transmitter via Nautel's HTML5 Advanced User Interface (AUI). Remote connectivity allows for setting of operating parameters and viewing the transmitter status from any web enabled device.						
Email Notification	Automatically receive email notifications when an alarm has been activated.						
AUDIO PERFORMANCE							
Asynchronous AM S/N Ratio	Better than 60 dB below reference carrier with 100% amplitude modulation using 75 μs de-emphasis (no FM modulation present)						
Synchronous AM S/N Ratio	Better than 50 dB below reference carrier with 100% amplitude modulation using 75 μs de-emphasis						
Audio Low Pass Filter	0 - 15 kHz 0.005 dB, 90 dB attenuation at 19 kHz						
Stereo Pilot Tone	19 kHz ±2 PPM						
38 kHz Suppression	>80 dB below ±75 kHz deviation reference						
Stereo Separation	>60 dB, 30 Hz to 15 kHz						
Stereo THD	0.025% or less, 30 Hz to 15 kHz, BW = 22 Hz to 22 kHz, 75 μS de-emphasis						
CONTROLLING AND MONITOR	RING						
Local Interface (Front name)	Presets						
Local Interface (Front panel LCD)	Logs						
Status	Status (meters and active alarms)						
Status	Fault LED for status summary						
Remote Interface (AUI)	HTML5, responsive design supports desktop, tablet, and smartphone Software upgrades						
	Presets						
	Remote I/O Setup						
	Status (meters and active alarms)						
	Audio Cooptium Applicati						
	Audio Spectrum Analyzer						



AUDIO PLAYER							
FILE FORMAT	SUPPORTED SAMPLE RATES		SUPPORTED CHANNELS		OTHER SPECIFICATIONS		
.MP3	24 kHz		Mono Stereo		32 kbps minimum bitrate 320 kbps maximum bitrate		
	32 kHz						
	44.1 kHz						
	48 kHz						
.WAV	32 kHz		Mono Stereo		16/24/32 bit PCM Encoding		
	44.1 kHz						
	48 kH	Z					
COMPLIANCE	VX150	VX300	VX600	VX1	VX1.5	VX2	
	ISED specification BETS6 issue 2						
	FCC CFR title 47 part 2 and part 73B						
Complies with:	FCC Low Power FN title 47 pa						
	FCC Translator/Bo CFR title 47						
	Conforms with all essential requirements of Radio Equipment Directive 2014/53/EU						
ENVIRONMENTAL							
Temperature Range	32°F to 122°F/0°C to +50°C						
Temperature nunge	Derate 2°C per 1000 ft/3°C per 500 m above sea level						
Humidity Range	0% to 95% non-condensing						
Altitude	15,000 ft/4572 m						
Cooling Air Requirements	Typical: 40 CFM/68 m³/hr Max: 130 CFM/221 m³/hr			Typical: 75 CFM/127 m ³ /hr Max: 140 CFM/ 238 m ³ /hr			
PHYSICAL							
Dimensions	W = 19"/48.3 cm Standard 19" EIA rack with min opening of 17.5"/44.5 cm						
	H = 2 RU/3.5"/8.9 cm						
				8 cm (including output connector)			
Weight	23 lb/10.4 kg				25 lb/11.5 kg		