

## GENERAL

### Transmitter Type

FM Broadcast, 100% solid state

### Configuration

16 hot swappable RF power modules

32 switching power supplies (2 per RF power module)

Power supplies are hot-swappable low voltage power supply (same as RF power module power supply) with redundant supply standard

Integrated exciter

Remote Interface PWB

### RF Output Connection

3-1/8 inch EIA, female (standard)

4-1/16 inch, female (optional)

### RF Output Impedance

50 ohms unbalanced

### Optional

Main/standby exciter

UPS Interface

Orban Inside

Additional LVPS

### HD Radio Deployment Option

**Classic Implementation:** Optional Nautel HD MultiCast+ Importer/Exporter combined with Exgine card.

**Just Add Audio\*:** Optional Software-based Air Chain, including "Omnia for Nautel" FM and HD audio processing, Blend-Lock FM/HD Synchronization, Gen4 vExgine modulator, Gen4 vPorter Importer/Exporter and Air Chain Selector.

### RF Load VSWR

1.5:1 with 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

No tuning required

### Frequency Stability

± 200 Hz

### Turn Around Loss

Better than 20 dB

### Spurious and Harmonic

Meets or exceeds all FCC/IC/CE requirements

## AC INPUT

### Voltage (factory configured)

208 Vac nom. 3-ph. or 240 Vac nom. 1-ph. (90 Vac to 265 Vac with reduced output power capability below 175 Vac)

380 Vac nom. 3-ph. (156 Vac to 459 Vac with reduced output power capability below 303 Vac)

47-66 Hz

Bottom AC input optional; factory configurable; contact Nautel for details

### Power Consumption

#### Analog Mode:

46.5 kW at 33 kW RF output (47.4 kVA)

#### HD Radio Hybrid Mode (-20dB):

42.9 kW at 30 kW RF output (43.7 kVA)

#### HD Radio Hybrid Mode (-14dB):

47.4 kW at 27 kW RF output (48.3 kVA)

#### HD Radio Hybrid Mode (-10dB):

38.5 kW at 20 kW RF output (39.2 kVA)

### Power Factor

Unity Power Factor Corrected (typically 0.98)

### Power Line Harmonics

IEEE 519-1992



RF Output Power and Efficiency	Analog Mode (max/rated)	HD Radio Hybrid (-20dB)	HD Radio Hybrid (-14dB)	HD Radio Hybrid (-10dB)
Analog TPO (kW)	33 / 30	30	27	20
Typical Efficiency	71%	70%	60%	55%

Typical analog power measured with MP3 mode, 1.1:1 VSWR, and Nautel HD PowerBoost.

\*To achieve similar analog TPO as provided by HD PowerBoost, customers implementing Software-Based Air Chain with PAR2 can expect 1 dB lower digital injection levels.

Power outputs vary with injection level, frequency, VSWR, MP operating mode, and symmetrical vs. asymmetrical sidebands. Please contact your Nautel representative to discuss your specific HD power requirement.

## AUDIO PERFORMANCE

### Asynchronous AM S/N Ratio

Better than 60 dB below reference carrier with 100% amplitude modulation using 75  $\mu$ s de-emphasis (no FM modulation present)

### Synchronous AM S/N Ratio

Better than 50 dB below reference carrier with 100% amplitude modulation using 75  $\mu$ s de-emphasis

## ENVIRONMENTAL

### Temperature Range

0°C to +50°C

Derate 3°C per 500 m above sea level (2°C per 1000 ft)

### Humidity Range

0% to 95% non-condensing

### Altitude

0 m to 3000 m (0 ft to 10,000 ft)

### Cooling Air Requirements

5437 m<sup>3</sup>/hr (3200 cfm)

## COMPLIANCE

Product complies with:

- ISED specification BETS6 issue 2
- FCC CFR title 47 part 2 and part 73
- Conforms with all essential requirements of Radio European Directive 2014/53/EU

## PHYSICAL

### Dimensions

Open ventilation configuration:  
184.2 cm H x 167.5 cm W x 83.8 cm D  
(72.5" H x 66" W x 33" D)

Note: total depth can be reduced to 76.2 cm (30") with rear filter panels and front doors removed.

### Weight

744 kg (1640 lbs)

