

## 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

1 low voltage power supply (same as RF power module power supply) with redundant supply standard

Integrated exciter

Remote Interface PWB

### Optional

Main/standby exciter

UPS Interface

Orban Inside

Additional LVPS

### RF Output Connection

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

4-1/16 inch, female (optional)

### RF Output Impedance

50 ohms unbalanced

### 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/RED requirements

### Upgradability

Upgradable to the next highest nameplate power level with factory firmware update

## 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.

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.

Closed ventilation configuration - consult factory

### Weight

744 kg (1640 lbs)

