

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

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/CE 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

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 μ 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 μ 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 m³/hr (3200 cfm)

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)