



GENERAL

Transmitter Type

FM Broadcast, 100% solid state

Configuration

16 hot swappable RF power modules with integrated IPA PA's
32 switching power supplies (2 per RF power module)
2 IPA power supplies
Integrated exciter

Standard Features

- Redundant IPA power supply
- Redundant low voltage power supplies
- Redundant fan power supply

Power supplies are hot-swappable

Optional: standby exciter

RF Output Connection

3-1/8 inch EIA, female (standard)
4-1/16 inch EIA 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

Turn Around Loss

Better than 20 dB

Spurious and Harmonic

Meets or exceeds all FCC/IC/CE requirements



RF Output Power and Efficiency

	Analog Mode	HD Radio Hybrid (-20dB)	HD Radio Hybrid (-14dB)	HD Radio Hybrid (-10dB)
Analog TPO (W)	1200 - 33,000	27,000	21,600	15,530
Typical Efficiency	61%	55%	48%	42%

*Typical power measured at midband in MP1 mode with better than 1.2 VSWR. Compliant with NRSC measurement standards. Power outputs vary with injection level, frequency, VSWR, MP operating mode, symmetrical vs. asymmetrical sidebands. Numbers shown do not include HD PowerBoost which can provide up to 30% additional hybrid mode power and up to 5% increased efficiency. Efficiency shown at rated power. Please contact your Nautel representative to discuss your specific HD power requirement.

SPECIFICATIONS SUBJECT TO CHANGE
WITHOUT NOTICE

AC INPUT

Voltage

180 V ac to 264 V ac, 3 phase, 50/60 Hz
312 V ac to 457 V ac, 3 phase, 50/60 Hz
180 V ac to 264 V ac, 1 phase, 50/60 Hz

Power Consumption

Analog mode:

49.2 kW at 30.0 kW RF output (49.7 kVA)

HD Radio™ Hybrid Mode (-20dB)

49.6 kW at 27.3 kW RF output (50.1 kVA)

HD Radio™ Hybrid Mode (-14dB)

46.8 kW at 22.5 kW RF output (47.3 kVA)

HD Radio™ Hybrid Mode (-10dB):

40.7 kW at 17.1 kW RF output (41.1 kVA)

Power Factor

Unity Power Factor Corrected (typically 0.99)

Power Line Harmonics

IEEE 519-1992

AUDIO PERFORMANCE

Asynchronous AM S/N Ratio

Better than 55 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

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

5094 m³/hr (3000 cfm)

PHYSICAL

Dimensions

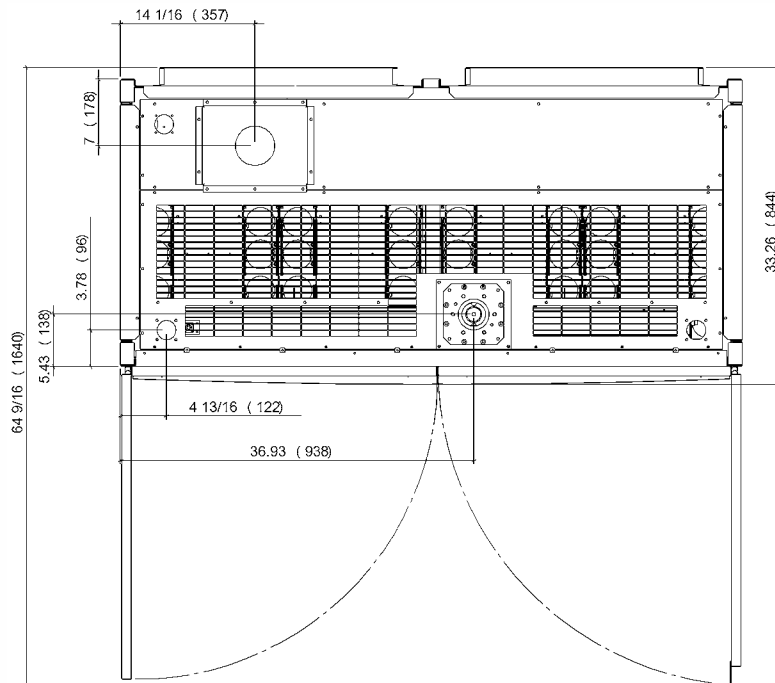
Open ventilation configuration:
184.2 cm H x 165.1 cm W x 81.3 cm D
(72.5" H x 65" W x 32" D)

Note: total depth 84.2 cm (33.1") with air filters fitted

Closed ventilation configuration -
consult factory

Weight

726 kg (1600 lbs)



Notes:

Specifications established at rated power unless otherwise noted.

All measurements into 50 ohm resistive load.

AC input voltage at nominal level.

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