



## 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)
<b>Analog TPO (W)</b>	<b>1200 - 33,000</b>	<b>27,000</b>	<b>21,600</b>	<b>15,530</b>
<b>Typical Efficiency</b>	<b>61%</b>	<b>55%</b>	<b>48%</b>	<b>42%</b>

\*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 m<sup>3</sup>/hr (3000 cfm)

## PHYSICAL

### Dimensions

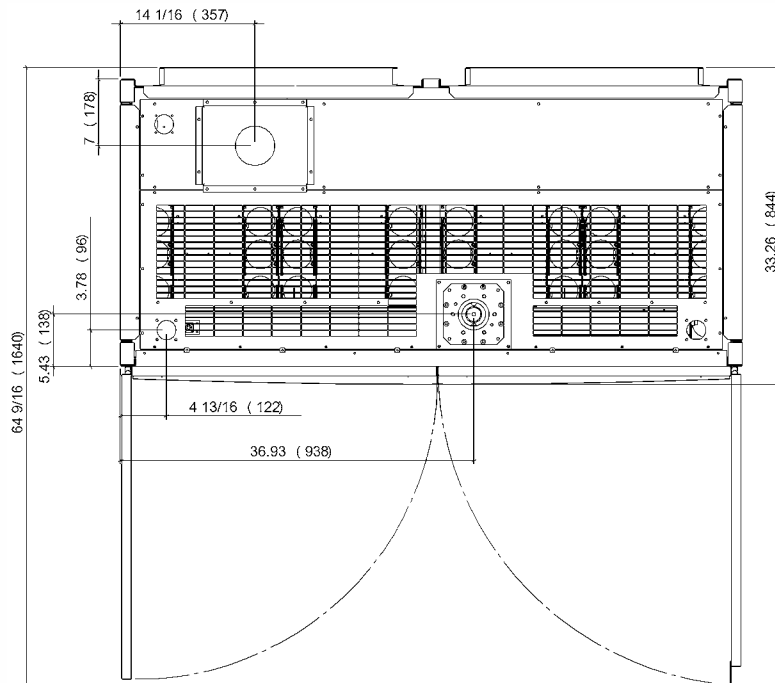
Open ventilation configuration:  
184.2 cm H x 165.1 cm W x 81.3 cm D  
(72.5" H x 65" W x 32" D)

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

Closed ventilation configuration -  
consult factory

### Weight

726 kg (1600 lbs)



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### Notes:

Specifications established at rated power unless otherwise noted.

All measurements into 50 ohm resistive load.

AC input voltage at nominal level.