



## GENERAL

### Transmitter Type

FM Broadcast, 100% solid state

### Configuration

Four power modules and four associated switching power supplies

Main and standby IPA with associated main and standby power supplies available

Main and standby exciters available

Main and standby low voltage power supplies available

### RF Output Power

HD Radio™ Digital mode:  
250 W to 1,500 W into a 1.2 VSWR  
250 W to 1,400 W into a 1.5 VSWR

HD Radio™ Hybrid mode:  
500 W to 4,000 W into a 1.2 VSWR  
500 W to 3,650 W into a 1.5 VSWR

### Analog mode:

100 W to 5,500 W into a 1.2 VSWR  
100 W to 5,000 W into a 1.5 VSWR

### RF Output Connection

1-5/8 inch EIA, female  
(3-1/8 inch and 7/8 inch available)

### RF Output Impedance

50 ohms unbalanced

### Efficiency

HD Radio™ Digital mode:  
30% typical at 1.4 kW

HD Radio™ Hybrid mode:  
50% typical at 3.65 kW

### Analog mode:

64% typical at 5 kW

### RF Load VSWR

1.5:1 - 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 (Analog Mode)

### Excitation

Nautel M50 Direct-to-Channel Digital FM Exciter

### Spurious and Harmonic

Meets or exceeds all FCC/IC requirements

## AC INPUT

### Voltage

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

### Power Consumption

HD Radio™ Digital mode:  
4.67 kW at 1.4 kW RF output (4.71 kVA)

HD Radio™ Hybrid mode:  
7.3 kW at 3.65 kW RF output (7.37 kVA)

### Analog mode:

7.8 kW at 5 kW RF output (7.9 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 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 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 1,000 ft)

### Humidity Range

0% to 95% non-condensing

### Altitude

0 m to 3,000 m (0 ft to 10,000 ft)

### Cooling Air Requirements

833m<sup>3</sup>/hr (490 cfm)

## PHYSICAL

### Dimensions

Open ventilation configuration  
184.5 cm H x 58.5 cm W x 87.8 cm D  
(72.5" H x 23" W x 34.5" D)

Closed ventilation configuration -  
consult factory

### Weight

205 kg (450 lbs)

SPECIFICATIONS SUBJECT TO CHANGE  
WITHOUT NOTICE.