

## GENERAL

### Transmitter Type

Medium wave, AM, 100% solid state

### Configuration

Four RF power modules, each including a single integrated RF amplifier/modulator

No frequency dependant parts in RF module

Each module is hot pluggable and has internal microcontroller for protection and monitoring over a serial bus

Short circuit protection at the module level offers an added layer of protection

Optional redundant digital single board exciters utilizing FPGA/DSP technology with automatic changeover

Pre-correction utilized specifically to improve digital performance

Redundant low voltage power supplies

### RF Output Power

Carrier Power Range: 0 to 11 kW

Up to 62 preset levels, presets may include other operational parameters such as DRM vs Analog and different program inputs

Output level stabilized against AC supply voltage variations

Built in Dynamic Carrier Control

Built in AM stereo

### RF Output Connection

7/8" EIA or 1-5/8" EIA

### RF Output Impedance

50 ohms, unbalanced

### Efficiency

86% typical at 10 kW

### RF Load VSWR

1600 peak reflected watts (1.5:1 VSWR @ 10 kW, 100% modulation) results in instantaneous power shutback

400 reflected watts RMS (1.5:1 VSWR @ 10 kW, 0% modulation) results in a graceful power reduction

### Frequency Range

531 kHz to 1,700 kHz.

"Quick frequency change capability"

### Frequency Stability

±2 ppm/year over temperature range

±0.3 ppm/year with GPS option

### Modulation Capability

140% positive peak modulation to 10 kW

130% positive peak modulation to 11 kW

### Spurious and Harmonic

Meets ITU-R SM.328-11

Meets ITU-R SM.329-12

## AC INPUT

### Voltage

208 Vac & 380 Vac, 3 phase or to customer specifications

### Power Supply Variation

±10% voltage, 47 Hz to 63 Hz\*

### Power Consumption

11.6 kW typical at 10 kW, 0% modulation

17.4 kW typical at 10 kW, 100% modulation

## ENVIRONMENTAL

### Temperature Range

0°C to + 50°C

Derate 3°C per 500 m above sea level (2°C per 1,000 ft)

### Cooling

Forced Air

### Humidity Range

0% to 95% non-condensing

### Altitude

0 m to 4,000 m (0 ft to 13,000 ft)

## SAFETY

Meets EN60215: 1996 Safety Requirements for Radio Transmitting Equipment

## PHYSICAL

### Dimensions

184.2 cm H x 58.7 cm W x 86 cm D  
(72.5" H x 23.1" W x 34" D)

### Weight

315 kg (695 lbs)



## AUDIO PERFORMANCE

### Analog Broadcast Inputs

Dual AES-EBU Digital Audio inputs\* adjustable from -30dBFS to 0dBFS for 100% modulation

600 ohms balanced analog audio input +10 dBm nominal for 100% modulation, adjustable from -10 to +12 dBm

### Digital Broadcasting Inputs

I,Q over AES-EBU\* with sample rate converter

I,Q over LVDS, 3 pairs, Clock, Data, frame sync

\*Two AES-EBU inputs provided and may be used for either analog audio or digital I,Q inputs

External Generator/Content Server required for DRM broadcasting

Optional integrated HD Radio Generator (Exgine™)

### Frequency Response

+0.2 dB/-0.8 dB, 30 Hz to 10,000 Hz.

Optional audio input filters available to meet regional bandwidth restrictions

### Total Harmonic Distortion

Better than 0.8% (THD), 30 Hz to 10,000 Hz at 95% modulation (typical)

### Intermodulation Distortion

SMPTE 1:1 Ratio, 60Hz/7kHz, 95% Mod Peak - 0.5% @10 kW (typical)

DIM-B, 2.96kHz/9kHz, 80% Mod Peak - 0.5% @ 10 kW

### Carrier Shift

0.5% or less

### Hum and Noise

-65 dB or better below 100% modulation at 10kW

## CONTROL AND MONITORING

Extensive Control/Monitoring/Troubleshooting system through Advanced User Interface (AUI) available over the internet from any web enabled device. Local control available via front panel LCD.

Built in instrumentation providing detailed spectrum/impedance and modulation analysis.

### Metering

Cube

DC Voltages (B+, PA and 15V)

DC Current

Sample Levels (PDM and RF Drive)

Fan Speeds

Heat Sink Temperature

Exciter

Output Current (RMS, Peak, Carrier)

Output Voltage (RMS, Peak, Carrier)

Forward Power (RMS, Peak, Carrier)

Reflected Power (RMS, Peak,

Carrier)

### RF Monitor

RF monitor is a power sample (using a directional coupler) that will allow for accurate audio performance measurements

### Status

Easy access to current transmitter operating state, past and present alarm conditions and historical trends of both digital and analog channels

### Schedule

Intuitive easy to read built in scheduler

Up to 144 yearly rules can be defined by user

## Remote Control/ Monitoring

Three Remote interfaces:

- Direct wired optically isolated inputs and open collector outputs
- Web interface - All locally available control is available over TCP/IP web interface
- SNMPv1

## COMPLIANCE

Product complies with:

- ISED specification BETS-5 issue 1
- FCC CFR title 47 part 2 and part 73
- Conforms with all essential requirements of Radio European Directive 2014/53/EU

### Notes:

Specifications defined in a laboratory environment with high grade source and demodulation equipment. Standard factory measurements does not include all items.

