GV40 FM Transmitter

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
Additional LVPS

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/RED requirements

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

Bottom AC input optional; factory configurable; contact Nautel for details

Analog Mode: 61.1 kW at 44 kW RF output (62.4 kVA)
HD Radio Hybrid Mode (-20dB): 57.1 kW at 40 kW RF output (58.3 kVA)
HD Radio Hybrid Mode (-14dB): 63.2 kW at 36 kW RF output (64.4 kVA)
HD Radio Hybrid Mode (-10dB): 50 kW at 26 kW RF output (51 kVA)

Power Factor
Unity Power Factor Corrected (typically 0.98)

Power Line Harmonics
IEEE 519-1992

RF Output Power and Efficiency

<table>
<thead>
<tr>
<th>Analog Mode (max/rated)</th>
<th>HD Radio Hybrid (-20dB)</th>
<th>HD Radio Hybrid (-14dB)</th>
<th>HD Radio Hybrid (-10dB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analog TPO (kW)</td>
<td>44 / 40</td>
<td>40</td>
<td>36</td>
</tr>
<tr>
<td>Typical Efficiency</td>
<td>72%</td>
<td>70%</td>
<td>60%</td>
</tr>
</tbody>
</table>

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 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
5437 m³/hr (3200 cfm)

**Compliance**

Product complies with:
- ISED specification BETS6 issue 2
- FCC CFR title 47 part 2 and part 73
- Conforms with all essential requirements of Radio European Directive 2014/53/EU

**Physical**

Dimensions
Open ventilation configuration:
184.2 cm H x 167.6 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.

Closed ventilation configuration - consult factory

Weight
744 kg (1640 lbs)