GV²30ᴺ FM Transmitter

making digital broadcasting **work** PHONE +1.902.823.2233 FAX +1.902.823.3183 info@nautel.com www.nautel.com

GENERAL

Transmitter Type
FM Broadcast, 100% solid state

Configuration

12 hot swappable RF power modules24 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

RF Output Connection
3-1/8 inch EIA, female (standard)
4-1/16 inch, female (optional)

RF Output Impedance
50 ohms unbalanced

Optional

Main/standby exciter

UPS Interface

Additional LVPS

HD Radio Deployment Option

Classic Implementation: Optional Nautel HD MultiCast+ Importer/Exporter combined with Exgine card.

Just Add Audio*: Optional Software-based Air Chain, including "Omnia for Nautel" FM and HD audio processing, Blend-Lock FM/HD Synchronization, Gen4 vExgine modulator, Gen4 vPorter Importer/Exporter and Air Chain Selector.

*To achieve similar analog TPO as provided by HD PowerBoost, customers implementing Software-Based Air Chain with PAR2 can expect 1 dB lower digital injection levels.

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/CE 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

Power Consumption

Analog Mode:
45.8 kW at 33 kW RF output (46.8 kVA)

HD Radio Hybrid Mode (-20dB):
42.9 kW at 30 kW RF output (43.7 kVA)

HD Radio Hybrid Mode (-14dB):
47.4 kW at 27 kW RF output (48.3 kVA)

HD Radio Hybrid Mode (-10dB):
38.5 kW at 20 kW RF output (39.2 kVA)

Power Factor
Unity Power Factor Corrected (typically 0.98)

Power Line Harmonics
IEEE 519-1992

RF Output Power and Efficiency	Analog Mode (max/rated)	HD Radio Hybrid (-20dB)	HD Radio Hybrid (-14dB)	HD Radio Hybrid (-10dB)
Analog TPO (kW)	33 / 30	30	27	20
Typical Efficiency	72%	70%	57%	52%

Typical analog power measured with MP3 mode, 1.1:1 VSWR, and Nautel HD Powerboost.

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

4163 m^3/hr (2450 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 129.5 cm W x 83.8 cm D
(72.5" H x 51" W x 33" D)

Note: total depth can be reduced to 76.2 cm (30") with rear filter panels and front doors removed.

Weight

560 kg (1235 lbs)

HD Radio™ Pure Digital. Clear Radio.