

# FLEXIVA™ COMPACT

Air-Cooled FM Analog/DigitalTransmitter/ Exciter, Low Power - 50 W to 3.5 kW

The Flexiva™ Compact air-cooled FM solid-state transmitter family provides today's broadcaster with a single transmission platform capable of analog and digital operation. Incorporating field-proven GatesAir technology, Flexiva transmitters deliver world-class performance, reliability and quality.



### Flexiva™ Compact Product Features

Flexiva is designed for low and high-power requirements, up to 80 kW, while utilizing the most compact design on the market today. Flexiva continues the legacy of the highly successful line of GatesAir FM transmitters and combines innovative, new quadmode RF amplification and software-defined exciter technology to take FM transmission to the next level.

Featuring PowerSmart® technology, the Flexiva line offers unmatched efficiency that makes it ideal for all FM applications. The 50-volt LDMOS device technology delivers a dramatic increase in power density, lower operating costs and reduced cost of ownership over the life of the transmitter.

As the digital transmission leader, GatesAir has developed a solid core competency backed by years of experience in the complex technical areas that are essential for maximum transmitter performance.

Customers can count on GatesAir for implementation. The company offers a range of support options from standard 24/7 telephone technical assistance and parts to installation, training, full system design and field maintenance contracts.

- Power levels up to 3850 W Analog FM, 3100 W FM+HD
- Broadband, fequency agile design 87.5 to 108 MHz requires no tuning or adjustments
- Best-in-class power efficiency for lowest operating costs
- Compact, space saving, 2, 3 or 4RU design
- State-of-the-art, direct-to-carrier digital modulator
- Integrated stereo encoder
- ITU-R BS412 peak program/multiplex power limiter
- Static RDS generator
- 2 AES, 1 analog L/R and 2 composite program inputs with automatic failover switching
- Digital MPX/Composite input over AES192 interface with failover switching
- Operation over a wide range of voltage and power stability conditions
- Operation at up to 1.5:1 VSWR with proportional foldback
  - Full remote control capability including:
    - Web-based HTML GUI interface
    - SNMP
    - Parallel control/monitoring
    - Extensive Fault, Warning and Operational parameter logging
    - N+1, dual transmitter and main/alternate; automatic switching capability
- Optional Features
  - GPS receiver for SFN synchronization
  - Gen 4 HD Radio™ Exgine modulator card
  - Intraplex IP Link 100e: STL via AOIP Linear, AES67, Icecast
  - Audio Processor, Audio Playout from USB



### Investment Security Based on Unrivaled Digital Experience

Transitioning to digital and delivering needed coverage require more than a financial investment — broadcasters must meet a whole new technical challenge. As broadcasting's digital radio transmission leader, GatesAir has developed a solid core competency backed by years of experience in the technical areas essential for maximum digital transmission performance. GatesAir has applied this expertise and developed transmitters for all digital standards, making the Flexiva Compact family of transmitters a confident investment.

### Seamless Migration Path to HD Radio™ and DRM+

The Flexiva series has been specifically designed for analog and digital broadcast standards. Transmitters can be purchased as analog FM today and upgraded to HD Radio or DRM+ by adding the appropriate digital modulation card, providing a clear, cost-effective and seamless upgrade path from analog to digital in the user's time frame.

# GatesAir PowerSmart Technology Inside

Featuring GatesAir PowerSmart technology in its transmitter architecture, Flexiva offers superior power and efficiency. New 50-volt LDMOS device technology delivers a dramatic increase in power density, lower operating costs and reduced cost of ownership over the life of the transmitter. Higher efficiency and cutting-edge thermal design means less wasted heat and lower cooling demands.

## Compact Footprint and Lightweight Design

Flexiva is the most compact FM transmitter on the market, with a significantly reduced size compared with other products in its power class. Ideally suited to fit in crowded, shared transmitter sites, Flexiva reduces the cost and space required in the facility, simplifies installation, lowers shipping costs and allows for easier maintenance.

#### **Built-In GUI Interface**

The graphical user interface (GUI) in the Flexiva Compact series transmitter works with only a web browser, with no software to install. The interface enables in-depth control and monitoring and easy setup from anywhere in the world. Flexiva products also support SNMP monitoring to deliver real-time status to your network management system.

### Multiple Program Inputs with Automatic Fail-over Switching Including Digital Composite over AES192

Five program inputs are available. There are 2 AES3 audio or composite/MPX over AES192, 1 analog left and right, and 2 analog composite (MPX) program inputs. Each input is monitored for valid program content and can be programmed to switch to a backup source if the main source should drop below a programmable threshold and time interval. Upon restoration, the program can automatically switch back to the main source after a user programmable time period.

### Robust Operation and VSWR Protection

With ruggedized power amplifiers, coaxial combiners and sophisticated power control systems, Flexiva provides protection against antenna system shortcircuits, opens and high VSWR while maximizing its ability to stay on the air. Flexiva can operate up to full rated power at up to a 1.5:1 VSWR with proportional foldback into infinite VSWR. For added protection, a 4-strike, 3:1 VSWR shutdown is available along with a separate fastacting analog VSWR protection circuit which mutes the transmitter instantly in the event of a sudden shorted or open antenna or line, to protect the transmitter and prevent sustaining arcing conditions.

#### The RTAC Advantage

Digital transmitters and exciters in the Flexiva Compact Class series use the reliable and field-proven GatesAir Real-Time Adaptive Correction (RTAC) technology, enabling optimum utilization of the power amplifier, while maintaining spectral mask compliance of the digital signal. The only system with simultaneous, linear and nonlinear, adaptive pre-correction, RTAC provides the highest level of system correction capability. With RTAC, the Flexiva Compact Class transmitter continuously monitors and corrects for linear distortions at the output, while automatically adapting for amplifier nonlinearity, keeping your station well within compliance and maximizing your coverage.

#### Flexiva Configuration

Each Flexiva Compact Class transmitter combines a digital, direct-to-channel FM modulator and one or more power supply and power amplifier modules to achieve the rated power.

### **Digital Modulator**

Continuing the legacy of Flexstar, the all new Flexiva Direct Digital Synthesis (DDS) modulator produces direct-to-carrier digital modulation of uncompromising precision and sonic clarity. The Flexiva modulator includes an integrated stereo encoder, static RDS/RBDS encoder, GatesAir's patented "look-ahead" Digital Composite Limiter, an ITU-R 812 MPX power limiter, Translator ID generator and includes multiple auto-failover switching program inputs including digital Composite/MPX baseband over AES. It supports the new Gen. 4 HD Radio Exgine module or DRM+ modulator and an internal GPS as options.

### **Power Supply Module**

This hot-pluggable (power levels of 300 W and up), hot swappable (power levels of 2 kW and up) module is a 1.2 kW or 2 kW, 50 Volt switch-mode power supply with an extremely wide AC input range and 96% ACDC efficiency. The PS interface provides on/off functionality to the power supplies, a fan tachometer alarm and the cooling system.

#### **RF Power System**

The 50-volt LDMOS-FET power amplifier device technology coupled with GatesAir's innovative "PowerSmart" amplifier design delivers a dramatic increase in power density.

Redundant rugged amplifiers and low-loss combiners provide protection against lightning, antenna system short-circuits, opens and high VSWR while maximizing Flexiva's ability to stay on the air, lower operating and maintenance costs, thus reducing the cost of ownership over the life of the transmitter.

#### **Cooling System**

Flexiva's air cooling system features redundant, continuously variable speed fans to provide quiet, efficient cooling over the transmitter's operating temperature range with plenty of headroom for abnormal conditions such as VSWR or high ambient temperatures. Critical component temperatures are monitored and fan speeds are adjusted continuously in order to maintain optimum operating temperatures. Cool air is pulled from the front panel through a removable, washable air filter, allowing exhaust to exit through the rear of the transmitter.

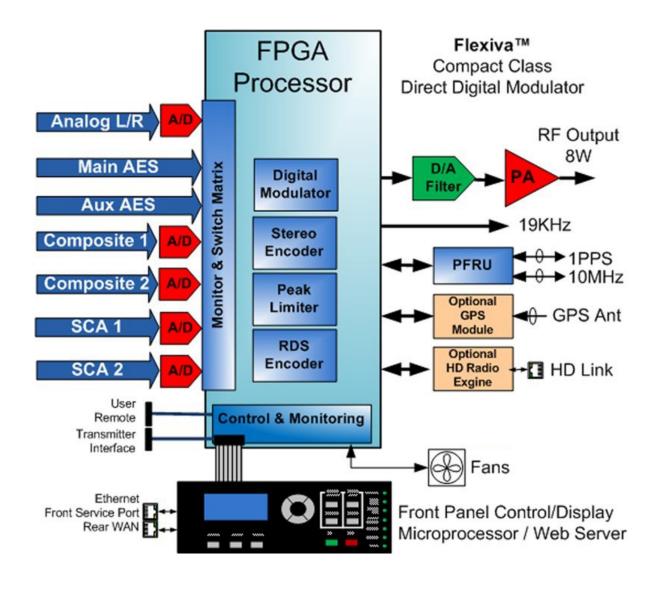
Multiple systems can be integrated into cabinets to support ducted air input plenums.

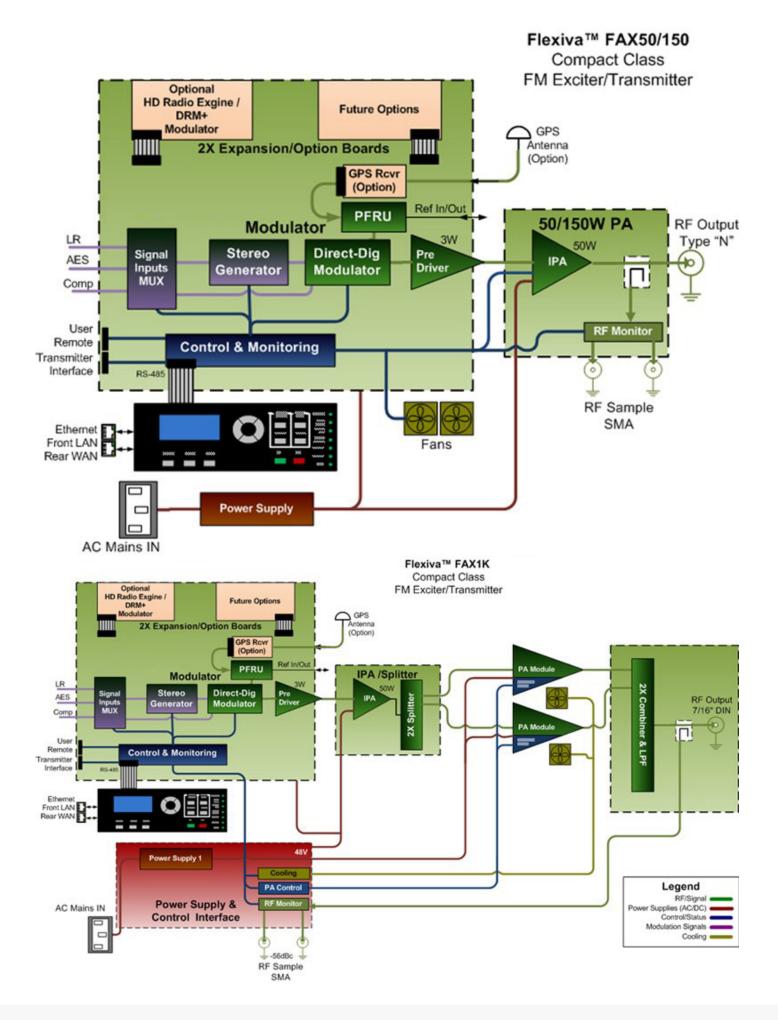
#### **Control System**

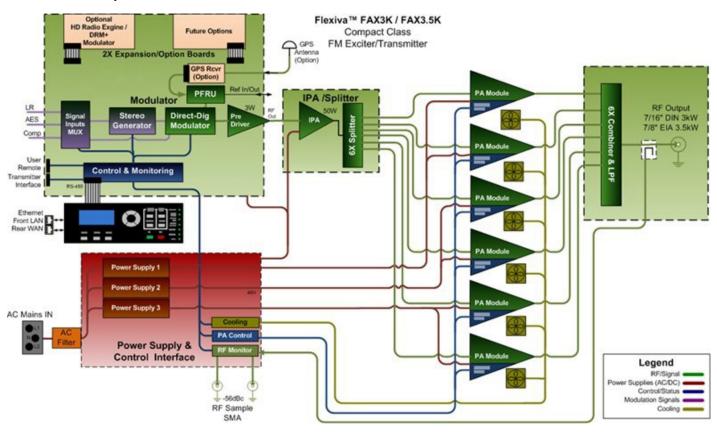
Flexiva's control system provides overall system management along with extensive monitoring, logging and control capabilities with fast-acting protection for maximum reliability. A front panel liquid-crystal (LCD) control screen, navigation buttons and bright LED indicators allow easy review, setup and recall of all operational parameters and easy diagnosis of any potential equipment problems. A front panel Ethernet connection allows instant local access with any laptop, tablet or smart phone with a Web browser for detailed diagnostics, control and monitoring through the feature-rich and intuitive

Graphical User Interface. A separate rear Ethernet port allows Flexiva to be controlled and monitored over a LAN/WAN or from anywhere in the world via the World-Wide-Web. Full Simple Network Management Protocol (SNMP) facilities are also provided for network management of the entire transmission system using industry-standard MIB protocols.

A standard, configurable parallel GPI/O interface is also provided for interfacing to station remote control equipment.









- LCD Status Display LCD screen provides a quick view of transmitter status and power level.
- LCD Navigation Controls Tactile push-buttons provide navigation of LCD screens to access set-up screens, status and power metering.
- Front-Panel Controls Fast-access front-panel pushbuttons and status indicators for remote/local, power raise/lower and on/off.
- RF Sample Port Convenient frontpanel RF sample for quick connection to test equipment as needed.
- 5. **Summary Status LED** Indicators provide quick visual indication of the transmitter's operational status.
- Front-Panel Ethernet Convenient front-panel Ethernet port permits quick system updates or setup using a local PC. All parameters are available via the intuitive standard GUI.
- Removable Front Panel Provides access to the hotpluggable power supplies and washable air filter.
- RF Sample Port Rear panel connection for modulation monitors or other test equipment.
- 9. **RF Output** RF output connector. Power and connector are model dependent.
- Dual-Drive Input External, low-level digital modulator or may be inserted, such as for HD Radio or DRM+. Automatic failover switching.
- GPS Receiver Antenna Optional high-quality integrated GPS receiver provides ultra-accurate reference for seamless SFN operation and reduces installation costs and space.

- 12. External Reference Input/Output Support for single-frequency networks (SFNs) is included with every Flexiva Compact Class system. Supports both 10 MHz and 1 PPS inputs. GPS receiver option provides 10 MHz & 1 PPS outputs. 19kHz Pilot output for external RDS synchronization.
- 13. Transmitter Interface When Flexiva Compact Class is used as an exciter, transmitter control and RS-485 serial connection allow direct interface with all GatesAir transmitters and full integration with Flexiva high-power amplifiers.
- 14. **Parallel Remote Control** Dedicated DB-25 type connectors provide standard interfacing for transmitter control system connections.
- 15. Ethernet Port Rear RJ45 connector provides fully configurable 100Base-T Ethernet for LAN/WAN connectivity
- 16. **Exciter ID Switch** Determines if Exciter A or B in a dual-drive transmitter system.
- 17. **Program Audio Inputs** 2) AES-EBU, 1) L/R Analog. Configurable as part of auto-fail-over switching MUX.
- Program Composite (MPX) Inputs 2) Composite baseband inputs. Configurable as part of auto-fail-over switching MUX.
- Aux Composite (SCA/RDS/RBDS) Inputs 2) Baseband inputs for SCA and/or RDS/RBDS.
- 20. **AC Connection** See model data sheet (Voltage power requirements and connector are model dependent).
- 21. **Two expansion card slots for easy upgrades** Ready for HD Radio Exgine or DRM+ Modulator card, Audio over IP/ USB audio playback, and audio processor options.

Output Power Watts		FAX50	FAX150	FAX300	FAX500	FAX1K	FAX2K	FAX3K	FAX3.5K	
Nominal		50	150	300	500	1,000	2,000	3,000	3,500	
FM Analog Range		1-55	15-165	30-330	50-550	100- 1,100	200- 2,200	300- 3,300	350-3,850	
FM+HD -20 dBc Max		40	120	330	550	1,000	1,800	2,700	3,000	
FM+HD -14 dBc Max		35	105	300	400	700	1,400	2,100	2,220	
FM+HD -10 dBc Max		27	80	160	300	620	1,240	1,590	1,650	
HD Only -20 dBc Max		20	60	120	200	400	800	1,200	1,300	
HD Only -14	HD Only -14 dBc Max		55	110	185	340	740	1,000	1,030	
HD Only -10	HD Only -10 dBc Max		48	95	155	300	620	800	880	
50 ohms RF Output Connector		N	N	7/16 DIN	7/16 DIN	7/16 DIN	7/16 DIN	7/16 DIN	7/8" EIA Unflanged	
Electrical										
AC Input 47-6 Single Phase	AC Input 47-63Hz Single Phase		90-277 VAC				180-277 VAC			
Power Connector		IEC 10A IEC 20A			M4 Terminal Lugs					
Power Consumption Typical Watts		202	314	569	764	1,513	3,025	4,601	5,445	
	Analog ACRF Efficiency Typical		52%	58%	72%	72%	72%	71%	70%	
Power Factor	Power Factor				0.9	19				
Mechanical										
Number of Power Amplifiers		1	1	1	1	2	4	6	6	
Number of Power Supplies		1	1	1	1	1	2	3	3	
Number of Fans		2	2	1	1	2	4	6	6	
Air Flow Maximum	m³/min	2.1	2.1	1.3	1.3	2.6	6.4	7.3	7.3	
	ft³/min	73	73	46	46	92	225	258	258	
Width		19"	19"	19"	19"	19"	19"	19"	19"	
		(48.3 cm)	(48.3 cm)	(48.3 cm)	(48.3 cm)	(48.3 cm)	(48.3 cm)	(48.3 cm)	(48.3 cm)	
Depth		12"	12"	20.5"	20.5"	20.5"	24.5"	24.5"	24.5"	
		(30.5 cm)	(30.5 cm)	(52 cm)	(52 cm)	(52 cm)	(62.2 cm)	(62.2 cm)	(62.2 cm)	
Height		2RU 3.5"	2RU 3.5"	3RU	3RU	3RU	4RU 7"	4RU 7"	4RU 7"	
		(8.9 cm)	(8.9 cm)	5.25"	5.25"	5.25"	(18 cm)	(18 cm)	(18 cm)	
Maight (approxim)		12 5 15 -	12 5 15 -	(13.3 cm)	(13.3 cm)	(13.3 cm)	4.4.II	FC II	CC lbs	
Weight: (approx w/		12.5 lbs	12.5 lbs	25 lbs	25 lbs	26 lbs	44 lbs	56 lbs	56 lbs	
modules installed)		6 kg	6 kg	11 kg	11 kg	12 kg	20 kg	25 kg	25 kg	

General Specifications					
Transmitter Type	Solid-state FM stereo analog and digital broadcast transmitter				
Exciter	Direct-digital Synthesis, direct-to-channel modulator				
RF Output Frequency Range	VHF Band II, 87.5-108.0 MHz, 10 kHz steps				
Transmission Standards	FM Analog, HD Radio, DRM+				
Frequency Stability	±150 Hz <10-6 0° to 50° C using high accuracy internal TCXO. 10 MHz input for synchronization to external (GPS) reference.				
	Automatic switching to internal oscillator if external reference fails				
FM Modulation Capability	Adjustable nominal (100%) deviation to 200 kHz, default 75 kHz 320 kHz maximum deviation				
Modulation Indication	Front panel UI Display to 140% Web GUI modulation display with peak hold auto-ranging (14%/140% full scale) 140%				
Composite Peak Limiter	Integrated				
Pre-emphasis	Selectable 0, 25, 50, or 75 microseconds				
Power Stability	≤± 0.25 dB				
Asynchronous AM S/N Ratio	65 dB minimum (>70 dB typical) below equivalent 100% amplitude modulation @ 400				
Synchronous AM S/N Ratio	60 dB rms minimum (>70 dB typical) below equivalent 100% amplitude modulation @ 400 Hz with 75 uS deemphasis and 400 Hz highpass filter (FM deviation ±75 KHz by a 1 KHz sine wave). Measured at wideband input				
RF Harmonic and Spurious Suppression	Meets or exceeds ETSI Requirements				
VSWR Operation	Up to 1.5:1. User adjustable proportional foldback threshold from 1.31.5:1 (except 3.5K, 1.3:1 max). Continued operation (with foldback) up to infinite VSWR or 4 strike shut down at 3:1 VSWR is user selectable				
	Protected against sudden short and open circuit conditions with mute to remove sustained arcing conditions, at all phase angles.				
Environmental					
Altitude	15,000 Ft. (4,572m) AMSL				
Ambient Temperature Range	0 to +45° C Inlet air temperature must not exceed 45° centigrade at sea level, de-rated at 2° C per 1000 ft (300 m) AMSL				
Humidity	95%, noncondensing				
Stereo Generator Performance (AES or Ana	_ * ·				
Modes	Selectable: Stereo, Mono L+R, Mono L, and Mono R				
Pre-emphasis	Selectable 0, 25, 50, or 75 microseconds				
Audio Low Pass Filter	Selectable, 15 kHz, 17 kHz, or BYPASS				
Stereo Pilot Tone	19 kHz ± 0.1 Hz; injection adjustable injection level and phase shift				
38 kHz, 57 kHz, 76 kHz, 95 kHz Suppression	>70 dB below ±75 kHz deviation				
Stereo Separation	>80 dB AES, >75 dB analog 10 Hz to 15 kHz				
Dynamic Stereo Separation	>72 dB 10 Hz to 15 kHz				
Stereo Amplitude Response	±0.03 dB 10 Hz to 15 kHz referenced to selected pre-emphasis curve				
Stereo Signal to Noise Ratio	>90 dB AES, 86 dB analog below 100% modulation at 400 Hz; measured in a 10 Hz to 15 kHz bandwidth with 75 µs de-emphasis and DIN "A" weighting				

Stereo Generator Performance (AES or Anal	og inputs) continued			
Stereo Total Harmonic Distortion	<0.03% THD+N, 10 Hz to 15 kHz, with 75 us de-emphasis			
Stereo Intermodulation Distortion (L or R)	CCIF: 0.05% (14/15 kHz 1:1) SMPTE: 0.02% (60/7000 Hz 1:1)			
Transient Intermodulation Distortion (TIM)	<0.05% (2.96 kHz square wave/14 kHz sine wave)			
Linear Crosstalk	>70 dB below 100% modulation reference. (AES3 Input); L+R to L-R or L-R to L+R due to amplitude and phase matching of L&R channels (20 Hz-15 kHz)			
Non-Linear Crosstalk	>70 dB below 100% modulation reference; L+R to L-R or L-R to L+R due to distortion products			
Audio Overshoot	Less than 0.16 dB			
Mono Performance (AES3 or analog input				
Pre-emphasis	Selectable 0, 25, 50 or 75 microseconds			
FM Mono Signal-to-Noise Ratio	>94 dB below 100% modulation at 400 Hz; measured in a 22 Hz to 22 kHz bandwidth with 75 µs de-emphasis and DIN "A" weighting			
Amplitude Response	<±0.02 dB, 10 Hz to 15 kHz referenced to selected pre-emphasis curve			
Total Harmonic Distortion	<0.01% AES input, 0.02% analog input THD+N, 10 Hz to 15 kHz, with 75 us de-emphasis			
Intermodulation Distortion	CCIF: <0.03% (14/15 kHz 1:1) SMPTE: <0.03% (60/7000 Hz 1:1)			
Transient Intermodulation Distortion (TIM)	<0.03% (2.96 kHz square wave/14 kHz sine wave)			
Wideband Analog Input Performance				
FM Signal-to-Noise Ratio	>94 dB below 100% modulation at 400 Hz; measured in a 22 Hz to 22 kHz bandwidth with 75 µs deemphasis and DIN "A" weighting			
Amplitude Response	<±0.03 dB 5 Hz to 53 kHz <±0.2 dB, 53 kHz to 100 kHz			
Total Harmonic Distortion	<.008% THD+N over stereo sub band (5 Hz to 53 kHz) with 75 µs de-emphasis			
Intermodulation Distortion	CCIF: <0.02% (14/15 kHz, Ratio 1:1) SMPTE: <0.02% (60/7000 Hz, Ratio 1:1)			
Transient Intermodulation Distortion (TIM)	<0.02% (2.96 kHz square wave/14 kHz sinewave modulation)			
Slew Rate	11.8 V/us -symmetrical			
Phase Response Variation	±0.1° from linear phase, 20 Hz to 53 kHz			
Group Delay Variation	±5 ns, 20 Hz to 53 kHz, ±30 ns, 53 kHz to 100 kHz			
External SCA/RBDS Performance Based or	External Generator			
SCA Format	Externally generated, analog FM subcarriers in the range 53 to 99 kHz			
Sub-band Amplitude Response	±0.5 dB, 40 to 100 kHz□ highpass filtered			
SCA Channel FM Signal-to-Noise Ratio	80 dB below ±6 kHz subcarrier deviation at 400 Hz with 150 μS de-emphasis			
Harmonic Distortion	Less than 0.5% in audio passband of SCA generator			
Intermodulation Distortion	SMPTE (60 and 7000 Hz, 1:1): 0.5% or less, no pre/de-emphasis, SCA generator low-pass filter bypassed			
Crosstalk, SCA to Stereo	80 dB below 100% modulation, L or R channel with 75 us de-emphasis			
Crosstalk, Stereo to SCA	80 dB below 100% modulation referenced to ±6 kHz deviation and 150 us de-emphasis			
Crosstalk, SCA to SCA	80 dB below 100% modulation (referenced to $\pm$ 6kHz deviation and 150 us de-emphasis per channel			
SCA Injection	67 kHz at 1.5 Vpp for 10%			

Program Inputs				
All program inputs are silence detecting with	adjustable auto-switching and switch-back			
Audio Inputs - Digital	2 AES3 XLR 110 ohms balanced			
7.66.6	Range -15 dBfs to 0 dBfs , Up to 196 kb/s, 16, 24, 32 bits			
Audio Inputs - Analog	1 Analog L/R, XLR, 10 K/600 ohms balanced			
radio inputs ratios	Range -6 dBu to +15 dBu max			
Analog MPX/Composite	2 BNC Analog floating-unbalanced 10 K/50 ohms			
Allalog Wil /V Composite	Range -6 dBu to +17 dBu max			
AES192 Digital MPX/Composite	2 AES3 XLR (shared with AES audio) 110 ohms balanced			
NEST SE DIGITAL IN A COMPOSICE	Range -15 dBfs to 0 dBfs, 196 kb/s composite/MPX on L or R channels			
External SCA / RDS	2 BNC, unbalanced 10 K ohms, 1.5 V nominal 4 V maximum			
Internal RDS Generator	Static RDS/RBDS generator supports: TP, PL, PS, PTY, RT, and 6 AF			
internal NDS deficiator	Optional Dynamic RDS Supports SPY and UECP protocols TP, PL, PS, PTY, RT, and 25 AF			
Reference I/O				
External 10 MHz Clock Input	BNC female, unbalanced, 50 ohms, -10 dBm to +10 dBm			
External 1 PPS Clock Input	BNC female, unbalanced, 50 ohms, TTL level			
GPS antenna input w/ Internal GPS Option	+3 V or +5 30 ma			
di 3 antenna input wi internal di 3 Option	SMA female			
10 MHz Clock Output w/ Internal GPS	BNC female, unbalanced, 50 ohms, 0 dBm			
Option				
1 PPS Clock Output w/ Internal GPS Option	BNC female, unbalanced, 50 ohms, TTL level			
RF Sample outputs	2 SMA. 1 front panel and 1 rear -53 dBc, post harmonic filter			
19 kHz Pilot Sync Output	BNC female, unbalanced, 50 ohms resistive, sinewave, phase adjustable, AC			
	coupled, 4.5 V pk-pk nominal, unterminated			
Remote Control I/O				
Ethernet Ports	2 RJ-45 100 Mb Ethernet/IP ports 1 front panel with DHCP server and fixed IP			
	address for maintenance access 1 rear panel with static or dynamic IP address for LAN/			
	WAN access to Web GUI and SNMP			
Parallel GPI/O	DB25-female standard remote control GPI/O with 4 user selectable command inputs and status outputs			
	Active-low, 5v 100 ma			
Exciter Interface	DB15-female direct interface control for power amplifier			
Internal Options	BB15 female direct interface control for power unipliner			
GPS Receiver Option	Internal receiver for both GPS and GLONASS is available as an optional "plug-in" to the			
dr3 Receiver Option	modulator board provides GPS derived precision discipline of the carrier and stereo			
	pilot frequencies for HD Radio and SFN operation. Disciplined 10 MHz and 1pps out-			
	puts provided on BNC female connectors on the rear panel for referencing external			
	devices such as SynchroCast and HD Radio Exporter. Supplied GPS kit includes GPS			
	antenna with TNC connector, 50' RG-223 double shielded cable, hardware and in-			
	structions for field installation standard. Longer cable lengths and high gain antenna			
	available optionally			

Optional Expansion Boards	
General	Provisions for up to 2 simultaneously implemented optional accessory 80 pin expansion cards on the modulator board
Gen 4HD Radio™ Exgine	Upgrade to HD Radio™ digital modulation. Internal expansion board provides hybrid crest factor reduction, linear and real-time nonlinear adaptive pre-correction (RTAC™), RF spectrum analyser display, asymetrical sideband control and modulation error ratio (MER) monitoring via the Web GUI
Compliance/Standards	RoHS 2011/65/EU Directive 2014/53/EU ETSI EN 60215 (Safety) ETSI EN 302 018 (ERM) ETSI EN 300 384 (Radio) FCC Part 73 (LP FM Type Acceptance) Industry Canada (IC) Russia GOST Brazil ANATEL CE Marked