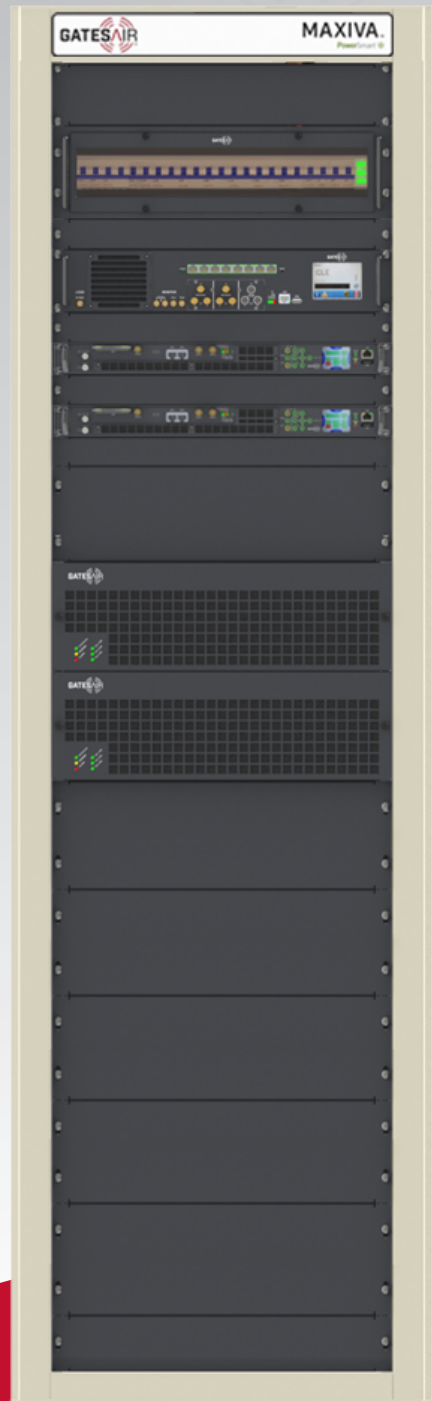


MAXIVA™ VAXT-HE

High-Efficiency VHF (Band III)
Air-Cooled Digital DAB Transmitters



GATESAIR Connecting
What's Next

WE DID IT... AGAIN.

GatesAir has once again shattered the expectations of what is possible with high-power, solid-state transmitters in terms of efficiency, power density, and performance.



Power levels from up to 15W to 15kW DAB/DAB+ with AC to RF efficiencies up to 53%

High-efficiency broadband Doherty power amplifiers (VHF Band III)

Software-defined modulation for future DAB & DAB+ upgradeability

Doherty amplification for highest efficiency and maximum energy savings

Hot-swappable power amplifiers for multi-amplifier systems

Separate hot-swappable compact power supplies for 3.5RU amplifier modules; 3 redundant supplies

Optimized for best performance using Real-Time Adaptive Correction

Innovative, high-efficiency air-cooling system with variable speed fans

**Power supply redundancy per 3.5RU PA module



Main Features

- High power density, high-efficiency compact dimensions
- DAB & DAB+ (Band III) power levels from 15W to 15kW(pre-filter)
- Ultra-compact, standalone (no rack) systems, with single- and multi-rack systems available
- High-efficiency broadband Doherty PA design
- Dual drive option available
- Enhanced power supply redundancy for higher power models
- Digital modulations: DAB/DAB+
- DAB/DAB+ software-upgradeable architecture
- Adaptive pre-correction included
- Optional high-stability GPS/GLONASS receiver
- Control system with GPIO and Web GUI
- Efficient air-cooling system with variable-speed fans



Maxiva™ VAXT-HE Ultra-Compact



VAXT-HE-DA Ultra Compact 15W to 900W



VAXT-1200HE-DA with Dual Drive



VAXT-4P6HE-36DA with Dual Drive

Maxiva™ VAXT-HE Specifications (DAB & DAB+)

System	
Ultra-Compact VHF (Band III) digital output power	15W to 900W rms @ MER 33dB or better typ. (DAB & DAB+)
Standalone (No Rack) VHF (band III) output power	300W to 2300W rms @ MER 33dB or better typ. (DAB & DAB+)
High Power Air Racked VHF digital output power	3400W to 15kW rms @ MER 33dB or better typ. (DAB & DAB+)
Efficiency	Up to 53% depending on power level and RF output level.
Configurations	Single or dual driver
RF output connector	Type N, 7-16DIN, 7/8" (f) or 1 5/8" (f) or 3 1/8" (f) or 4 1/8" (f), EIA, 50 Ohm (according to output power)
Frequency agility	VHF Band III (174-240MHz)
Frequency resolution	1 Hz
Precorrection	Real-Time Adaptive Correction
Exciter	VAXT-HE-DA-UC series exciter/driver - for standalone (no rack) and high-power racked systems
Integrated matrix circuits	EDI & ETI
Connectors	BNC (f), 75 Ohm
Cooling	Forced-air cooling, multiple fans per PA
Modulator	
DAB/DAB+	
Standard	EN300401, ETS 300 799
Inputs	4x ETI (NI[G703], NA5376[G704] or NA5592[G704]) BNC (f), 75 Ohm or 2x ETI BNC (f), 75 Ohm + 2x EDI(ETSI TS 102 693) RJ45 10/100/1000 Seam less switching between any input.
Transmission Modes	Mode I, II, III, IV (Automatically detected from the ETI stream, or user selectable)
Operation	MFN or SFN operations
Bandwidth	DAB/DAB+: 1.5MHz
Intermodulation (shoulders)	>= 37 dB
MER	>= 33 dB
Satellite Receiver (Option)	
Standard	ETSI EN 300 421 (QPSK) (DVB-S) ETSI EN 302 307 (QPSK, 8 PSK, 16APSK) (DVB-S2) ETSI EN 50083-9 (ASI) ETSI EN 50221 (Common Interface)
DVB-S2	VCM, CCM, Multi Stream and Single Stream, Normal and Short FEC frames
Symbol Rate	1 - 45 Msym/s (DVB-S) 2 - 45 Msym/s (DVB-S2)
Constellation	QPSK, 8PSK, 16APSK
Input Connector	F(f), 75 Ohm
Frequency	L-band 930 ÷ 2250 MHz
LNB Control Voltage	Off, +13/18 Vdc, 22kHz, 0.25 A (overload protection)
RF Input Level	40 ÷ 100 db/uV (with attenuator)
Output Connector	ENC(f), 75 Ohm
Modality	188 bytes
Max Input Bit Rate	80 Mbps (CAM limit: 72 Mbps)
CAM Interface	PCMCIA DVB-CI Common Interface
CA Mode (Conditional Access)	Multiscript, Simulcrypt
CAS Support	Mediaguard, Viaccess, Irdeto, Conax, BISS with professional multiprogram CAM (descrambling of up to 24 Elementary Streams) Betacrypt, Cryp- toworks, Nagravision with standard consumer CAM (descrambling of up to 4 services)

Maxiva™ VAXT-HE Specifications (DAB & DAB+)

GNSS (GPS/GLONASS) [Option]	
Input Connector	N (f), 50 Ohm
Input/Monitor Output 10 MHz	BNC (f), 75 Ohm
Input/Monitor Output 1 PPS	BNC (f), 75 Ohm
Phase Noise	-140 dBc/Hz @10 KHz -150 dBc/Hz @ 100 kHz
Stability	1e-12 / 24 hours with disciplined OCXO
Hold-over Stability	5 µs after 5 hours (optional 1 us after 24 hours)
Mechanical	
Rack	Model < 3000W, rack is optional Model > 3,000W, rack is included
Width	600 mm
Rack Height	36 RU rack models: 1800 mm Refer to Key Features table for models which include rack, and 42RU for some applications
Depth	Refer to Key Features table for models which include rack
Control	
Display screen - with advanced button control	
SNMP GPIO	
Environmental	
Operating Temperature	-5oC ÷ 45oC
Range	
Max. Relative Humidity	95% non-condensing
Max. Operating Altitude	Up to 2,500 m (8,202 ft) above sea level, derate 2° C (3.6° F) per 300 m (984 ft) of elevation. (Altitude > 2,500 m on request)
Cooling Method	Forced air-cooled, internal fans, airflow front to rear
Acoustic Noise	≤65 dBA (front 1 m)
Electrical	
Power Supply	< 1000W models: Exciter: Single phase 100-240 V AC,
	50/60 Hz, Amplifier: Single phase 185-264 V AC,
	50/60 Hz
	>1000W models: 208-240 V 3-Phase 50/60 Hz, or 380-415V 3-Phase, 50/60 Hz.
NOTES	
To comply with the applicable standards and limit values for the suppression of out-of-band emissions (and in the case of digital standards, also for maintaining the required shoulder distance), the transmitter may only be operated with suitable filters at the RF output.	
Specifications are subject to change without notice.	

Key Features

Air-Cooled Digital DAB / DAB+ VHF HE Models

Mid- to High-Power DAB Transmitter Model	DAB Power Before Filter (W)	Total Number of PA Modules	Configuration / Rack Style	# of Tx Racks
VHF Band III HE DAB & DAB+ Models				
VAXT-15HE-DA-UC	15W		1 RU	Option
VAXT-30HE-DA-UC	30W		1 RU	Option
VAXT-80HE-DA-UC	80W		1 RU	Option
VAXT-250HE-DA-UC	250W		1 RU	Option
VAXT-300HE-DA-UC	300W		2 RU	Option
VAXT-600HE-DA-UC	600W		2 RU	Option
VAXT-900HE-DA-UC	900W		3 RU	Option
VAXT-300HE-DA	300W	1	1RU + 2RU	Option
VAXT-300HE-3DA	300W	1	1RU + 3RU	Option
VAXT-600HE-DA	600W	1	1RU + 2RU	Option
VAXT-600HE-3DA	600W	1	1RU + 3RU	Option
VAXT-900HE-DA	900W	1	1RU + 3RU	Option
VAXT-1200HE-DA	1200W	1	1RU + 3.5RU	Option
VAXT-1700HE-DA	1700W	1	1RU + 3.5RU	Option
VAXT-2300HE-DA	2300W	1	1RU + 3.5RU	Option
VAXT-2P6HE-36DA	3400W	2	36RU	1
VAXT-3P6HE-36DA	5100W	3	36RU	1
VAXT-4P6HE-36DA	6800W	4	36RU	1
VAXT-2P7HE-36DA	4000W	2	36RU	1
VAXT-3P7HE-36DA	6000W	3	36RU	1
VAXT-4P7HE-36DA	8000W	4	36RU	1
VAXT-6P6HE-42DA	10000W	6	42RU	1
VAXT-6P7HE-36DA	11500W	6	36RU	2
VAXT-8P7HE-36DA	15000W	8	36RU	2
<i>Note: For additional details contact your Sales Representative</i>				



GatesAir efficiently leverages broadcast spectrum to maximize performance for multichannel TV and radio services, offering the industry's broadest portfolio to help broadcasters wirelessly deliver and monetize content. With 100 years in broadcasting, GatesAir's exclusive focus on the over-the-air market helps broadcasters optimize services today and prepare for future revenue-generating business opportunities. Until 2019, research, development and innovation has been driven from the company's facilities in Mason, Ohio and supported by the long-standing manufacturing center in Quincy, Illinois. In May 2019, the company acquired an Italian company operating as GatesAir S.r.l. which provides an additional research, development and service location within the EU.

GatesAir's turnkey solutions are built on two pillars: Transport and Transmit. The company is best known for powering over-the-air analog and digital radio/TV stations and networks worldwide with the industry's most operationally efficient transmitters. Groundbreaking innovations in low, medium and high-power transmitters reduce footprint, energy use and more to establish the industry's lowest total cost of ownership. Support for all digital standards and convergence with mobile networks ensure futureproof systems.

In television, GatesAir supplies proven, trusted wireless UHF and VHF solutions across all power requirements to support single-station over-the-air broadcasters on up to large national networks. The industry's most reliable software-definable exciters ensure broadcasters can optimize analog networks and quickly transition to digital TV in the field, with support for all major global DTV standards. GatesAir also supplies a wide array of over-the-air accessories to maximize transmitter control, network redundancy and signal compliance – along with installation, commissioning and ongoing support services – to deliver the industry's strongest turnkey approach for customers worldwide.

Award Winning Service

From experienced installation and field service engineers to responsive factory experts, GatesAir provides the strongest service team in the broadcast transmission industry. Couple that team with reliable products, responsible service parts inventories and a demonstrated commitment to the industry, and you have a service offering that's perfectly matched to your equipment and your operations.

Global Service Locations



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Ordering Information

Our GatesAir experts will help you determine the most efficient solution to meet your requirements.
Visit www.gatesair.com/contact to find your representative.



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