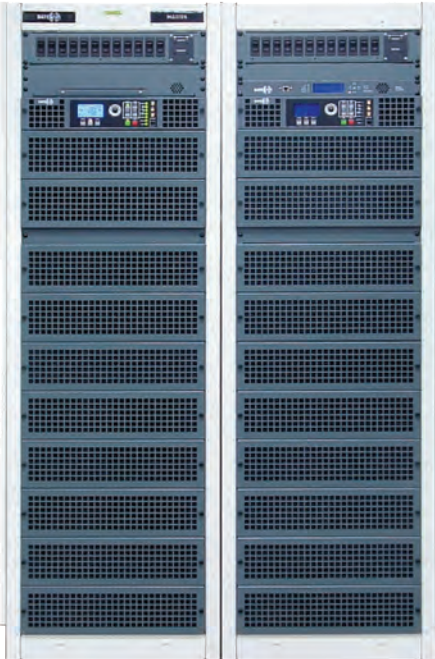




# Maxiva™ UAXT with PowerSmart Plus

High Efficiency Air-Cooled UHF Multimedia TV Transmitter



The Maxiva™ UAXT, is a new technology, high-efficiency, air-cooled UHF solid-state transmitter. The state-of-the-art design combines GatesAir's PowerSmart Plus™ architecture and Maxiva UAX Compact drive to provide today's broadcaster unmatched efficiency, performance, reliability and quality. Designed with future broadcasting needs in mind, the Maxiva UAXT transmitter is a single transmitter platform capable of DVB-T/H, DVB-T2, ATSC, ATSC Mobile DTV, ISDB-Tb, CMMB, CTTB, and other digital standards.

## Product Features

For pre-filter average digital power levels up to 4kW OFDM and 7.2kW ATSC, the Maxiva UAXT transmitter is ideally suited for serving broadcasters needs for highly efficient, extremely compact and easy to maintain transmitter systems. The UAXT series utilizes GatesAir platform technologies derived from the Maxiva M2X multimedia exciter, PowerSmart Plus™ technology, new generation AC to DC power supplies and the latest 50 Volt LDMOS amplifier devices. This powerful technology blend provides best-in-class performance with respect to transmitter RF performance, efficiency, size, and upgradeability.

- High efficiency design incorporates GatesAir PowerSmart Plus™ technology, for best-in-class power efficiency and lowest TCO
- Overall AC to RF efficiency up to 36% OFDM, 40% ATSC
- Rugged, reliable design and construction
- Digital average power levels up to 4 kW OFDM, 7.2 kW ATSC
- Maxiva M2X exciter technology, allowing easy migration between different digital standards
- Real-Time Adaptive Correction (RTAC™) technology is included with every system
- Broadband high-efficiency power amplifier (PA) modules
- Extremely compact design, allows multiple transmitters and N+1 configurations in a single rack
- Hot-pluggable air-cooled high efficiency power supplies for simplified maintenance
- Modular central control system for straightforward monitoring and in-depth diagnostics
- Web-enabled remote graphical user interface (GUI)
- Includes front panel LCD screen for display of transmitter parameters, including Forward Power and Reflected Power

## Available Options

- Integral GPS/GLONASS receiver for SFN timing
- Dual exciters and switcher
- Exciter external UPS
- ASI/T2MI over IP (100/1000BASE-T)

## Specifications

Specifications and designs are subject to change without notice

<b>General</b>	
Frequency Range	UHF TV Band
Transmission Standards	ATSC, DVB-T, DVB-T2, ISDB-Tb, CTTB
Channel Bandwidth	6, 7 or 8 MHz (system dependent)
Rated Power Output	4kW OFDM, 7.2kW ATSC before mask filter
Output Power Reduction Range	0 to -10 dB
RF Load Impedance	50 ohms
VSWR	Protected against open or short circuit, all phase angles. Capable of operation into infinite VSWR with user-adjustable fold back threshold. Factory pre-set to 4% of nominal nameplate power (VSWR = 1.5:1)
RF Output Connector	See power level table below
<b>AC Mains</b>	
AC Line Voltage	3 phase: 380 to 415 V, or 208 to 240 V, 50/60 Hz, or single phase 208 to 240 V, 50/60 Hz - specify when ordering
AC Line Variation	±15%, between 208 to 230 V or 380 to 400 V
Power Factor	>0.95
<b>Environmental</b>	
Altitude	Up to 8,200 ft (2,500 m) elevation above mean sea level
Ambient Temperature	32° to 113° F (0° to 45° C) at sea level (upper limit derated 3.6° F [2° C] per 984 ft [300 m] elevation AMSL)
Humidity	95%, non-condensing
Cooling Method	Air-cooled with internal fans, air flow front to rear (external air using optional front air plenum)
Acoustic Noise	<65 dBA (measured 1 m in front of cabinet), with external input air plenum/door
Frequency Stability	Without precision frequency control/GPS: ±150 Hz/month (2.3 x 10 <sup>-7</sup> ppm)
<b>External Inputs</b>	
GPS Input	SMA female, 50 ohms, (+5 V DC @ 100 mA max output for active antenna)
1 PPS Input	BNC female, user selectable 50 ohms or high impedance termination
10 MHz Reference Frequency Input	BNC female, 50 ohms
<b>Monitoring Outputs</b>	
RF monitor (exciter)	SMA female
1 PPS	BNC female
10 Mhz	BNC female

<b>DVB-T / DVB-T2 / ISDB-Tb / CTTB Specification</b>	
Power Output (average)	Up to 4 kW models available, measured before mask filter (see chart below)
Systems	DVB-T/H, standard EN 300744 DVB-T2, standard EN 302 755 v1.3.1 DVB-T2, TS 102 773 v1.3.1 ISDB-Tb, Brazil ANATEL standard CTTB (China)
ASI/T2MI Inputs	2 inputs BNC female; 75 ohms according to EN 50083-9 (for DVB-H 2 main/2 hierarchical)
ASI/T2MI over IP (optional)	1 input, 100/1000BASE-T
Crest Factor	13 dB maximum
Shoulder Level	<-37 dB (before mask filter)
END	<0.5 dB
MER	>34 dB (typical 36 dB)
Harmonics (before filter)	<-40 dB
Central Carrier Suppression	>75 dB
DVB-T2 Modes	Supports multiple PLP's, MISO, extended bandwidth mode, PAPR reduction
SFN Delay	Static and Dynamic, 0 to 1 second per ETSI TS 101 191 V1.4.1 (2004-06)
<b>ATSC Specification</b>	
Power Output (average)	Up to 7.2 kW models available, measured before mask filter (see chart below)
System	ATSC A-53, 8-VSB DTV standard
Data Input	19.39 Mb/s, configurable as SMPTE-310M or ASI (user selectable)
Impedance	75 ohms, unbalanced
Input Connector	2 inputs, BNC female
Signal to Noise (EVM)	>27 dB (EVM <4%) Typical >32 dB (EVM <2.5 %)
Phase Noise	<104 dBc/Hz@ 20 kHz offset (ATSC A/64)
Harmonic Radiation and Spurious	Meets mask requirements specified in FCC 5th and 6th report and order
Sideband Performance	Compliant with FCC radiation mask, when measured at the output of GatesAir-supplied output filter
<b>Remote Control</b>	
Parallel Remote	25 conductor D-sub for single drive basic rack, 12 conductor terminal block (mini Wago) on deluxe rack
Ethernet/SNMP	RJ-45, twisted pair
Compliance	RoHS 2002/95/EC R&TTE 1999/5/EC Safety: EN 60215 EMC: EN 301-489-1 FCC Part 73 Manufacturing: ISO 9001: 2008

### UAXT Model and Power Levels

Model Number	OFDM Power Before Filter (Watts)*	ATSC Power Before Filter (Watts)*	RF Output Connector	Total Rack Space (1 exciter)	Total Rack Space (2 exciters)
UAXT-1-1P	165	300	DIN 7-16	5RU	8RU
UAXT-1-2P	330	600	DIN 7-16	5RU	8RU
UAXT-1	500	900	DIN 7-16	5RU	8RU
UAXT-2	1,000	1,800	DIN 7-16	8RU	11RU
UAXT-3	1,500	2,700	1-5/8" EIA	11RU	14RU
UAXT-4	2,000	3,600	1-5/8" EIA	14RU	17RU
UAXT-6	3,000	5,400	3-1/8" EIA	44RU Rack	44RU Rack
UAXT-8	4,000	7,200	3-1/8" EIA	44RU Rack	44RU Rack

\* Guaranteed minimum rated power levels shown. For maximum rated power levels on a specific channel, please consult GatesAir.