

ANYWAVE ACT-MPTV Series UHF Transmitter Family For TV

Performance and Design without compromise...



ANYWAVE COMMUNICATION TECHNOLOGIES



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Overview

The new Anywave ACT-X family of UHF TV transmitters provides the broadcaster with the latest state of the art digital transmitter design. The ACT-X family delivers the highest levels of performance and reliability without costing you extra. It's streamline and efficient design offers outstanding configuration flexibility and exceptional operating convenience within a small footprint. From small family owned stations to large international networks, the ACT-X family delivers high performing cost effective solutions without compromise. These convection air cooled Solid State (50V LDMOS technology) transmitters range in output power from 1kW ATSC (800W OFDM) to 2.5kW ATSC (2kW OFDM). They operate across all modulation standards including ATSC, ATSC-M/H, DVB-T, DVB-T2, DVB-H, ISDB-T and ISDB-Tb. The ACT-X transmitter family incorporates the powerful correction capabilities of the ACT 5X and 8X digital exciter platforms. The ACT digital exciter offers the most advanced and highest performing correction technology in the world. The exciters powerful ADPC[™] (Adaptive Digital Pre-Correction) algorithm and patented multi-dimensional pre-correction technology delivers RF Performance Metrics (SNR/MER and Shoulder) never before realized. The ACT-X transmitter is easily configured to operate as a standard transmitter or as an RF translator supporting A/53, A/153 (MH), and A/110:2011 (SFN) ATSC standards. Innovative DDRF[™] (Direct Digital RF) broadband automatic balancing technology achieves near perfect RF performance with shoulder levels exceeding -60 dB and out of band spurious also greater than -60 dB, all based on an ultra low noise floor. Independent feedback for adaptive SWR optimization function



maximizes emission signal quality after the transmitter band-pass filters (BPF). System level AGC (Auto Gain Control) function includes both RF and DC AGC feedback obtaining a stable output power and performance.

The Transmitter includes a digital ultra-wideband phase noise processing technology that automatically detects and compensates phase noise to achieve unparalleled performance. The patented AIM[™] (Adaptive Impedance Match) technology ensures impedance matching at the RF Output. The front panel of the transmitter includes a user friendly graphical display for control and status monitoring including a real time measurement and display of the shoulder levels and SNR of the transmitted signal. This control interface provides a quick guide to the operation of the entire transmitter including a real-time temperature display, an over temperature alarm, and the individual voltage and current readings of all the amplifier transistors.



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Features and Benefits

(A) Scalable

(A) From 1kW to 2.5kW with single or dual Exciter

(A) Flexible

(A) Multiple standards and inputs; RF, IP, ASI and SMPTE310*
(A) Simple to change from Analog to Digital or from one digital standard to another

* SMPTE 310 input only available with 8X exciter

(A) Efficient

(A) Latest transistor technology (A) High Power Density

(A) Reliable

(A) Redundant fans, power supplies and exciters (optional)

ACT- 5X Transmitter Family				
Number of Amplifiers	2	3	4	5
Output Power (RMS) for ATSC and ATSC M/H Power (1)	1kW	1.5kW	2kW	2.5kW
Output Power (RMS) for COFDM standards (1)	0.8kW	1.2kW	1.6kW	2.0kW
Output Power (Peak Sync) for Analog (ATV) standards (2)	1.6kW	2.4kW	3.2kW	4.0kW
Dimensions (3)				
Height	1270 mm (50")	1575 mm (62")	1880 mm (74")	2185 mm (86")
Width	584 mm (23")	584 mm (23")	584 mm (23")	584 mm (23")
Depth	914 mm (36")	914 mm (36")	914 mm (36")	914 mm (36")
AC Input Voltage	220V/380V Single Phase Three Wire System			
Consumption	4350W	6520W	8700W	10870W

(1) After band pass filter

(2) After four cavity band pass filter

(3) Does not include the band pass filter.

While Anywave attempts to provide the most up to date and accurate information certain specifications may change without prior notification. For details please contact your local Anywave expert, or e-mail sales@Anywavecom.com

Mechanical



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ACT-X Series 1000 W UHF MPTV TV Transmitter

Contents

(1)
(1)
(1)
(1)
(2)
(1)
(1)
(1)
(1)









ACT-X Series 1500 W UHF MPTV TV Transmitter



^{*} Height does not include Band Pass filter





23" / 584mm ---→ - -

36" / 914mm Depth

Contents	
Single Cabinet - 19RU	(1)
Digital Exciter	(1)
Standby Digital Exciter (Optional)	(1)
Control and Monitoring Unit with LCD	(1)
RF Amplifier (600W ATSC / 400W OFDM)	(4)
Mains Breaker Panel	(1)
RF Power Combiner	(1)
Output Coaxial Assembly	(1)
RF Band Pass Filter (Six Pole)	(1)



Π

Π



^{*} Height does not include Band Pass Filter





* Height does not include Band Pass Filter

Π

Specifications

Specifications		
Digital TV		
Standards		DVB-T, DVB-T2, DVB-H, ISDB-T,
		ISDB-T _B , ATSC, ATSC Mobile DTV, DTMB
Channel bandwidth	DVB-T, DVB-H	5/6/7/8 MHz
	DVB-T2	1.7/5/6/7/8 MHz
	ATSC	6 MHz
	ISDB-T/ISDB-T _B	6/8 MHz
	DTMB	8 MHz
Inputs	DVB-T, DVB-H, DVB-T2, DTMB	2 × ASI (HP/LP), 75 Ω BNC, 2 × RJ-45
	ATSC	2 × SMPTE310M or 2 × ASI, 75 Ω BNC, 2 × RJ-45
	ISDB-T/ISDB-T _B	2 × BTS, 75 Ω BNC, 2 × RJ-45
		2 x ETI, BNC 75 Ω/high impedance, 2 x RJ-45
Analog TV	standards	B/G, D/K, M2), N2), I, I1
Color transmission		PAL, NTSC, SECAM
Sound transmission		IRT dual-sound coding, FM single sound and
		NICAM728 (-13 dB/-20 dB) (optional), FM single sound (-10 dB)
Inputs		1 × video (75 Ω BNC), 2 × audio (XLR)
General data		
Frequency range	UHF bands IV/V	470 MHz to 862 MHz
Supply voltage		230 V; 2 wires + PE (L1/N/PE) ± 15 %
		400/230 V; 4 wires + PE (L1/L2/L3/N/PE); ± 15 %
		240 V; 2 wires + PE (L1/L2/PE) ± 10 %
		208 V; 4 wires + PE (L1/L2/L3/N/PE) ± 10 %
Max. installation altitude	> 2000m on request	2000 m above sea level
Operating temperature range		+1 °C to +45 °C
Relative humidity (max.)		95 %, non-condensing
Synchronization		
Reference frequency		10 MHz, 0.3 V to 5 V (V _{pp}) or TTL, BNC
Reference pulse		1 Hz, TTL, BNC
Operation		
Display unit with touchscreen and LEDs		local operation and display
Ethernet interface, RJ-45		local, remote, standard web browser
		network management interface via SNMP
Parallel remote interface		floating contacts for messages and commands

Ordering Information

Nomenclature

ACT-5XU-1500-A-L-DD



Single Drive or Dual Drive	SD / DD
Convection Cooled or Liquid Cooled	Convection cooled only
ATSC - DVB-T2 - ISDB-T	ATSC , DVB-T2 or ISDB-T
Power level in Watts	1000, 1500, 2000 & 2500

Series and Band (UHF / VHF) UHF only

OPTIONS Mobile Handheld (MH) SFN Translator

8X Exciter 8X Exciter 5X Exciter

Your local Anywave expert will help you determine the optimum solution for your requirements. To find the nearest Anywave representative contact sales@anywavecom.com

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