

LPU Titanium Series™ Transmitters/Translators

DTV Transmitter (Analog Compatible)

Models LPUT-250, LPUT-500, LPUT-750, LPUT-1000, LPUT-1250, LPUT-1500, LPUT-1750, LPUT-2000



The versatile EMCEE LPU Titanium Series™ is the pinnacle of over 45 years of transmitter design experience. The building block construction and triple conversion design makes it the most flexible LPTV transmitter on the market. The latest generation of LDMOS technology and power supply architecture facilitates a very low cost of operation and extremely high reliability. Inherently low distortion minimizes the need for extensive corrective circuitry and provides for excellent performance in low to medium power digital and analog applications. Broadband circuitry complemented by modular packaging enables simplified maintenance with reduced spare requirements and at the same time provides a path for channel flexibility and power upgrades. A new generation, EMCEE designed, low phase-noise synthesizer/local oscillator chain provides built-in channel agility together with GPS/NAVSTAR or LORAN synchronizing capability for high precision frequency control and co-channel interference reduction. The building block chassis design incorporates the capability to increase output power by adding power blocks to the chassis. No need to replace the transmitter for channel changes or power increases, the flexibility is designed in, eliminating the need for additional chassis or rack space. The Class AB amplifier design incorporates soft-fail technology, so one failed amplifier does not constitute a service outage. Hot-swappable plug-in power supplies provide for simple change out and optional N+1 redundancy. Front panel monitoring of all internal

voltages and forward and reflected power is provided in an easy to read LCD display. Remote control interfacing for critical transmitter functions and monitoring is available via the up-converter rear chassis connections. The LPU Series is the perfect choice for transition into digital LPTV service and for low or medium power analog. An optional touch screen display makes taking transmitter readings very simple, quick, and accurate.

Features

- High Reliability
- Modular Design
- Analog & Digital Compatible
- Fully Synthesized

Benefits

- LDMOS Architecture 250-2000 Watts
- Ease of Maintenance & Upgrade
- Versatility
- Built-in Channel Flexibility

SPECIFICATIONS – LPUT TITANIUM SERIES TRANSMITTERS

Models LPUT-250, LPUT-500, LPUT-750, LPUT-1000, LPUT-1250, LPUT-1500, LPUT-1750, LPUT-2000

<i>ANALOG (VISUAL) SERVICE</i>		<i>DIGITAL SERVICE</i>	
Output Power Peak Visual	625, 1250, 1875, 2500, 3125, 3750, 4375 or 5000 Watts	Output Power Average, DTV	250,500,750,1000,1250,1500,1750, or 2000 Watts
Emission	5M75C3F	Emission	6M00D7W
Color Transmission	NTSC, PAL, SECAM	Modulation Mode	QPSK/16/64/256QAM, 8 OR 16 VSB
Output Frequency	470-806 MHz	Output Frequency	470-806 MHz
Frequency Stability	±1 KHz	Frequency Stability	±1 KHz, <1Hz with GPS input
Spurious Products ¹	-60 dB	Spectral Mask ¹ Per FCC	-37dB @ channel edge, -100 dB @ ±6 MHz Ref Channel edge below Average Power (Watts/5.4 MHz)
Intermodulation (IM3)	<-56dB	Spurious Products	<-60dB
Differential Phase	±2°	Envelope Delay	±5ns
Differential Gain	3%	Frequency Response	±0.5dB
Low Frequency Linearity	3%	Error Vector Magnitude	≤3%, SNR >30dB
Envelope Delay	Better than FCC 73.687 (a) (3)	Output Power Stability	±0.3dB
Sideband Response	Better than FCC 74.936 (b)	Digital Signal to Noise	34dB
Frequency Response ¹	±0.5 dB	Hum & Noise	<-60dB
Output Power Stability	±0.3dB	Phase Noise (Synth)	≤-104dBc/Hz @ 20 KHz
RF Regulation	2%	Harmonic Output	<-60dB
Signal to Noise	55dB	IF Input Level	-5 to -15 dBm
Hum and Noise	-55 dB	Input Impedance	75 Ohm/BNC, 44MHz
Phase Noise (Synth)	-100 dBc/Hz @ 10 KHz	Output Impedance, Conn.	50 Ohm, 7/8" EIA
K Factor (2T)	2%	GENERAL/MECHANICAL CHARACTERISTICS	
ICPM	3°	(Specific to Both <i>Analog & Digital</i> Service)	
Harmonic Output	-65dB	Operating Temperature, Alt.	0° to +50°C, 10,000 Ft. AMSL
Input Impedance (Composite)	75 Ohm/BNC	Maximum Relative Humidity	95%
Output Impedance	50 Ohm, 7/8" EIA	Weight/Dimensions	
ELECTRICAL CHARACTERISTICS		LPU-1000	210 lbs.42"Hx22"Wx36"D
<u>ANALOG</u> (AURAL) SERVICE		LPU-2000	330 lbs. 60"Hx22"Wx36"D
Output Power	-13 dB Ref. to Visual	Power Requirements	200~264 VAC ±15%, 47~63 Hz Power Consumption/PF
Emission	250KF3E	LPUT-1000	10,150 Watts/0.95
Frequency Tolerance	NTSC +4.5 MHz ±100 Hz CCIR+5.5 & 6.5 MHz ±100 Hz	LPUT-2000	20,150 Watts/0.95
Audio Distortion	1.0%	Cooling, All Models	Forced Air
FM Noise	-60 dB	Heat Load @ Full Power	
AM Noise	-60dB	LPUT-1000	31,230 BTU/Hour
Frequency Response	±1 dB	LPUT-2000	65,400 BTU/Hour
Deviation	25KHz Mono, 50 KHz Stereo or per CCIR Requirements		

¹Measurements with Output Filter

U.S. Sale Subject to FCC Type Approval

Specifications Subject To Change Without Notice!