

400-500W Digital TV Transmitter

DTT5900-500 series

DTT5900-500 Series



Product Profile

Dibsys's DTT5900-500 Series is a low power UHF terrestrial DTV transmitter, which inherits the high performance, high stability and high reliability of Dibsys's many products. It can work in any frequency within UHF span, and the transmitting bandwidth is up to 80MHz. By incorporating our latest technologies of linear and non-linear digital adaptive pre-correction, RF delay and co-channel interference rejection, this system can fulfill the needs of single band or broadband transmission in small to medium-scale terrestrial coverage scenarios.

This series of products, which has advance design and simplified architecture are small in size, with the advantage of lower noise, higher efficiency, and outstanding anti-interference

performance. They support DVB-T/H, DTMB, ATSC, ISDB-T/Tb and DVB-T2 standards, thus having greater flexibility and suitability in actual deployment.

Features

- 470 to 860MHz
- Compact structure, supporting up to 500W digital output power
- Linear & non linear digital pre-correction function in exciter
- Modular design across the whole system, easy installation, maintenance and/or upgrade
- Low power consumption with high efficient LDMOS amplifiers to reduce electricity costs for operators
- Suitable for different countries and/or areas because multiple DTT standards are complied with, including DVB-T/H, DTMB, ATSC, ISDB-T/Tb and DVB-T2
- Low power consumption with linear design, further improves transmitting power and minimizes non-linear distortion, to satisfy transmission requirements of single band and broadband
- Built-in color TFT LCD with touch screen in front panel of rack, supports monitoring & control of working states and any malfunction for any module without additional testing/monitoring equipment required, such as transmitting power, VSWR, working voltage/current, fan speed, IP address and so on
- Extreme low group delay for DTV signal transmission
- Multiple protect mechanisms are introduced for over-load, over-temperature, over-current and high VSWR
- Large and dynamic Auto Gain Control (AGC) circuit ensures stability of output power
- Suitable for single channel or broadband transmission enabling low-cost DTV network coverage

Main Application

- Digital TV head-end system
- IPTV, Over-the-air TV distance learning
- Remote live Rebroadcasts and real-time transmission
- HD or SD video via private IP networks

Technical Specifications

Universal Specifications			
	Ordering Codes	DTT5900-400	DTT5900-500
	Output Power(RMS)**	400W	500W
	Number of Power Amplifiers	2×Power Amplifier Modules	
	Frequency Range(F _{IN})	470 to 860MHz	
	Channel Bandwidth	6MHz,8MHz	
	Supported Standards	DVB-T2,DVB-T/H,ATSC,ISDB-T/Tb	
	Transmitting Mode	Standard:Single band Optional:Broadband(maximum 80MHz)	
	Supported Network	SFN or MFN	
	Cooling Method	Forced Air Cooling	
	Note:**The above output powers are colculated per ATSC/DTMB standards under single band mode		
Main Components			
	Preamplifier	1×Preamplifier module(3U)	
	Exciter(Optional)**	1×DVB-T2/DTMB Exciter(modulater)(1U)	
	Power Splitter and Combiner	1×Distributor & Synthesizer(3U)	
	Monitoring and Control Unit	1×Monitoring control unit(2U) with 7”LCD touch screen	
	Bandpass Filter(Optional)	Optional Single band or broadband Bandpass filter	

	Note:** Please contact our sales representative for the other exciter/modulator requirments.		
Environmental			
	Operating Temperature	0 to 45℃	
	Operating Humidity	0 to 95%, non-condensing	
Power Supply			
	Power Supply	Three-Phase Option	4 wires(3-phase+neutral),342-418V AC,50Hz±5%
		Single-Phase Option	2 wires,190-250V AC,50Hz±5%
	Surge Protection		Built-in AC Surge Protector
Mechanical			
	Dimensions(W×H×D)		650mm×1480mm(27U)×870mm 25.6”×58.3”×34.3”
	Weight		180kg(396.8 lbs)
I/O Interface			
	TS Input		DVB-ASI(BNC female,75Ω)(DTMB/DVB-T2 Exciter)
	MPEG-TS over IP		100/1000Base-T,RJ-45(DVB-T2 Exciter)
	RF Output		EIA1-5/8”flange
	1PPS Clock Input		BNC,female,50Ω(DTMB/DVB-T2 Exciter)
	10MHz Clock Input		BNC,female,50Ω(DTMB/DVB-T2 Exciter)
	RF Monitor Output		SMA,female,50Ω
Monitoring & Control			
	Local Monitoring & Control		TFT LCD touch screen

	Network Management Interdace	10/100Base-T Ethernet,1×RJ-45, SupportingWeb-browser or SNMP network management
Electric Performance		
	Frequency Stability	$\leq \pm 1 \times 10^{-7}$ (Internal reference) $\leq \pm 1 \times 10^{-7}$ (External 10MHz reference clock)
	Frequency Accuracy	MFN, $\leq \pm 100\text{Hz}$, SFN, $\leq \pm 1\text{Hz}$
	MER	$\geq 33\text{dB}$
	Shoulder of Single	$\leq -36\text{dB}$
	In-band non-flatness	$\leq \pm 0.5\text{dB}$
	AGC Power Control Range	$\pm 8\text{dB}$
	Stabilityo f Output Power	$\leq \pm 0.5\text{dB}$

Order Information

Model	DTT5900 -5	DTT5900 -10	DTT5900 -20	DTT5900 -30	DTT5900 -50	DTT5900 -100	DTT5900 -200	DTT5900 -300
Output Power (RMS)**	5W	10W	20W	30W	50W	100W	200W	300W

Model	DTT5900-800	DTT5900-1000	DTT5900-1200	DTT5900-1600
Output Power(RMS)**	800W	1000W	1200W	1600W

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