

GT-5900-500 Series

Low Power UHF Terrestrial DTV Transmitter

Product Overview

Gospell's GT-5900-500 Series is a low power UHF terrestrial DTV transmitter, which inherits the high performance, high stability and high reliability of Gospell'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.

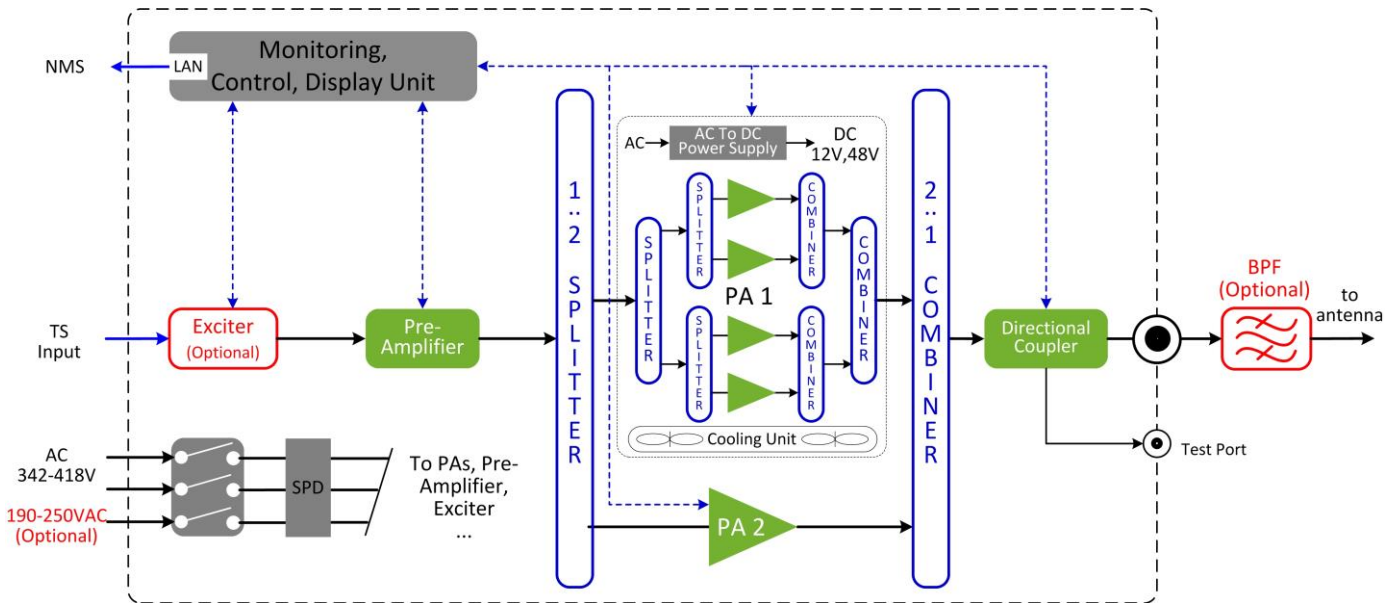
This series of products, which has advance design and simplified architecture are small in size, with the advantage of lower noise, higher efficiency, and outstanding anti-interference performance. They support DVB-T/H, DTMB, ATSC, ISDB-T/Tb and DVB-T2 standards, thus having greater flexibility and suitability in actual deployment.



Main 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



Block Diagram:

Diagram 1 GT-5900-500 Series Block Diagram

Technical Specifications:

	Ordering Codes	GT-5900-400	GT-5900-500
Universal Specifications	Output Power(RMS) *	400W	500W
	Number of Power Amplifiers	2 x Power Amplifier Modules	
	Frequency Range(Fin)	470 to 860MHz	
	Channel Bandwidth	6MHz, 8MHz	
	Supported Standards	DVB-T2, DVB-T/H, DTMB, ATSC, ISDB-T/Tb	
	Transmitting Mode	Standard: Single band Optional: Broadband (maximum 80MHz)	
	Supported Network Cooling Method	SFN or MFN Forced Air Cooling	
Notes: * The above output powers are calculated per ATSC/DTMB standards under single band mode.			
Main Components	Preamplifier	1 x Preamplifier module(3U)	
	Exciter (Optional)**	1 x DVB-T2/DTMB Exciter(modulator) (1U)	
	Power Splitter and Combiner	1 x Distributor & Synthesizer (3U)	
	Monitoring and Control Unit	1 x Monitoring control unit(2U) with 7" LCD touch screen	
	Bandpass Filter(Optional)	Optional Single band or broadband Bandpass filter	
Notes: ** Please contact our sales representative for the other exciter/modulator requirements.			
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
Environmental	Operating Temperature	0 to 45°C
	Operating Humidity	0 to 95%, non-condensing
Mechanical	Dimensions(W x H x D)	650mm x 1480mm(27U) x 870mm 25.6" x 58.3" x 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	EIA 1-5/8" 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 Interface	10/100 Base-T Ethernet, 1 x RJ-45, Supporting Web-browser or SNMP network management
Electric Performance	Frequency Stability	$\leq \pm 1 \times 10^{-7}$ (Internal reference) $\leq \pm 1 \times 10^{-10}$ (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 Signal @fc±4.2MHz	$\leq -36\text{dB}$
	In-band non-flatness@fc±3.591MHz	$\leq \pm 0.5\text{dB}$
	AGC Power Control Range (ΔG_{AGC})	$\pm 8\text{dB}$
	Stability of Output Power (ΔP_{OUT})	$\leq \pm 0.5\text{dB}$

For More Information

Please visit our website: <http://www.gospell.com> or contact your local sales representative:

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