ZHC518A-3000W(VHF)/C2

Analog TV Transmitter

Overview:

This Transmitter is a high-standard, broadcast-level all-solid-state **Compact design** analog TV transmitter. It uses a new software radio technology to achieve the TV modulation function; the use of international high-quality LDMOS high-power field effect tube to achieve radio frequency amplification, the output power can be **3000W**.

The TV transmitter is mainly composed of a **TV modulation unit** and an **RF power amplification unit**. Among them, the TV modulation unit uses the new **FPGA + DDS** to realize the software

TV modulation function, while obtaining superior technical indicators while ensuring reliability and performance consistency; the **RF power amplification unit** uses international high-quality LDMOS high-power field effect transistors, Analog/Digital Compatible, stable and reliable.

The whole Transmitter adopts 19 "standard stainless steel case, suitable for all levels of TV stations.

Features:

● It adopts new FPGA + DDS technology to realize software-based TV modulation function, with superior performance, high reliability and good consistency.

● It adopts the integrated structure design, and the single-channel image sound combination type is easy to install and use.

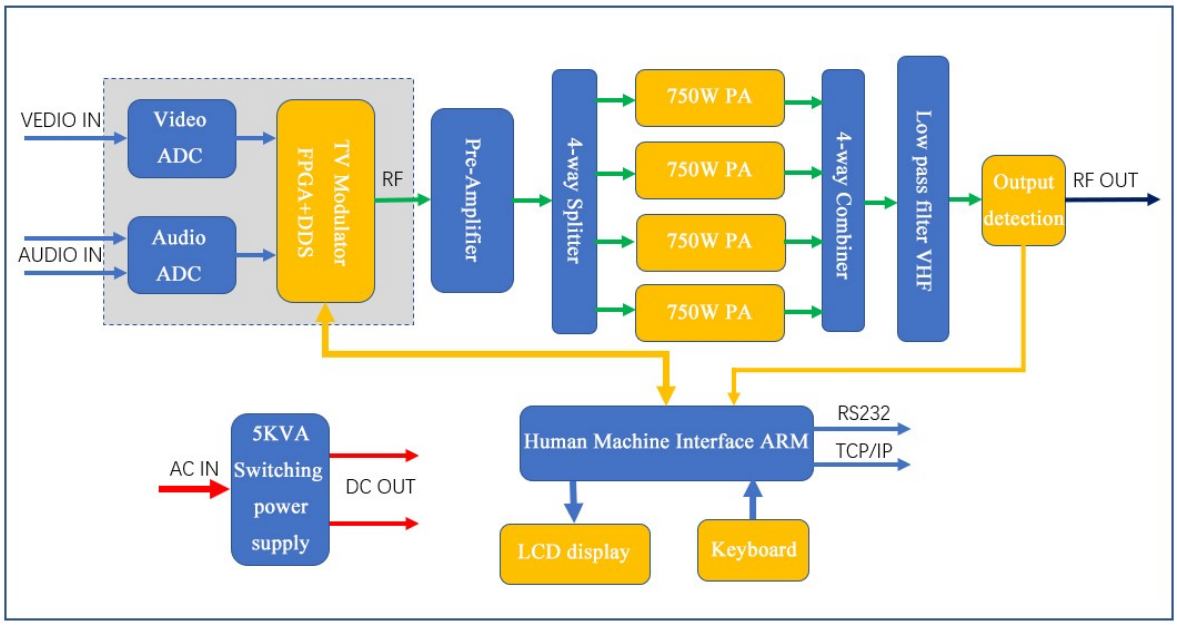
● It has the functions of no video, excessive standing wave ratio, over power, over voltage, over current, and over temperature protection to reduce equipment damage.

● With intelligent network management and monitoring, with RS232 and TCP / IP communication interfaces.

● It's using high-quality switching power supply, with over-voltage, over-current, under-voltage, over-temperature, short circuit, lightning protection and other protection measures, high efficiency, good voltage regulation range, strong ability to adapt to external power changes.

● It adopts high-quality high-flow axial flow fan, with good heat dissipation effect, keep the transmitter in a low temperature state, and extend the life of the transmitter.

ZHC518A-3000W(VHF)/C2 Analog TV Transmitter Diagram



Technical Specifications:

Overall performances:

1. Operating frequency band: VHF / UHF
2. Image carrier frequency deviation: ± 300Hz
3. Output power: 3000W
4. Output impedance: 50Ω
5. Inter-modulation distortion: ≤-50dB
6. Useless emission: ≤-50dB inside adjacent channels;
   ≤-65dB outside adjacent channels
7. RF output interface: 7/16” female or 7/8” Flange
8. Power supply: single phase 220VAC / 110VAC
9. Cooling method: forced air cooling
10. Working environment temperature: -10~+45℃
11. Dimensions: 483mm(width)x177mm(height)x650mm(depth)
12. Weight: 35Kg

Image performance:

1. Video input level: 1VP-P positive polarity
2. Video input impedance: 75Ω
3. Video in-band reflection loss: ≥35dB
4. Video input interface: BNC-K
5. Periodic clutter signal-to-noise ratio: ≥55dB
6. Continuous random wave SNR: ≥60dB (weighted),
   ≥55dB (un weighted)
7. Group delay: ±30ns
8. 2T square wave distortion: ≤1%
9. Distortion of brightness waveform: ≤1.2%

10. Non-linear brightness distortion: ≤3%
11. Differential gain DG: ≤±3%
12. Differential phase DP: ≤±3°
13. Color / bright gain difference: ≤1%
14. Color / bright delay difference: ±5ns
15. Modulation degree: ≤87.5%

Sound performance:

1. Sound / image carrier power ratio: -10dB
2. Sound carrier frequency deviation: ±200Hz
3. Audio input level: 0dBm ± 6dBm
4. Audio input impedance: 600Ω balanced or 10KΩ unbalanced
5. Audio input interface: XLR-K / BNC-K
6. Sound modulation capability: >±100KHz
7. FM signal-to-noise ratio: ≥70dB
8. Amplitude-frequency characteristic: ± 1dB
9. AM noise (no modulation): ≤-55dB
10. Internal carrier noise (100% modulation): ≤-50dB
11. Harmonic distortion: ≤0.3%
12. Maximum frequency deviation: ±50KHz
13. Pre-emphasis time constant: 50us