

ZHC518A-1000W/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 **1000W**.

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.

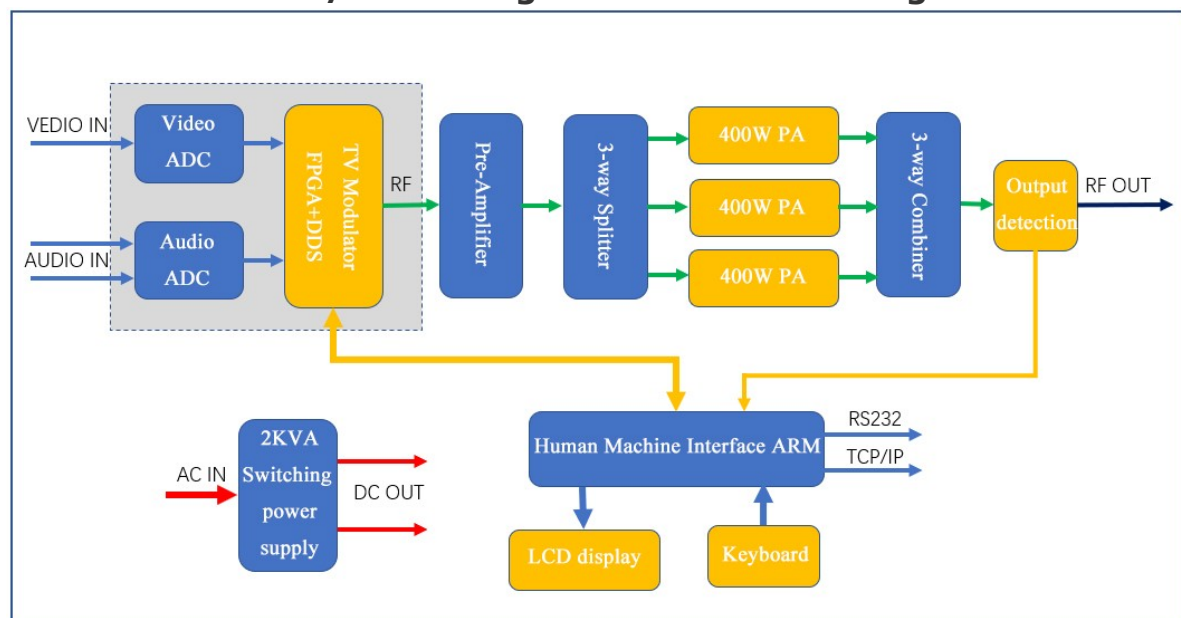
The whole Transmitter adopts 19 "standard stainless steel case, suitable for all levels of TV stations.

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-1000W/C2 Analog TV Transmitter Diagram



Technical Specifications:

Overall performances:

1. Operating frequency band: VHF / UHF
2. Image carrier frequency deviation: $\pm 300\text{Hz}$
3. Output power: 1000W
4. Output impedance: 50Ω

5. Inter-modulation distortion: $\leq -50\text{dB}$
6. Useless emission: $\leq -50\text{dB}$ inside adjacent channels;
 $\leq -65\text{dB}$ outside adjacent channels
7. RF output interface: 7/16" female
8. Power supply: single phase 220VAC / 110VAC
9. Cooling method: forced air cooling
10. Working environment temperature: $-10\sim+45^{\circ}\text{C}$
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: $\geq 35\text{dB}$
4. Video input interface: BNC-K
5. Periodic clutter signal-to-noise ratio: $\geq 55\text{dB}$
6. Continuous random wave SNR: $\geq 60\text{dB}$ (weighted),
 $\geq 55\text{dB}$ (un weighted)
7. Group delay: $\pm 30\text{ns}$
8. 2T square wave distortion: $\leq 1\%$
9. Distortion of brightness waveform: $\leq 1.2\%$
10. Non-linear brightness distortion: $\leq 3\%$
11. Differential gain DG: $\leq \pm 3\%$
12. Differential phase DP: $\leq \pm 3^{\circ}$
13. Color / bright gain difference: $\leq 1\%$
14. Color / bright delay difference: $\pm 5\text{ns}$
15. Modulation degree: $\leq 87.5\%$

Sound performance:

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