

ZHC929G-25W FM Tunnel Broadcast Remote Transmitter



1. Overview

ZHC929G-25W FM tunnel broadcast remote transmitter is a remote device in the tunnel broadcasting system that receives the signal from the front-end device and transmits the FM transmission signal. It and the near-end transmitter are the main transceiver equipment in the tunnel broadcasting system.

They are connected with the leaky cable through the optical cable. Or the cooperation of the transmitting antenna can effectively fill the coverage blind area and extend the coverage of the transmitting station. Mainly used in highway tunnels, underground parking lots, subway tunnels and station halls, civil defense facilities, schools, etc.

2. Features

ZHC929G-25W FM tunnel broadcasting remote transmitter mainly consists of six parts: optical module, band-pass filter, power amplifier, low-pass filter, power supply, and central control module MCU.

The power amplifier and the main control board are fully enclosed in the chassis. The equipment naturally dissipates heat, and all input and output ports are connected and led out from the rear panel.

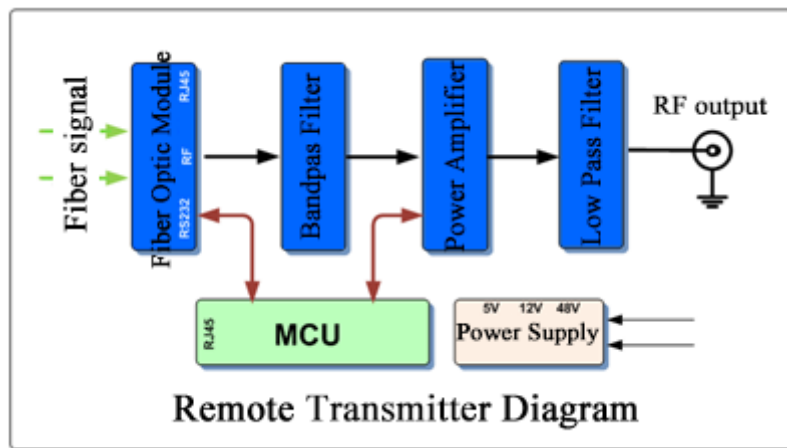
This transmitter is called a remote transmitter in the repeater system, and it must be used in conjunction with a near-end transmitter that includes signal source receiving, modulation, and optical transmission.

The power supply part converts 220V alternating current into direct current needed by the transmitter. The main control board provides the functions of direct current, AD conversion, network port communication, and receiving optical alarm signals required for the work of each module. The power amplifier is composed of three parts: power amplification, filter, and power detection.

Collect analog voltage parameters such as power, voltage, current, temperature, and transmit them to the main control unit, and at the same time accept and execute the control commands of the main control unit, and control the output power of the power amplifier according to these collected data. At the same time, the collected data is transmitted back to the near-end transmitter through the optical cable.

- ✧ The bidirectional optical module simultaneously returns monitoring data to the near-end transmitter.
- ✧ Broadband linear amplification and high linear power amplification, effectively reducing inter-modulation and out-of-band products.
- ✧ Realize remote monitoring through the built-in 4G router of the local transmitter.
- ✧ The RJ45 network port can be connected to a computer to display configuration working parameters. The working parameters and status can also be easily and quickly modified and viewed remotely through the communication port of the near-end transmitter.

3. Diagram



4. Technical Specifications

- Optical power input level-30dBm ~-8dBm
- Wavelength of optical signal 1310nm / 1550nm
- Optical input interface type FC/UPC
- Number of optical module ports Support 2 optical ports

- Optical loop function support
- Optical transceiver alarm function support
- Optical module rate 1.25Gb/s/ SHP type
- Networking function Star, chain, ring and hybrid networking, etc.
- RF output frequency range 87.00 MHz ~ 108.00MHz (or designated frequency)
- RF output power 0~25W continuously adjustable (other power can be customized)
- RF output impedance 50Ω
- RF output connector L16K
- Allowable deviation of RF output power $< \pm 10\%$
- RF output power stability $< \pm 3\%$
- Inter-modulation products $\leq -35\text{dBc}$
- Out-of-band harmonics $< -60\text{dBc}$
- Operating temperature range $-10^{\circ}\text{C} \sim 40^{\circ}\text{C}$
- Power supply voltage AC220V / 50Hz
- External communication TCP/IP (RJ45) and SMS modem
- Cooling method Natural convection cooling
- Dimensions 575mm×468mm×237mm
- Weight 35kg