WEP5540

Cloud Broadcasting Control Host

Description

The WEP5540 is a multi-network, multi-functional cloud broadcasting control host that integrates diverse control capabilities. When used with different upstream and downstream devices, it can form various application systems. It is mainly designed for 4G/5G/IP network transmission, wireless/wired co-cable transmission addressable systems, rural broadcasting village-wide sound projects, and small to large-scale broadcasting engineering systems. Powered by an ARM core and a DSP radio chip, the unit follows a design philosophy of diversified integration and optimized resource utilization. It incorporates functions such as emergency broadcasting, constant-voltage power amplification, monitoring, microphone interfaces, and power synchronization control, delivering a simple, practical, stable, and energy-efficient solution.

Features

- Equipped with a display screen to view current signal strength and playback status.
- Supports 2 RDS dual-channel receivers for emergency and regular audio reception.
- Provides 2 AUX line inputs and 1 AUX line output.
- Supports multimedia playback via USB drive.
- Built-in 10/100M adaptive Ethernet port for IP network data return and network broadcast control.
- Supports upstream program playback, with priority for local emergency microphone broadcasts.
- Digital volume control for enhanced stability and reliability.
- Includes amplifier load detection to monitor speaker faults in real time.
- Supports TS stream and GPRS remote firmware updates for future functional upgrades.
- Can connect an external FM transmitter for wireless coverage in villages or rural areas.
- Integrates reception, encoding, and broadcast control management with high integration.
- Emergency broadcasts and upstream broadcasts have priority; local broadcasts cannot interrupt or interfere with upstream or cloud broadcast signals.
- Supports telephone input and SMS reception, as well as USB playback; telephone and SMS inputs have the highest priority.
- Rear panel includes wireless/wired/FM signal RF input, IP (RJ45) input/output interfaces, two audio line inputs, one audio line output, one RS232 serial port, one RDS output, one RDS input, one network management port, one 4G/5G module, one FM input, 220V 5A controlled power output, and a built-in power amplifier output of over 200W.

- FM signal input port includes lightning protection.
- Supports priority-based broadcasting, with emergency broadcasts taking precedence; emergency activation via phone, SMS, or network management.
- Features security verification using a hardware digital signature module for emergency information processing.
- Built-in monitoring speaker for high-fidelity signal monitoring.
- Provides information feedback capability, reporting device operating status and cloud broadcast message responses to the upstream platform.
- Supports remote on/off control of terminals such as column speakers and receiver amplifiers, with front-panel volume adjustment.
- Designed with consideration for user environment and conditions, capable of 24-hour operation and unattended use.
- Power switch button on the front panel for easy operation, with encrypted command-based power-on control.
- Includes power-off memory function, automatically resuming playback of pre-shutdown programs upon restart.

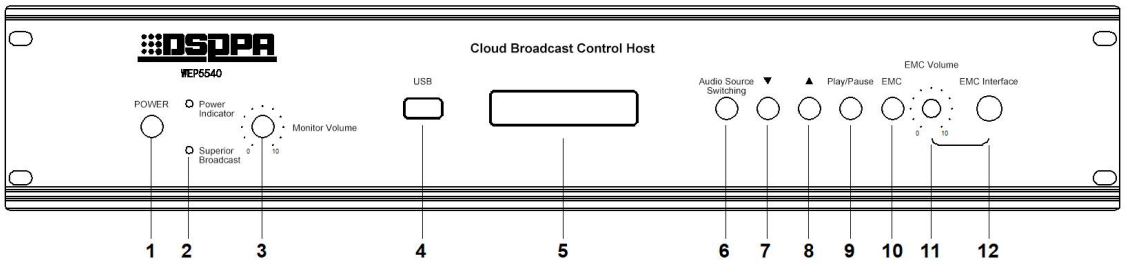
Specifications

Model			WEP5540
Input Interfaces	1 Wireless Input		F-type connector (75Ω)
	1 Wired Input		F-type connector (75Ω)
	1 FM Input		F-type connector (75Ω)
	1 IP Input		100/1000Mbps, UDP protocol
	1 GPRS Receiving Module		Supports remote emergency insertion via SMS or phone call
	2 Audio Line Inputs		RCA connector
	1 RDS Input		BNC connector
	1 USB Input		USB port
			Codec format: MP3
	1 Microphone Input		6.35Mm jack
	IP Output		1 IP output, UDP protocol, 100/1000Mbps network port
	1 Audio Output		RCA connector
	1 Monitoring Speaker		Output power: 3W
	1 FM Output		F-type connector (75Ω)
	1 Controlled Power Output		220V, 5A
Amplifier Output	Output Power		Greater than 200W, constant-voltage output
Technical Parameters	Reception Mode		Supports FM/IP
	Reception Frequency Range		FM: 87MHz~108MHz
	Frequency Output Range		76-108MHZ
	RF Signal Input Level		FM: ≤-50dBm
	Modulation Output Parameters	Distortion (100% modulation)	＜0.5%
		Frequency Response (no pre-emphasis/de-em	±0.5dB

		phasis)	
		Signal-to-Noise Ratio (100% modulation)	> 60dB
		Left/Right Channel Separation	> 40dB
		Left/Right Channel Level Difference	＜0.4dB
		Carrier Frequency Tolerance	≤2KHZ
		Carrier Output Level	≥110dBuV
		Spurious AM Noise	≤-45dB
		Audio Frequency Response (100Hz-10kHz)	≤1.5dB, ≥-1.5dB
		Audio Frequency Response (40Hz-15kHz)	≤1.5dB, ≥-3dB
		Audio Total Harmonic Distortion	≤1.5% (±75kHz frequency deviation, 1kHz test frequency)
	Audio Encoding/Decoding	Codec	MPEG-1 Layer 2
		Sampling Rate	48KHz
		Bit Depth	24-bit
		Bitrate	64Kbps
System	LCD display with button operation		
	Simplified Chinese user interface		
	Temperature Range	Operating temperature: 0~45°C; storage temperature: -20~80°C	
	Power Supply	AC 100~265V±10%, 50/60Hz	
	Power Consumption	<135W	

Front / Rear Panel

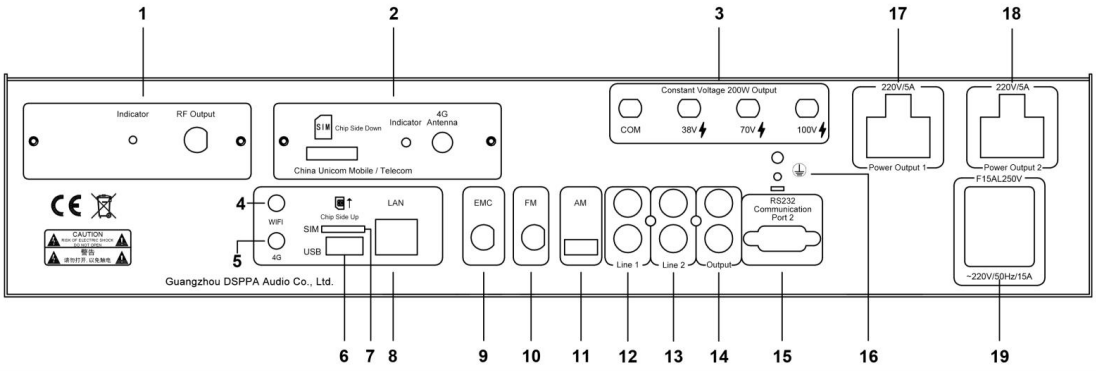
Front Panel



1. Power Switch Control
Operation/Standby.
2. Function Indicator
Power indicator.
Steady on indicates receiving upstream broadcast; flashing indicates pending upstream broadcast.
3. Monitoring Volume Control

Starting from the minimum level at the far left; rotate clockwise to increase the volume.
4. USB Port
Supports USB drives containing MP3 audio files for playback.
5. Display Screen
Provides real-time information of the device and displays corresponding operation menus.
6. Audio Source Switching
Allows switching between local audio sources.
7. UP Key
Multi-function button: short press to move up; long press to decrease the volume.
8. Down Key
Multi-function button: short press to move down; long press to increase the volume.
9. Play/Pause/Confirm
Multi-function button for playback and confirmation operations.
10. Emergency Microphone Button
Press to activate emergency microphone broadcasting during emergencies.
All other ongoing broadcasts will be automatically interrupted. Press again to exit the emergency microphone mode.
11. Emergency Microphone Volume Control
Starting from the minimum level at the far left; rotate clockwise to increase the volume.
12. Emergency Microphone Input
6.3mm MIC input jack.

Rear Panel



1. Indicator
RF Output Port (F-type connector).
Steady on indicates RF output active; flashing indicates RF output disabled.
2. Telephone 4G Module
Supports telephone broadcasting and TTS voice broadcasting. Steady on indicates broadcasting; flashing indicates standby.
3. Constant-Voltage Amplifier 200W Output
Provides 100V, 70V, and 38V output levels. COM serves as common ground.
4.Wi-Fi Antenna Interface
5.4G Antenna Interface
For connection to external 4G/5G module.
6.TTL Serial Interface
Reserved communication port.
7.SIM Card Slot

Standard size SIM card.
8.Network Communication Management Interface (Refer to the OTE9332TS receiver amplifier manual for web configuration usage)
Network broadcast communication and configuration management port.
9. RDS Emergency Reception
Priority emergency radio interface (F-type female connector, imperial thread)
10. FM Reception
For standard commercial FM radio reception.
11.AM Input
For standard commercial AM radio reception.
12.Line Input 1
Audio input.
13. Line Input 2
Audio input.
14.Line Output
15.RS232-RDS Communication Port 2
For connection to transmitter.
16.Grounding Terminal
17.Power Output 1 (If the transmitter was previously activated, clicking Power 1 will delay shutdown by 5 seconds.)
220V/50Hz/5A.
18.Power Output 2
220V/50Hz/5A.
19.Power Input
~220V/50Hz/15A.