DTVANE DMB 8800A

DMB-8800A Premium H.264 High Profile HDMI AV with WiFi RTSP Video Streaming Encoder IPTV Live Streaming

Brand: DTVANE | **Model:** DMB 8800A

1. Introduction

The DTVANE DMB-8800A is a high-performance H.264/AVC video streaming encoder designed for professional IPTV and live streaming applications. It supports multiple video inputs including HDMI and CVBS, and outputs streams over IP using various protocols such as RTSP, HTTP, UDP, and RTMP. This device is ideal for broadcasting, surveillance, and other scenarios requiring reliable and high-quality video encoding and distribution. This manual provides detailed instructions for setting up, operating, and maintaining your DMB-8800A encoder, ensuring optimal performance and longevity.

2. Key Features

- **Input Versatility:** Equipped with 1 HDMI input and 2 CVBS inputs for diverse source compatibility.
- **Robust IP Output:** Supports TS over IP output (1000M) with HTTP, UDP, RTSP, RTMP, and ONVIF protocols.
- **HDCP Support:** Compatible with High-bandwidth Digital Content Protection for secure content transmission.
- **Multi-Stream Capability:** Capable of outputting up to 4 TS over IP streams from each HDMI/CVBS input simultaneously.
- **Optimized Streaming:** Delivers low bitrate streams with high-quality image retention.
- **Wireless Connectivity:** Integrated Wi-Fi support for flexible network deployment.
- **Cross-Platform Compatibility:** Supports simultaneous display on multiple devices and is compatible with Windows XP/VISTA/SERVER2003/SERVER2008/WIN7 (32/64-bit) and LINUX operating systems.

3. Product Components and Interfaces

Figure 3.1: Front view of the DMB-8800A Video Encoder. This image displays the compact design and the primary input/output ports on the front panel, including Ethernet, AV inputs, HDMI, and audio input.

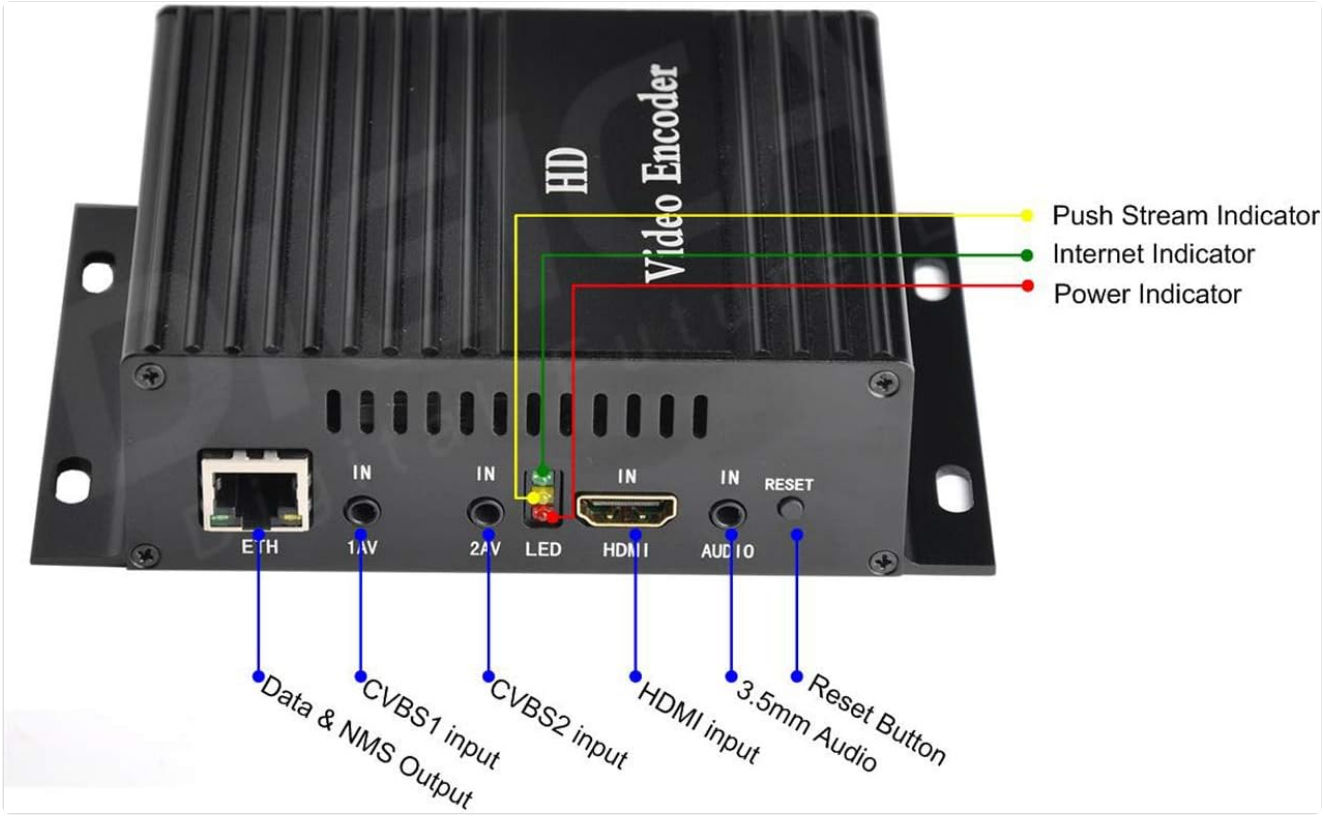

Figure 3.2: Detailed view of the DMB-8800A encoder's front panel with labeled ports and indicators. This image highlights the Ethernet (ETH) port, CVBS1 input (1AV), CVBS2 input (2AV), LED indicators (Power, Internet, Push Stream), HDMI input, 3.5mm Audio input, and Reset button.

ETH: Ethernet port for network connection and NMS (Network Management System) output.

1AV / **2AV:** CVBS (Composite Video Broadcast Signal) inputs for analog video sources.

LED: Indicator lights for Power (Red), Internet (Green), and Push Stream (Yellow).

HDMI: High-Definition Multimedia Interface input for digital video and audio sources.

AUDIO: 3.5mm audio input jack.

RESET: Button to reset the device to factory settings.

Figure 3.3: Various perspectives of the DMB-8800A encoder, showcasing its compact form factor and heat dissipation design. This provides a comprehensive view of the device's physical attributes.

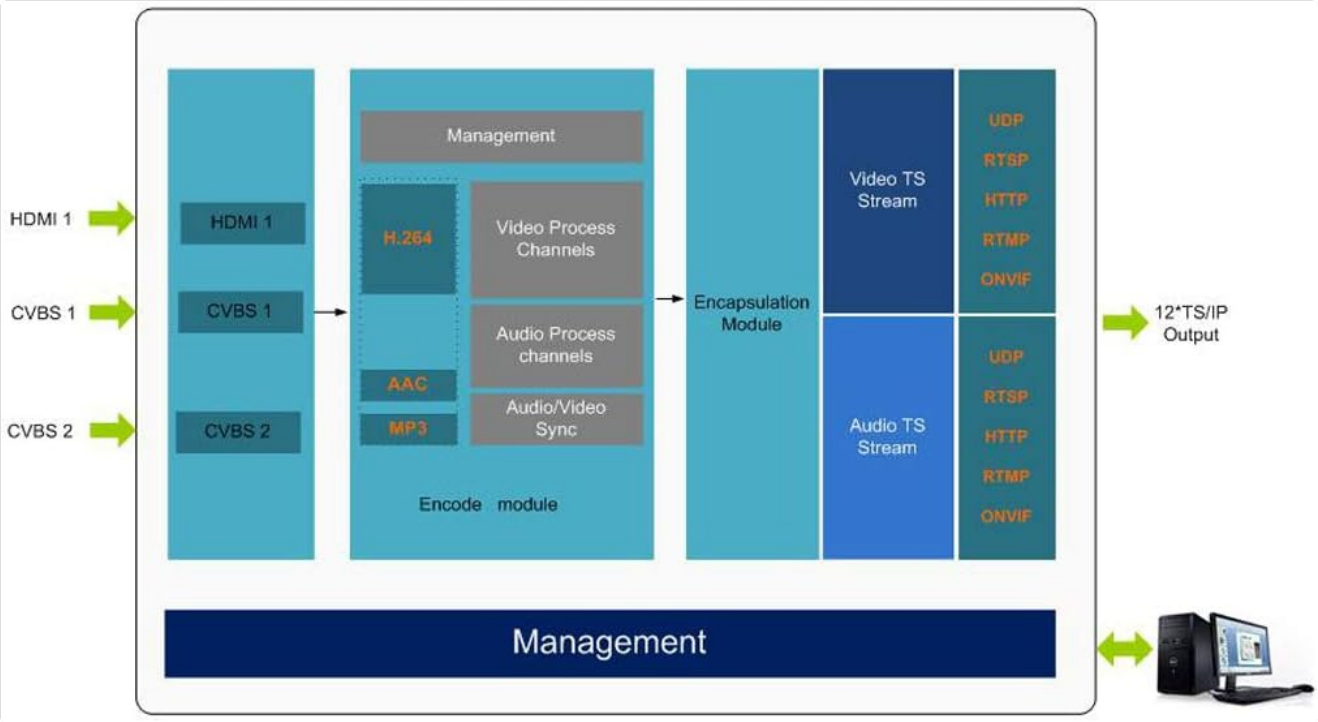

Figure 3.4: Internal block diagram illustrating the video and audio processing flow within the DMB-8800A encoder. It shows the path from HDMI and CVBS inputs through H.264, AAC, and MP3 encoding, synchronization, encapsulation, and finally to IP output via various protocols.

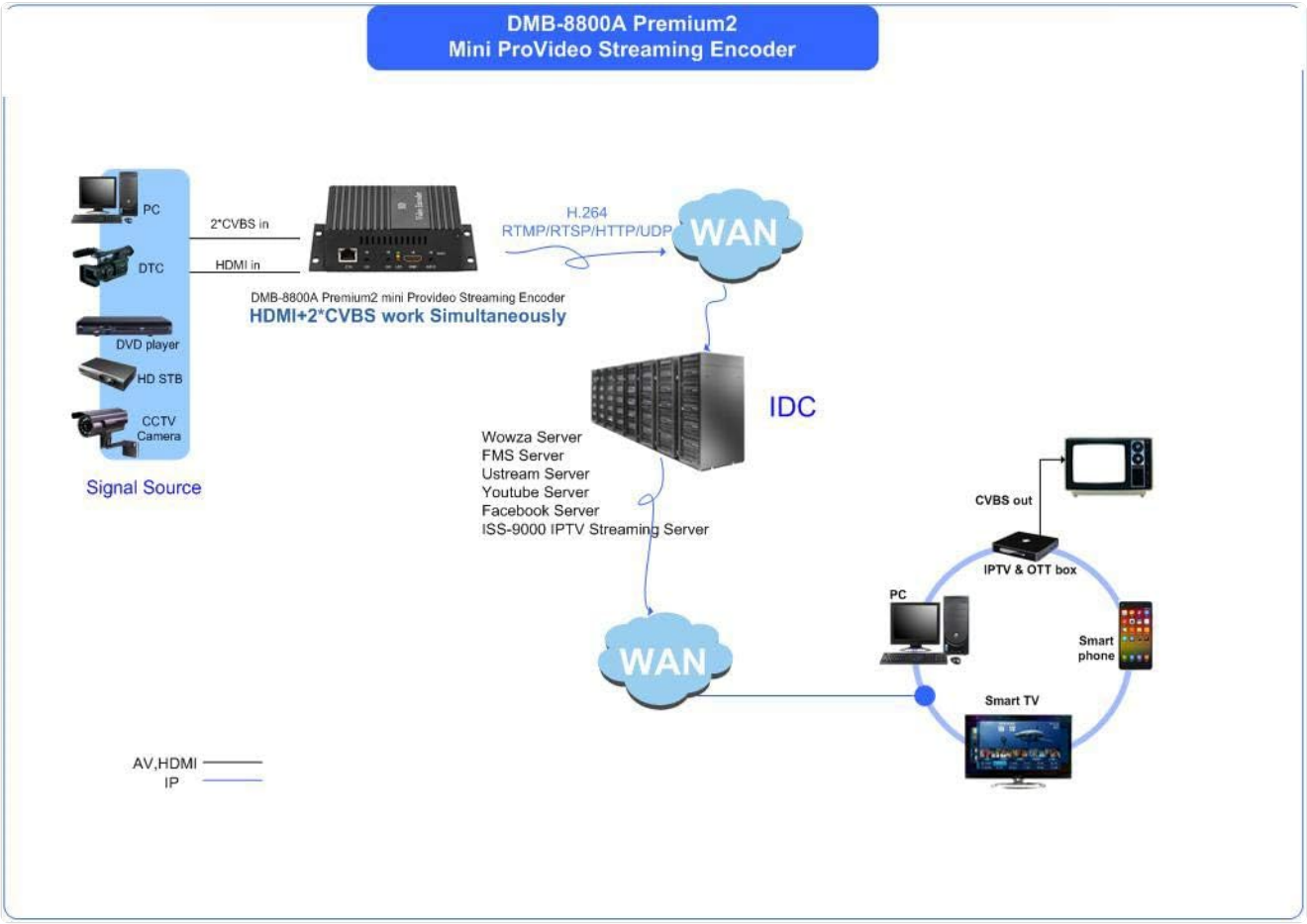

Figure 3.5: Typical application diagram for the DMB-8800A encoder. This diagram demonstrates how the encoder integrates into a streaming ecosystem, showing signal sources (PC, DVD player, CCTV camera), the encoder, WAN connection to servers (Wowza, FMS, Youtube, Facebook, Ustream, ISS-9000 IPTV), and various receiving devices (PC, IPTV & OTT box, Smart Phone, Smart TV).

4. Setup Instructions

Follow these steps to set up your DMB-8800A encoder:

1. **Connect Video Source:** Connect your HDMI or CVBS video source(s) to the corresponding input ports (HDMI, 1AV, 2AV) on the front panel of the encoder.
2. **Connect Audio Source:** If using an external audio source, connect it to the 3.5mm AUDIO input jack. If using HDMI, audio will be embedded with the video signal.
3. **Network Connection:** Connect an Ethernet cable from the ETH port on the encoder to your network router or switch. For Wi-Fi setup, refer to the web-based configuration interface after initial power-up.
4. **Power On:** Connect the 12V DC power adapter to the encoder's power input and then plug it into a power outlet. The Power LED (Red) should illuminate.
5. **Access Web Interface:** Once powered on and connected to the network, use a web browser on a computer connected to the same network to access the encoder's web-based configuration interface. The default IP address can usually be found in the quick start guide or by using a network scanning tool.

Ensure all connections are secure before powering on the device.

5. Operation Guide

The DMB-8800A encoder is primarily configured and operated via its web-based interface. Below are key operational aspects:

5.1. Video Configuration

- **Video Compression:** H.264/AVC High Profile Level 4.0.
- **Input Mode:** Supports PAL and NTSC for CVBS inputs.
- **Resolution Settings:**
  - **HD Main Stream:** 1920x1080, 1680x1056, 1280x720, 1024x576, 850x480, 720x576, 720x540, 720x480, 720x404, 704x576, 640x480, 640x360, auto.
  - **HD Sub-Stream:** 1280x720, 800x450, 720x576, 720x540, 720x480, 720x404, 704x576, 640x480, 640x300, 352x288, 320x240, 320x180, auto.
  - **CVBS Main Stream (NTSC):** 720x480, 640x480.
  - **CVBS Main Stream (PAL):** 720x576, 704x576.
  - **CVBS Sub-Stream (NTSC):** 320x240.
  - **CVBS Sub-Stream (PAL):** 352x288.
- **Bit-rate:** Configurable from 16kbps to 12Mbps, supporting CBR (Constant Bit Rate) and VBR (Variable Bit Rate) modes.
- **Video Pre-processing:** Features include Noise reduction, Sharpening, and Filtering for enhanced video quality.

5.2. Audio Configuration

- **Audio Compression:** Supports AAC and MP3 formats.
- **Sampling Rate:** Adaptive, with selectable re-sample options.
- **Sampling Accuracy:** 24-bit.
- **Bit Rate:** Selectable options including 48000, 64000, 96000, 128000, 160000, 192000, 256000.
- **Re-sample Rates:** 32000, 44100.

5.3. IP Output and Protocols

- **Transport Protocol:** TS over IP output, supporting RTSP, HTTP, UDP, and RTMP protocols.
- **Multi-Stream Output:**
  - **HD to IP Output:** 4*TS over IP streams (HTTP/RTSP/UDP or RTMP protocol). Typically, 2 channels with higher resolution (up to 1080P) for large screen applications and 2 channels with lower resolution (up to 720P) for small screen applications.
  - **CVBS to IP Output:** 4*TS over IP streams (HTTP/RTSP/UDP or RTMP protocol). Typically, 2 channels with higher resolution (D1) for large screen applications and 2 channels with lower resolution (CIF) for small screen applications.
- **Connector:** RJ45, 100M Ethernet.

Detailed configuration of these parameters, including network settings, stream destinations, and advanced features, is performed through the intuitive web-based management interface. Refer to the on-screen help within the interface for specific parameter definitions and recommended settings.

6. Technical Specifications

Category	Specification	Details

Category	Specification	Details
Video	Compression	H.264/AVC High Profile Level 4.0
	Inputs	HD (supports HDCP protocol), CVBS
	Analog Video Input Mode	PAL, NTSC
	HD Main Stream Resolution	1920x1080, 1680x1056, 1280x720, 1024x576, 850x480, 720x576, 720x540, 720x480, 720x404, 704x576, 640x480, 640x360, auto
	HD Sub-Stream Resolution	1280x720, 800x450, 720x576, 720x540, 720x480, 720x404, 704x576, 640x480, 640x300, 352x288, 320x240, 320x180, auto
	CVBS Main Stream Resolution	NTSC: 720x480, 640x480; PAL: 720x576, 704x576
	Bit-rate	16kbps~12Mbps, CBR/VBR
Audio	Compression	AAC, MP3
	Sampling Rate	Adaptive, selectable of re-sample
	Sampling Accuracy	24-bit
	Bit Rate	48000, 64000, 96000, 128000, 160000, 192000, 256000
Outputs	Transport Protocol	TS over IP output, RTSP/HTTP/UDP or RTMP protocol
	IP Stream Output	4*TS over IP stream out per input (HD/CVBS)
	Connector	RJ45, 100M Ethernet
System	Configuration Interface	Web-based
	Upgraded	Via network
	Connector	RJ45, 100M Ethernet interface
Physical & Power	Voltage	12V DC
	Consumption	5W
	Operating Temperature	0~50°C
	Dimensions & Weight	200mm(W) x 100mm(D) x 150mm(H), 1kg/pc

Category	Specification	Details
General	Compatible Devices	Television
General	Connector Type	Ethernet, HDMI, Wi-Fi

7. Maintenance

Proper maintenance ensures the longevity and reliable operation of your DMB-8800A encoder:

- **Cleaning:** Regularly clean the exterior of the device with a soft, dry cloth. Avoid using liquid cleaners or aerosols directly on the unit.
- **Ventilation:** Ensure the encoder is placed in a well-ventilated area. Do not block the ventilation slots to prevent overheating.
- **Environmental Conditions:** Operate the device within the specified temperature range (0~50°C) and avoid environments with high humidity or excessive dust.
- **Firmware Updates:** Periodically check the manufacturer's website for firmware updates. Updating the firmware via network can improve performance, add features, or resolve issues.

8. Troubleshooting

If you encounter issues with your DMB-8800A encoder, refer to the following common troubleshooting steps:

- **No Power:**
  - Ensure the power adapter is securely connected to the encoder and a working power outlet.
  - Verify the power outlet is active.
- **No Video Input Signal:**
  - Check if the video source (e.g., camera, DVD player) is powered on and outputting a signal.
  - Ensure the HDMI or CVBS cables are securely connected to the correct input ports on the encoder.
  - Verify the input resolution and format are supported by the encoder (refer to Section 6: Technical Specifications).
- **No Network Connectivity:**
  - Check the Ethernet cable connection to the ETH port and your router/switch.
  - Verify your network settings (IP address, subnet mask, gateway) in the encoder's web interface.
  - Ensure your router/switch is functioning correctly.
  - For Wi-Fi, ensure the Wi-Fi module is enabled and correctly configured with your network credentials.
- **Streaming Issues (Buffering, Disconnections):**
  - Check your internet connection speed and stability.
  - Reduce the video bitrate or resolution in the encoder's settings if your network bandwidth is limited.
  - Verify the streaming server (e.g., RTMP server) is online and correctly configured.
  - Ensure firewall settings on your network or computer are not blocking the streaming protocols.
- **Web Interface Inaccessible:**

- Ensure your computer is on the same network segment as the encoder.
- Verify the encoder's IP address. If unknown, you may need to use a network scanning tool or reset the device to factory defaults (using the RESET button) to revert to a known default IP.

For persistent issues, consult the manufacturer's support resources or contact technical support.

9. Warranty and Support

The DTVANE DMB-8800A Video Streaming Encoder comes with a comprehensive warranty and support package:

- **Manufacturer Warranty:** A five-year manufacturer warranty covers defects in materials and workmanship from the date of purchase.
- **Lifetime Technical Support:** Enjoy free lifetime technical support for your product. This includes assistance with setup, configuration, troubleshooting, and general inquiries.
- **Customization Services:** The manufacturer also provides various customization options, such as logo printing, function adjustments, or firmware modifications.

For warranty claims, technical assistance, or customization inquiries, please refer to the contact information provided on the official DTVANE website or your purchase documentation.