

Universal Multifunction Converter & Scaler

Model: PANIO CM55

HDMI / DVI / VGA / YPbPr / CVBS | Mirror | Scaler | Audio Embed / De-embed

1. Product Overview

The CM55 is a versatile universal multifunction converter and scaler that supports seamless conversion between analog and digital signals, including HDMI, DVI, VGA, YPbPr, and CVBS. Equipped with a universal DVI-I interface, it allows easy connection of various adapters for flexible signal interchange. Featuring advanced scaling (upscaling/downscaling), 180° mirror function, and integrated audio embedding/de-embedding capabilities, it intelligently detects input and output sources to ensure stable operation. Widely applicable in professional environments such as conference rooms, digital signage, education, control centers, and security monitoring systems, it delivers reliable performance for diverse signal conversion needs.

2. Key Features

- **Multifunctional Signal Conversion**

Supports bidirectional conversion between HDMI, DVI, VGA, YPbPr, and CVBS signals, with a universal DVI-I interface for easy adapter connection.

- **Audio Embedding & De-embedding**

Enables audio signals to be embedded into or extracted from video signals, facilitating flexible system integration.

- **Advanced Scaling & Mirror Functions**

Professional scaling engine for upscaling/downscaling and precise image fitting; 180° mirror rotation adapts to diverse installation layouts.

- **Flexible Image Adjustment**

Image zoom range of -10% to +10%; adjustable color, brightness, contrast, and sharpness for optimal visual effects.

- **Rich Output Resolutions**

Supports 26 output resolutions including 1080P/1080i/720P/576P/480P, compatible with most display devices.

- **Automatic Signal Detection**

Intelligently identifies input and output sources, ensuring seamless switching without manual configuration.

3. Technical Specifications

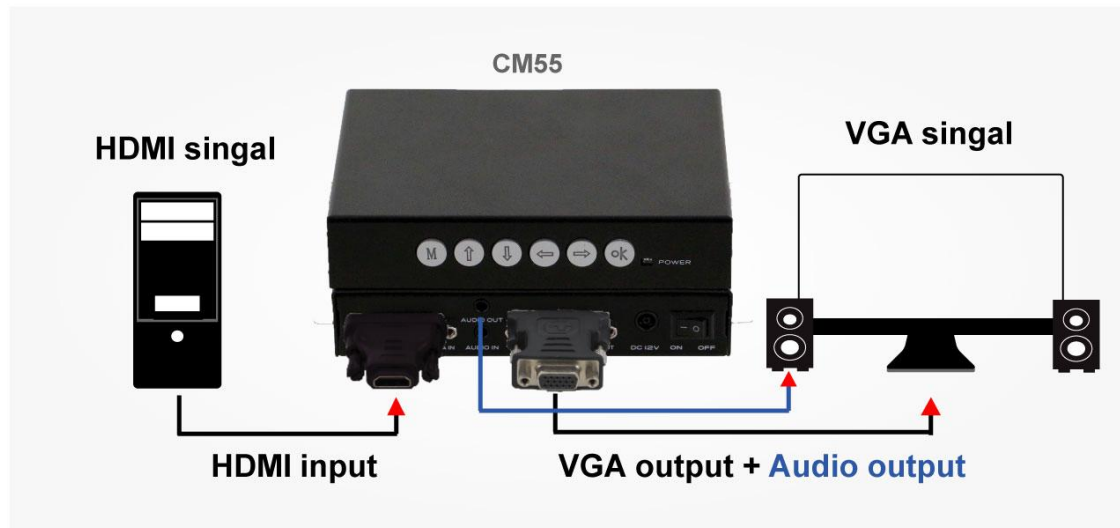
Model Name	CM55 Universal Multifunction Converter & Scaler
Input Resolution	HDMI / DVI (DVI-I): 800×600–1920×1200VGA (DVI-I): 800×600–1920×1200, 0.7Vp-p, 75ΩYPbPr (DVI-I): 480p / 576p / 720p / 1080i / 1080pCVBS (DVI-I): NTSC / PAL, 1Vp-p, 75Ω
Output Resolution	HDMI / DVI / VGA: 800×600–1920×1200YPbPr: 480p / 576p / 720p / 1080i / 1080pCVBS: NTSC / PAL
Audio Functions	Audio Embedding: Integrate audio into video signalsAudio De-embedding: Extract audio from video signals
Image Adjustment	Zoom Range: -10% to +10%Mirror Function: 180° rotationAdjustable Parameters: Color, brightness, contrast, sharpness
Physical Dimensions	152mm(W) × 96mm(D) × 27mm(H)
Net Weight	200g
Housing	Metal Enclosure
Power Requirements	Input: DC 12V 1.5A (Power adapter included)
Operating Environment	Temperature: 0°C ~ 50°C (32°F ~ 122°F)Humidity: 10%–95% RH (non-condensing)

4. Important Installation Notes

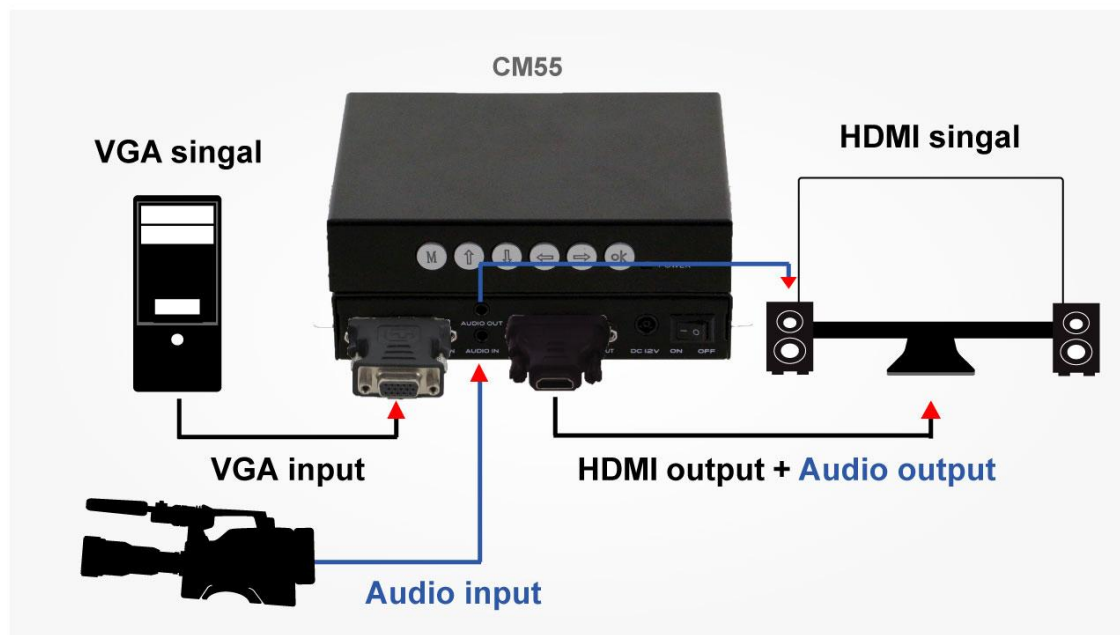
1. The product contains precision electronic components; use a surge protection device to avoid damage from voltage surges or lightning strikes.
2. Ensure all connections are secure before powering on the device to prevent signal interruption or hardware damage.
3. Use only the original DC 12V 1.5A power adapter provided to maintain safety and optimal performance.
4. Place the device in a well-ventilated area; do not block the metal housing to ensure effective heat dissipation.
5. When using adapters (HDMI-to-DVI, VGA-to-DVI, YPbPr-to-DVI), ensure they are compatible with the signal standards to avoid conversion errors.
6. Avoid hot-swapping devices during operation to prevent signal loss or potential damage to the converter.

Diagram

HDMI input to VGA+Audio output



VGA+Audio input to HDMI+Audio output



5. Package Contents

Item	Quantity	Remarks
CM55	1 unit	Metal enclosure, universal DVI-I interface
DC 12V 1.5A Power Adapter	1 piece	

HDMI-to-DVI Adapter	1 piece	For HDMI signal connection via DVI-I port
VGA-to-DVI Adapter	1 piece	For VGA signal connection via DVI-I port
YPbPr-to-DVI Adapter	1 piece	For YPbPr signal connection via DVI-I port
User Manual	1 piece	

6. Ideal Applications

Conference Rooms: Supports flexible connection of laptops, projectors, and displays via multiple interfaces. Automatic signal detection and audio embedding/de-embedding simplify video conference setups, enhancing meeting efficiency.

Multimedia Classrooms: Enables teachers to connect various devices (e.g., computers, cameras, DVD players) and convert signals to match classroom displays. Adjustable image parameters and mirror function adapt to different teaching layouts.

Digital Signage & Exhibition Centers: Ideal for venues requiring signal conversion between diverse media players and display screens. 26 output resolutions ensure clear, consistent content presentation across multiple displays.

Monitoring & Command Centers: Facilitates signal conversion between surveillance cameras, recorders, and monitors. Stable performance and wide compatibility support 24/7 operation in security and control scenarios.

Ticket Counters & Service Desks: Simplifies connection of computers, printers, and display terminals. Compact design saves space, while reliable signal conversion ensures smooth service operations.

Family Video & Digital Media: Compatible with various home entertainment devices (e.g., set-top boxes, game consoles, old video players), bridging analog and digital signal gaps for versatile home use.