

TELEPRESENTER™ M4



PRACTICAL PRESENTATION AND COLLABORATION

The Telepresenter M4 is a content production and distribution system for digital networks. Designed for recording and streaming high-quality presentations, the M4 combines high-resolution graphics (RGB/DVI) with video feeds and stereo audio into one multimedia file, which is then made available for either real time viewing or on demand playback. The M4 allows for interactive presentations so users can collaborate in real time.

Traditionally, authoring sophisticated media presentations usually required an outside production firm or dedicated staff, which are expensive approaches. Several pieces of costly equipment would be needed to capture the various media sources and combine them in a meaningful way into a multimedia file. Furthermore, encoding these files so they can be streamed on the Internet can be cumbersome and time intensive, and still more hardware is needed for streaming. The Telepresenter M4 fully automates this process by offering a dedicated hardware solution with a powerful set of features.

The Telepresenter M4 allows users to:

- ◆ Capture—several multimedia feeds: graphics, video, and audio,
- ◆ Compose—these feeds with PiP into a single multimedia stream,
- ◆ Encode—the stream into a standard MPEG-4 (H.264) file,
- ◆ Cast—that file on the Internet using realtime streaming protocols,
- ◆ Archive—the stream for on-demand viewing, and
- ◆ Collaborate—with other Telepresenters or other audience PCs.

The Telepresenter M4 introduces support for up to WUXGA (1920x1200) input resolutions and PiP (Picture In Picture) video and graphics overlay. The M4 is a dedicated hardware solution that combines simple operation with a powerful set of features. Enjoy universal interoperability with any RGB/DVI source: laptops, PCs, MACs, document cameras, diagnostic equipment, etc

The M4 is easy to operate, simply plug in RGB (laptop, document camera, etc), DVI, video, and audio sources. Start and stop sessions using the web interface, serial commands or the ubiquitous Google calendar. The input signals will be automatically detected by the system and combined dynamically in a PiP (Picture in Picture) format. At the start of a session, this combined signal will be encoded as an MPEG-4 file, and will then be available for streaming, recording and collaborating.

APPLICATIONS

- ✓ Presentation and Lecture Capture
- ✓ Distance Learning
- ✓ Corporate Training
- ✓ Telemedicine
- ✓ Videoconference Recording
- ✓ Municipal, State and, Federal Government Communications

FEATURE HIGHLIGHTS

• INTEGRATED VIDEO AND GRAPHICS

M4 technology integrates high resolution graphics and video sources into a PiP (Picture in Picture) or Picture-by-picture format for Flash or H.264 playback

• PiP CUSTOMIZATION

Robust control set available for Picture-In-Picture technology, logo insertion and textual description. Graphical and dynamic text overlays add details.

• CHANNEL/SESSION TEMPLATES

User-defined preset templates simplify session setup

• SCHEDULING

Schedule one or more Telepresenters using Google Calendar or other iCalendar based tools

• ROBUST

Embedded Linux kernel for secure, crash-free operation

• SCALABLE

N*Cast technology allows for maximum scalability with remote users if streamed through multicast. Alternatively, an embedded unicast server supports up to 25 users as well

• GRAPHICS RESOLUTION

Supports up to WUXGA (1920x1200) capture and streaming capabilities

• GRAPHICS QUALITY

Retain full integrity of original image using motion adaptive de-interlacing

• RECORD CAPABILITIES

Archiving feature captures any source to the M4 for later download or remote viewing. Transcode to multiple H.264 formats for widespread distribution.

• AUDIO CAPABILITIES

Audio input is fully synchronized with the video and graphics presentation for flawless playback

• PLAYBACK OPTIONS

Recorded archives auto-upload to a VOD server. H.264 encoding is compatible with Flash Media players.

• DESKTOP PLAYERS

Anyone connected to the network can view a Telepresentation via a web browser and media player (Flash, Quicktime, Real, Windows Media Player)

TELEPRESENTER™ M4



TECHNICAL SPECIFICATIONS

GRAPHIC AND VIDEO INPUTS

DVI-D (Laptops, HD Video)
RGB (DB15), Y-Pr-Pb
S-Video
Composite Video



GRAPHICS RESOLUTIONS & PERFORMANCE

WUXGA, 1920x1200, 24 or 30 fps
UXGA, 1600x1200, 30 fps
SXGA, 1280x1024, 30 fps
XGA, 1024x768, 60 fps
SVGA, 800x600, 60 fps
Video, 720x480, 300x240, 720p (HD) - 30 fps
1080p (HD) - 24 or 30 fps

GRAPHICS OUTPUTS

WUXGA/UXGA/SXGA/XGA up to 1920x1200
RGB (DB15) 16.7 M colors, wide-screen displays, EDID detection

GRAPHICAL OVERLAYS

Add .jpg, .png, and .gif images to the final screen composition
Dynamic text overlays add real-time titles and text

GRAPHICS COMPRESSION

MPEG-4 (ISO/IEC 14496-2), H.264 (ISO/IEC 14496-10)

AUDIO

MPEG-4, AAC (ISO 14496-3), Low Complexity Profile
Input, Stereo, Line-In & Mic-In on 2.5mm Jack (PC Audio type)
Input Sampling, 16 Bits, 44.1 kHz
Output, Stereo, Line Out, 3.5mm Jack (PC Audio type)
USB Audio support

NETWORK INTERFACE

RJ-45 (LAN, DSL, Cable Modem), Ethernet 10/100 Mbps, DHCP

COMMUNICATION PROTOCOLS

Multicast, Unicast, HTTP, HTTPS, UDP, TCP/IP, RTP, RTCP, RTSP,
DHCP, NTP, FTP, SFTP, Telnet, Auto Announce, NCast NCCP

EXTERNAL INTERFACES

Serial RS-232 port on DB-9 connector, USB (7), Mic-in,
Line-in and Line-out

ENCODING BITRATES

128 Kbps. to 10.0 Mbps.

COLLABORATIVE FEATURES

Interactive floor control during session
Audio mixing from all M4 sites to talk simultaneously
Full duplex mode available

ENTERPRISE SYSTEM MANAGEMENT

Serial Crestron/AMX compatibility (Serial, Telnet, HTTP)
iCalendar support (Google Calendar)
Optional Python Systems Manager

ARCHIVE FEATURES

Archive and record options - hard drive included
Archives stored as MPEG-4 or H.264 files (ISO 14496-14)
Audio using MPEG-4 AAC (ISO 14496-3)
Post-session transcode to four alternate H.264 formats
Metadata index files with title, author, and subject
FTP and Secure FTP file push

SETUP

USB Stick for IP Settings, Configuration Save & Restore

USER INTERFACE CONTROLS

Capture size, Resolution and Aspect ratio
Graphics overlay positioning (vertical, horizontal)
PIP size, location (Overlap or Side-by-side)
Brightness, contrast, sharpness, saturation, hue
Audio Input Gain, Volume
Dynamic text overlays, Closed Caption controls and Chapters
User-defined channel preset templates

SECURITY

Embedded Linux OS, HTTPS, SSL Certificate, SSH-FTP

PHYSICAL

Dimensions: 19"(482.6mm) x 3.46"(87.8mm) x 13.9"(353mm)
Weight: 23 lbs (10 kg)
Power Supply: Universal 100-240V 50/60 Hz—350W
Power Consumption: 150 Watts

ENVIRONMENTAL

Operating Temperature: 10° to 35°C (50° to 95°F)
Non-operating Temperature: -40° to 70°C (-40° to 158°F)
Operating Relative Humidity: 8% to 90% (non-condensing)
Non-operating Relative Humidity: 5 to 95% (non-condensing)

STREAMING CAPABILITIES

Multi-user Unicast Server up to 30 users
Flash Player, Quicktime, Real, DivX, VLC, Windows Media Player
(with plug-in) and others supported

REGULATORY

FCC Part-15 Class A
EMC Directive 2004/108/EC
EMD Low Voltage Directive 2006/95/EC
RoHS Compliant 2002/95/EC



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