

## 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.

The Telepresenter M4 fully automates this capture and streaming 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 MP4 (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 Telepresenter 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 MP4 file, and will then be available for streaming, recording and collaborating.

## APPLICATIONS

- Presentation and Lecture Capture
- Corporate and Medical Training
- Simulations
- Events, Seminars, Conferences
- Focus Groups
- Interview Recordings
- Government Meetings



## FEATURED 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 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

NCast 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 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. Local monitor playback.

### DESKTOP PLAYERS

Anyone connected to the network can view a presentation via a web browser or media player (Flash, Quicktime, VLC, HTML5, etc.) Playback by Windows Media Player and more.

### GRAPHIC AND VIDEO INPUTS

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

### GRAPHICS RESOLUTIONS & PERFORMANCE

WUXGA, 1920x1200, 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) - 30 fps

### GRAPHICS OUTPUTS

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

### GRAPHICAL OVERLAYS

Add JPEG, PNG, and GIF images to the final screen composition  
Dynamic text overlays add real-time titles and text

### GRAPHICS COMPRESSION

MP4 (ISO/IEC 14496-2), H.264 (ISO/IEC 14496-10)

### AUDIO

MP4, AAC (ISO 14496-3), Low Complexity Profile  
Input, Stereo, Line-In & Mic-In on 3.5mm 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, SMTP, NCast NCCP

### EXTERNAL INTERFACES

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

### ENCODING BITRATES

Graphics 128 Kbps to 10.0 Mbps  
Audio 16 Kbps to 128 Kbps

### SECURITY

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

### 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)  
Google Calendar and iCalendar support  
Optional Java or Python Systems Manager  
NCast Management Dashboard

### ARCHIVE FEATURES

Archive and record options – hard drive included  
Archives stored as MP4 (H.264) files (ISO 14496-14)  
Playback using Windows Media Player, Quicktime, VLC, etc.  
Post-session transcode to four alternate H.264 formats  
Audio using MP4 AAC (ISO 14496-3)  
Metadata index files with title, author, and subject  
Closed Caption SRT files  
Automated FTP and SSH FTP file push  
Upload to NCast Presentation Server

### 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, Audio Output Volume  
Dynamic text overlays, Closed Caption controls and Chapters  
User-defined channel preset templates

### PHYSICAL

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

### 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 25 users  
Multicast, RTSP, Unicast to a Streaming Server  
Flash Player, Quicktime, HTML5, DivX, VLC 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

