



TANDBERG Educator MXP

The TANDBERG Educator Series is a modular solution ideal for classrooms, higher education and corporate training. At its core is the TANDBERG 6000 MXP technology. Going beyond traditional distance education, it meets the special video needs of both instructors and students. With transparent technology, the Educator Series promotes an interactive learning experience.



DESIGN FEATURES

- Monitor, cabinet and podium options for different learning environments
- Industry's most intuitive 12" color video touch panel enables instructors to control video calls and multiple peripherals, including cameras, PCs and DVDs
- Industry-leading high definition or wide-angle view camera with extensive zoom, pan and tilt
- Optional components include locator mats, student trackers, electronic whiteboards and assorted microphone options

APPLICATION FEATURES

- Join up to 6 video and 5 audio sites with optional embedded MultiSite functionality
- View presentations and presenter simultaneously with optional DuoVideo or H.239 on single or dual monitor setup
- Display images from PCs, DVDs, VCRs, document cameras and other input devices
- XGA autoswitching for better quality with higher resolution
- TANDBERG Expressway™ Technology

PERFORMANCE FEATURES

- Choice of network: IP, ISDN and other external network
- Bandwidth: up to 2 Mbps ISDN/4 Mbps IP (6 Mbps in MultiSite)
- Superior video quality incorporating the H.264 standard
- True CD-quality audio
- Standards-based embedded encryption (AES & DES)
- Protection against network interruptions in point-to-point and multipoint calls with automatic Downsampling and IPLR

PROTECT YOUR TECHNOLOGY INVESTMENT WITH TANDBERG'S PORTFOLIO OF **CONSTANT CARE SERVICES**. VISIT WWW.TANDBERG.COM

UNIT DELIVERED COMPLETE WITH:

12" color video touch panel, 6000 MXP Codec, extended height cart(s), camera(s), AudioScience microphone, monitor(s)/plasma(s), optional podium and cables

BANDWIDTH

H.320 up to 2 Mbps
H.323 up to 3 Mbps
SIP up to 4 Mbps
Up to 6 Mbps total MultiSite bandwidth

FIREWALL TRAVERSAL

TANDBERG Expressway Technology™
Auto NAT

VIDEO STANDARDS

H.261, H.263, H.263+, H.263++ (Natural Video), H.264

VIDEO FEATURES

Voice Switching for VCR recording
Intelligent Video Management
Secondary/Instructor Camera auto tracking + 40 presets
Primary/Student Camera + 40 presets
Support for Tandberg Precision HD and Sony EVI-HDL cameras
Support for ParkerVision & Sony Cameras
Support for Sony & Panasonic AV equipment
Support for TANDBERG Track Camera

VIDEO INPUTS (11 INPUTS)

Up to 3 HD camera via TVS
1 x S-Video Primary Camera (WAVE II)
6 x Composite: Doc Camera, DVD & Aux Inputs
3 x SXGA: PC (1x codec or 3 x via external switch)
1 x VNC connection
Input: 800 x 600 (@ 60, 72, 75, 85 Hz), 1024 x 768 (@ 60, 70, 75 Hz), 1280 x 1024 @ 60 Hz)

VIDEO OUTPUTS (10 OUTPUTS)

2 x RCA/Phono, composite: primary display
2 x RCA/Phono, composite: secondary or dual monitor
1 x RCA/Phono, composite: VCR
1 x RCA/Phono, composite: touch panel
2 x DVI: Primary or Secondary
2 x XGA: Primary or Secondary
XGA Output
800 x 600 @ 75 Hz, 1024 x 768 @ 60 Hz, 1280 x 768 (WXGA) @ 60 Hz
VESA Monitor Power Management
1 x MiniDin, S-video: main monitor
1 x MiniDin, S-video: dual monitor

VIDEO FORMAT

NTSC, PAL, VGA, SVGA, XGA, W-XGA, or SXGA 720p

LIVE VIDEO RESOLUTIONS

HD RESOLUTIONS

HD 448p (576 x 448)
HD 720p (1280 x 720)

NATIVE NTSC:

4SIF (704 x 480 pixels), Digital Clarity
Interlaced SIF (352 x 480 pixels), Natural Video
SIF (352 x 240 pixels)

NATIVE PAL:

4CIF (704 x 576 pixels), Digital Clarity
Interlaced CIF (352 x 576 pixels), Natural Video
CIF (352 x 288 pixels)
QCIF (176 x 144 pixels)
SOCIF (128 x 96 pixels)

NATIVE PC RESOLUTIONS:

XGA (1024 x 768)
SVGA (800 x 600 pixels)
VGA (640 x 480 pixels)

AUDIO STANDARDS

G.711, G.722, G.722.1, G.728, 64 bit & 128 bit MPEG4 AAC-LD

AUDIO FEATURES

CD-Quality 20KHz Mono and Stereo
Telephone add-on via MultiSite
Four separate acoustic echo cancellers
Audio mixer
Automatic Gain Control (AGC)
Automatic Noise Reduction
Audio level meters
VCR ducking
Custom Microphone Mute
Optional Stereo Package
Packet loss management
Active lip synchronization
TANDBERG Touch-n-Talk up to 40 Microphone
Analog Telephone Add

AUDIO INPUTS (4 INPUTS)

3 x microphone, 24V phantom powered, XLR connector, each with separate echo cancellers
2 x RCA/Phono, Line Level: Stereo Aux 1
2 x RCA/Phono, Line Level: Stereo Aux 2
2 x RCA/Phono, Line Level: Stereo VCR/DVD
3.5 Min Stereo for PC

AUDIO OUTPUTS (5 OUTPUTS)

1 x RCA/Phono, S/PDIF (mono/stereo) or 2 x Analogue
Line Level: main audio or Analogue Stereo L
1 x RCA/Phono, Line Level: auxiliary
(or Analogue Stereo R or VCR Stereo L)
1 x RCA/Phono, Line Level: VCR (mono or Stereo R)

FRAME RATES

30 frames per second @ 168 kbps and above
60 fields per second @ 336 kbps and above (Point-to-point)

DUAL STREAM

Duo Video & H.239
Available on H.323 & H.320
Available in Multisite from any site

NETWORK FEATURES

Auto H.320/H.323 dialing
SIP
Downspeeding
Intelligent Call Management
HO on ISDN-PRI Facility
Maximum call length timer
Automatic SPID and line number configuration
(National ISDN, GR-2941-CORE)
SoftMux
NATO standard KG194/KIV-7 encryptor support
H.331 Broadcast Mode

MULTISITE FEATURES

H.323/H.320/SIP/Telephony/VoIP in the same conference
Audio and Video Transcoding
Video rate matching from 56 kbps — maximum conference rate
CP4, CP 5+1 and Voice Switched
Best Impression (Automatic CP Layouts)
H.264, Encryption, Digital Clarity
Dual Stream from any site
ISDN & IP Downspeeding and IPLR
MultiSite (H.243) Cascading on H.320 & H.323
Dial in/Dial out
Chair control for host system
Snapshot of ongoing conference (JPEG)
Snapshot of ongoing DuoVideo/H.239 presentation (JPEG)
Separate welcome page for encrypted conferences
Conference rates up to 6 Mbps
Up to 6 video and 5 audio sites
4 sites @ 2 Mbps, 6 sites @ 768 (+telephone calls)
Mix ISDN (BRI or PRI), or Serial Interface (V.35) with IP up to maximum conference rate

EMBEDDED ENCRYPTION

H.320 and H.323 point-to-point and multipoint calls
Standards-based: H.233, H.234, H.235 v2&v3, DES and AES
NIST-validated AES
NIST-validated DES
Automatic key generation and exchange
Supported in Dual Stream & MultiSite

IP NETWORK FEATURES

H.235 Authentication
Differentiated Services (DiffServ)
Resource Reservation Protocol (RSVP)
IP precedence
IP type of service (ToS)
IP adaptive bandwidth management (including flow control)
Auto gatekeeper discovery
Dynamic playout and lip-sync buffering
Intelligent Packet Loss Recovery (IPLR)
H.245 DTMF tones in H.323
Cisco CallManager integration using ECS
IP Address Conflict Warning

SECURITY FEATURES

Management via HTTPS
IP Administration Password
Menu Administration Password
H.243 MCU Password
VNC password
SNMP security alerts
Disable IP services
MD-5 Challenge
Network Settings protection
SIP Authentication via NTLM
Security level access to touch panel features
FIPS 140-2 level 1 certification

NETWORK INTERFACES

6 x ISDN BRI (RJ-45), S-interface
1 x E1/T1 G.703 (RJ-45) for ISDN PRI or Leased E1/T1
1 x E1/T1 G.703 (RJ-45) for future usage
1 x LAN/Ethernet (RJ-45) 10/100 Mbit (LAN/DSL/cable modem)
1 x X.21/V.35/RS-449 with RS-366 dialing, Leased Line or data triggered mode
1 x USB

ETHERNET/INTERNET/INTRANET CONNECTIVITY

TCP/IP, DHCP, ARP, FTP, Telnet, HTTP, HTTPS, SOAP and XML, MD-5 Challenge
SNMP Enterprise Management
Internal web server
Internal streaming server

OTHER MAJOR STANDARDS SUPPORTED

H.231, H.233, H.234, H.235 v2&v3, H.239, H.241, H.243, H.281, BONDING (ISO 13871), H.320, H.323, H.331
RFC 3261, RFC 2237, RFC 3264, RC 3311, RFC 3550, RFC 2032, RFC 2190, RFC 2429, RFC 3407

W.A.V.E. (WIDE ANGLE VIEW) II CAMERA

10 x zoom 1/4" CCD +15°/-20° tilt
+/-95° pan
61° vertical field of view
96° total vertical field of view
77° horizontal field of view
267° total horizontal field of view
460 (PAL)/470 (NTSC) TV lines
Min. Illumination 2 Lux (F1.8)
Auto or manual focus/brightness / white balance
Far-end camera control
– Remote source switching with source labels
– Camera control and presets

PRECISION HD

1280 x 720 pixels progressive @ 30fps
7 x zoom 1/3" CMOS, +10°/-20° tilt +/-95° pan
42° vertical field of view

TOUCH PANEL INTERFACE

12" 24bit color video with microphone connection
Configurable easy to use human interface
Built in speakers provide audio cues for local operation
Full control of a wide variety of AV devices

PRESENTATIONS AND COLLABORATION

Natural Presenter Package including:
PC Presenter (DVI-I, SXGA In)
PC SoftPresenter
Digital Clarity & Native Formats
Advanced Video Layouts
Streaming compatible with Cisco IP/TV, Apple QuickTime™, RealPlayer v8 etc.

SYSTEM MANAGEMENT

Support for the TANDBERG Management Suite
Total management via embedded web server, SNMP, Telnet, XML, SOAP and FTP
Remote software upload: via web server or FTP server
1 x RS-232 local control and diagnostics
Remote control and on-screen menu system
Web access to user interface available

DIRECTORY SERVICES

Support for Local, Global Directories LDAP and H.350
200 number global directory
200 number local directory
Call History

LANGUAGE

English

CUSTOMIZED WELCOME SCREEN AND COMPANY LOGO

POWER

TANDBERG Applications Module MXP (TAM MXP)
100-240 VAC, 50-60 Hz, 150 watts
6000 MXP codec 100-240 VAC, 50-60 Hz, 65 watts for codec and camera
D-NAM 100-120 or 220-240 VAC, 50-60 Hz, 250 watts
Total power dependent upon display type

OPERATING TEMPERATURE AND HUMIDITY

0° C to 35° C (32° F to 95° F) ambient temperature
10% to 90% Relative Humidity (RH)

STORAGE AND TRANSPORT TEMPERATURE

-20° C to 60° C (-4° F to 140° F) at RH 10–90% (non-condensing)

DIMENSIONS

TAM MXP 3U high, 19" rack mount, 12" deep
6000 MXP codec 1U high, 19" rack mount, 11" deep

FOOT PRINT OF CARTS

114.3 cm (45") wide x 67.7 cm (26.75") deep x 98.7 cm (38.75") high

FOOT PRINT OF PODIUM

149.7 cm (58.22") wide x 83.1 cm (32.75") deep x 101.6 cm (40") high

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TANDBERG

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