



## TANDBERG EX90

Transform the executive desk into a revolutionary personal telepresence and collaboration space with the TANDBERG EX90. The absolute quality video and audio, natural collaboration and simple TANDBERG inTouch controller make connecting with every corner of the business easy and effective.



TANDBERG inTouch is a revolutionary interface for easy communication control.

### FASTER DECISIONS, INCREASED EFFICIENCY, ENHANCED COLLABORATION

- **Absolute Quality** — Instantly connect in full end-to-end 1080p HD resolution on a large 24" HD display that also functions as a PC screen. The crisp images and bold size make executive meetings more engaging, vibrant and productive.
- **So Simple** — The TANDBERG inTouch brings the intuitive touch interface of our immersive Telepresence T3 and T1 solutions right to the desktop. Scroll through menu's and directories with a flick of the finger to quickly and easily manage your meetings.
- **Natural Collaboration** — Share presentations, documents and multimedia content in full 1080p30/WUXGA or with the Precision HD camera that rotates 90° to function as a document camera. For even greater collaboration, a second screen can easily be added to expand viewing capacity.
- **Customized Configuration** — Not every EX90 will be used the same way. That's why we've designed it to allow you to add an additional camera, monitor, or multimedia devices and other peripherals to create a telepresence experience tailored to your needs.

GET THE MOST FROM YOUR INVESTMENT.  
WITH **PROFESSIONAL SERVICES**, TANDBERG EXPERTS  
SUPPORT TANDBERG EX90 DEPLOYMENT AND TRAINING.  
VISIT [WWW.TANDBERG.COM](http://WWW.TANDBERG.COM)

## UNIT DELIVERED COMPLETE WITH:

Fully integrated codec, display, camera, microphone and loudspeakers

TANDBERG InTouch controller including detachable wideband handset

DVI-I-cable, DVI-I to VGA adapter, 3,5 mm jack audio cable, LAN cable, power adapter and power cable

## DISPLAY

24" LCD monitor  
Resolution: 1920 x 1200 (WUXGA)  
Contrast ratio: 1000:1  
Viewing angle: 160/160°  
Response time: 5ms  
Brightness: 300cd/m2  
5°-15° tilt

## PC AND SECOND SOURCE VIDEO INPUTS

DVI-I  
HDMI

## SUPPORTED PC INPUT RESOLUTIONS

SVGA (800x600) to WUXGA (1920x1200)

## DUAL DISPLAY OUTPUT\*

HDMI

## CAMERA

TANDBERG PrecisionHD™ design  
Document camera mode  
1/3" CMOS sensor  
2.7 megapixels  
Aperture F1.7  
1920x1080@60 fps  
Optical, motorized zoom  
45°-65° horizontal field of view  
40°-27° vertical field of view  
Auto focus  
Mechanical auto iris  
Focus distance 0.3m–infinity  
Automatic and manual exposure and white balance  
Ambient light frequency detection (50/60 Hz)  
Integrated privacy shutter

## AUDIO SYSTEM

2 stereo front speakers  
Integrated subwoofer  
Integrated full range microphone  
Support for TANDBERG Performance Mic 20 external microphone  
1x3.5 mm line in jack for PC or other audio source  
2x3.5 mm jack for headset  
HDMI audio input/output  
Wideband handset  
Bluetooth ready

## USER INTERFACE

TANDBERG InTouch  
8" projected capacitive touch screen  
480x800 resolution

## BANDWIDTH

H.323/SIP up to 6 Mbps point-to-point

## FIREWALL TRAVERSAL

TANDBERG Expressway™ Technology  
H.460.18, H.460.19 Firewall Traversal

## VIDEO STANDARDS

H.261, H.263, H.263+, H.264

## VIDEO FEATURES

16:9 Widescreen  
Advanced Screen Layouts  
Intelligent Video Management  
Local Auto Layout

## LIVE VIDEO RESOLUTIONS (ENCODE/DECODE)

176 x 144@30 fps (QCIF)  
352 x 288@30 fps (CIF)  
512 x 288@30 fps (w288p)  
576 x 448@30 fps (448p)  
768 x 448@30 fps (w448p)  
704 x 576@30 fps (4CIF)  
1024 x 576@30 fps (w576p)  
640 x 480@30 fps (VGA)  
800 x 600@30 fps (SVGA)  
1024 x 768@30 fps (XGA)  
1280 x 1024@30 fps (SXGA)  
1280 x 720@30 fps (720p30)  
1280 x 768@30 fps (WXGA)  
1920 x 1080@30 fps (1080p30)\*  
1440 x 900@30 fps (WXGA+)\*  
1680 x 1050@30 fps (WSXGA+)\*  
1600 x 1200@30 fps (UXGA)\*  
1920 x 1200@15 fps (WVUXGA)\*  
512 x 288@60 fps (w288p60)\*  
768 x 448@60 fps (w448p60)\*  
1024 x 576@60 fps (w576p60)\*  
1280 x 720@60 fps (720p60)\*

## AUDIO STANDARDS

G.711, G.722, G.722.1, 64/128kbps MPEG4 AAC-LD, AAC-LD Stereo

## AUDIO FEATURES

CD-quality 20kHz stereo  
Acoustic echo cancelling  
Automatic gain control  
Automatic noise reduction  
Active lip synchronization

## DUAL STREAM

H.239 (H.323) dual stream  
BFCP (SIP) dual stream  
Support for resolutions up to 1080p30 in both main stream and dual stream simultaneously

## MULTISITE FEATURES\*

4-way 720p30 Continuous Presence (CP) MultiSite\*\*  
Full individual audio and video transcoding  
Individual layouts for all participants (CP layout without self view)  
H.323/SIP/VoIP in the same conference  
Best Impression (Automatic CP Layouts)  
H.264, encryption and dual stream from any site  
IP downspeeding  
Dial in/Dial out  
Conference rates up to 10 Mbps

## PROTOCOLS

H.323  
SIP

## EMBEDDED ENCRYPTION

H.323/SIP point-to-point  
Standards-based: H.235 v2 & v3 and AES  
Automatic key generation and exchange  
Supported in dual stream

## IP NETWORK FEATURES

DNS lookup for service configuration  
Differentiated Services (QoS)  
IP adaptive bandwidth management (including flow control)  
Auto gatekeeper discovery  
Dynamic playout and lip-sync buffering  
H.245 DTMF tones in H.323  
Date and time support via NTP  
Packet loss based downspeeding  
URI dialing  
TCP/IP  
DHCP  
802.1x network authentication  
802.1q VLAN

## SECURITY FEATURES

Management via HTTPS and SSH  
IP administration password  
Menu administration password  
Disable IP services  
Network settings protection

## NETWORK INTERFACES

Internal 2 port Ethernet switch  
1 x LAN/Ethernet (RJ-45) 10/100/1000 Mbit for PC  
1 x LAN/Ethernet (RJ-45) 10/100/1000 Mbit for LAN

## OTHER INTERFACES

1x USB device for future applications  
2x USB host for future applications  
Bluetooth for future applications

## SYSTEM MANAGEMENT

Support for the TANDBERG Management Suite  
Total management via embedded SNMP, Telnet, SSH, XML, SOAP  
Remote software upload: via web server, SCP, HTTP, HTTPS  
InTouch interface menu system

## DIRECTORY SERVICES

Support for local directories (My Contacts)  
Corporate directory  
Unlimited entries using server directory supporting LDAP and H.350  
Unlimited number for corporate directory (through TMS)  
200 number local directory  
Received calls  
Placed calls  
Missed calls with date and time

## POWER

Auto-sensing power supply  
100–240 VAC, 50/60 Hz  
150 watts max

## 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)

## APPROVALS

Directive 2006/95/EC (Low-Voltage Directive) — Standard EN 60950-1  
Directive 2004/108/EC (EMC Directive) — Standard EN 55022, Class A — Standard EN 55024 — Standard EN 61000-3-2/-3-3  
Approved according to UL 60950-1 and CSA 60950-1-07  
Complies with FCC15B Class A

## TANDBERG EX90 MAIN UNIT DIMENSIONS

Length: 56.7 cm (22.3")  
Height: 54.5 cm (21.4")  
Depth: 17.3 cm (6.8")  
Weight: 11.0 kg (24.2 lbs)

## TANDBERG INTOUCH CONTROLLER DIMENSIONS

Length: 22.8 cm (9.0"), 29.0 cm (11.4") with handset  
Height: 4.4 cm (1.7"), 7.7 cm (3.0") with handset  
Depth: 14.5 cm (5.7"), 18.7 cm (7.4") with handset  
Weight: 0.64 kg (1.4 lbs), 0.94 kg (2.1 lbs) with handset  
Cable length: 120 cm (47")

\* Requires option

\*\* 3 way MultiSite in first release

All specifications subject to change without notice, system specifics may vary.

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MTBF PRODUCT RELIABILITY/MTBF The predicted reliability is expressed in the expected random Mean Time Between Failures (MTBF) for the electronic components based on the Power On Hours: Power On Hours (POH) > 69 000 hours Useful Life Cycle > 8 years ISO 9001 certificate is available upon request

## TANDBERG EX90

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