



## TANDBERG E20

TANDBERG is reinventing the desk phone by merging voice, video and collaboration into one device. A highly scalable solution for enterprise mass deployment, everyone in the organization will immediately see the benefits of increased productivity and daily collaboration.



#### DESIGN FEATURES

- Attractive Scandinavian design
- Superior quality IP telephone with advanced features
- Intuitive user interface and keypad for quick access to all IP phone and video services
- Wideband 10 kHz handset
- Easy to deploy and manage

#### APPLICATION FEATURES

- Video and voice for every desk
- Scalable for enterprise mass deployment
- Richer collaboration than only phone calls can provide
- Unite remote workers and other members of the organization
- Scale expertise across the organization
- Familiar IP telephone features such as a message waiting indicator/button
- Handset, headset, speakerphone flexibility

#### PERFORMANCE FEATURES

- Ultra wideband 20 kHz speaker phone
- TANDBERG acoustic echo cancellation
- High-resolution TANDBERG camera with integrated privacy shutter
- DVD quality, w448p video resolution
- 10.6" wide format LCD display with WXGA resolution
- Bandwidth — SIP up to 1152 kbps
- Firewall traversal through TANDBERG Video Communications Server (VCS) Expressway

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**FULLY INTEGRATED UNIT INCLUDING:**

LCD screen, camera, microphone, loudspeaker, keypad and handset  
 Delivered with power supply/cable and Ethernet cable.

**LCD SCREEN**

10.6" wide viewing angle screen  
 WXGA (1280x768)  
 Manual brightness, contrast, color RGB

**CAMERA**

TANDBERG custom camera design  
 1/2.5" CMOS sensor  
 Aperture F2.7  
 50° Horizontal field of view  
 29° Vertical field of view (39° total)  
 +5°/-5° digital tilt  
 Manual focus  
 Focus distance 0.3m-infinity  
 1280 x 720 progressive @30 fps  
 Automatic frequency detection (PAL/NTSC)  
 Automatic and manual brightness/white balance

**BANDWIDTH**

SIP up to 1152 kbps

**VIDEO STANDARDS**

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

**VIDEO FEATURES**

Native 16:9 Widescreen  
 Picture in Picture (PIP)

**VIDEO RESOLUTIONS AND FRAME RATES**

**TRANSMIT AND RECEIVE:**

768 x 448@30fps (w448p)  
 576 x 448@30fps (448p)  
 512 x 288@30fps (w288p)  
 352 x 288@30fps (CIF)  
 176 x 144@30fps (QCIF)

**RECEIVE ONLY:**

1280 x 768@7,5fps (WXGA)  
 1024 x 768@7,5fps (XGA)  
 1024 x 576@7,5fps (w576)  
 800 x 600@7,5fps (SVGA)  
 704 x 480@15fps (4SIF)  
 704 x 480@15fps (4CIF)  
 640 x 480@15fps (VGA)  
 352 x 240@30fps (SIF)

**AUDIO STANDARDS**

MPEG4 AAC-LD, G.729ab, G.722, G.722.1, G.711

**AUDIO FEATURES**

Ultra wideband 20 kHz speaker phone  
 Wideband 10 kHz handset  
 RJ11 headset port  
 TANDBERG acoustic echo cancellation  
 Automatic Gain Control (AGC)  
 Automatic Noise Reduction  
 Packet loss management  
 Active lip synchronization

**PRIVACY FEATURES**

Camera with integrated privacy shutter  
 Video mute button with backlight indicator and far-end video mute indication  
 Audio mute button with backlight indicator and far-end audio mute indication  
 Headset button with backlight indicator

**USER INTERFACE**

On-screen graphic user interface  
 Navigation cluster with select button  
 Message waiting indicator/button  
 5 contextual soft keys

**DUAL STREAM**

Receive DuoVideo on SIP BFCP

**FIREWALL TRAVERSAL**

Through TANDBERG Video Communications Server (VCS)

**EMBEDDED ENCRYPTION**

AES with SRTP and TLS  
 Automatic key generation and exchange

**IP NETWORK FEATURES**

Differentiated Services (DiffServ)  
 Dynamic play out and lip-sync buffering  
 Intelligent Packet Loss Recovery (IPLR)  
 Maximum call length timer  
 IP Address Conflict Warning  
 URI Dialing  
 DNS lookup for service configuration  
 Date and Time support via NTP

**IP NETWORK SUPPORT**

IPv4

**SECURITY FEATURES**

IP Administration Password  
 Menu Administration Password  
 Embedded encryption (AES)  
 Call status light indication  
 SIP Authentication via NTLM  
 SIP Authentication via Digest  
 Management via HTTPS and SSH

**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

**AUXILIARY INTERFACES**

USB host port for future applications  
 Bluetooth module for future applications

**ETHERNET /INTERNET /INTRANET CONNECTIVITY**

TCP/IP, DHCP, ARP, SNMP, SSH, SCP, SOAP and XML  
 Internal Web server, HTTP, HTTPS

**CLOSED CAPTIONING**

TTY (Telephone Text) support via handset

**SYSTEM MANAGEMENT**

Support for the TANDBERG Management Suite  
 SSH, XML, SOAP, SNMP  
 Remote software upload via Web server or SSH/SCP

**DIRECTORY SERVICES**

Support for Local Directories (My Contacts)  
 Support for Server Directory via TMS\*  
 Received, Placed and Missed Calls with Date and Time

**POWER**

Auto-sensing power supply  
 100-240 VAC, 50-60 Hz  
 24 watts max

**OPERATING TEMPERATURE AND HUMIDITY**

0° C to 35° C (32° F to 95° F) ambient temperature  
 10% to 80% Relative Humidity (RH)

**STORAGE AND TRANSPORT TEMPERATURE**

-20° C to 60° C (-4° F to 140° F) at RH 10-80% (non-condensing)

**APPROVALS**

Directive 2006/95/EC (Low Voltage Directive)  
 — Standard EN 60950-1 2nd ed  
 Directive 89/336/EEC (EMC Directive)  
 — Standard EN 55022, Class B  
 — Standard EN 55024  
 — Standard EN 61000-3-2/-3-3  
 Approved according to UL 60950-1 2nd ed and CAN/CSA C22.2 No. 60950-1-07 2nd ed  
 Complies with FCC15B Class B

**UNIT DIMENSIONS**

Height: 34.7 cm (13.7 inches)  
 Width: 31.6 cm (12.4 inches), 27.7 cm (10.9 inches) without handset cradle  
 Depth: 17.0 cm (6.9 inches)  
 Footprint: 17.0 cm x 31.6 cm (6.68 inches x 7.3 inches)  
 Weight: 1.9 kg (4.2 lbs)

*\*Requires TANDBERG Management Suite version 12 or newer*

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

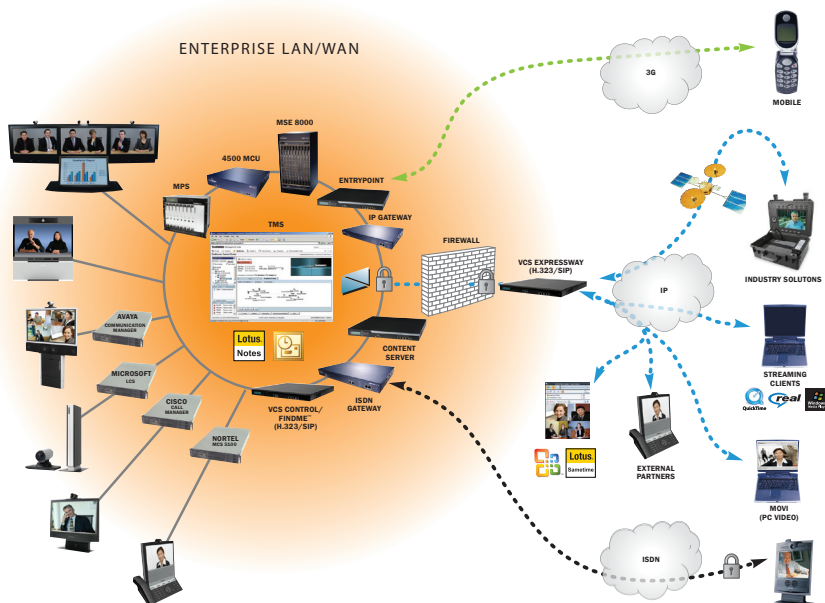
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**MTBF PRODUCT RELIABILITY/MTBF**

*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 > 6 years ISO 9001 certificate is available upon request*



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