

Essential Technical Specifications of Video Conferencing Systems

The minimum essential technical specifications of VC equipments (as per Ministry's requirements) are mentioned below:

1. Video coding standards - H.264 SVC & AVC.
2. Audio Coding Standards- G.722, G.722.1, MPEG-4, AAC-LC.
3. Live Video Features- 720p30, 1080p30, 1080p60 (preferable).
4. Minimum Bandwidth required for video quality (1080p60) at End Point/ Far-site end = 1Mbps.
5. **Interface to records the ongoing Video Conferencing Session** of both Near End and Far End along with mixed Audio @ 1080p60 **through USB within Codec in device** (Not through cloud/ Network based/ Server Based).
6. The End point should have capability to upgrade to multi-point (at least 1+5 Sites) @1080p60 Full HD, in future, by using add-on software on existing codec over IP (Not via external hardware/ Server/ Cloud).
7. End point should support multipoint calls at full HD 1080p60 resolution in continuous presence mode (DHCP).
8. End point should have 1080p60fps PTZ camera with minimum 10X Optical Zoom.
9. The complete solution which includes Software and Hardware bundle should be from the same OEM.
10. The Codec should be an independently/ specifically designed standalone device with embedded menu driven GUI, Audio-Video I/O Ports, Network and control ports etc. inbuilt on its back plane.
11. Should be H.323 and SIP Compliant (It should be IP Based Hardware System not a PC Based stack up system with software loaded on it).
12. Built-in acoustic echo canceller with noise reduction
13. Input/ Output ports :
 - a. Input- 2xHDMI/DVI ports
 - b. Output- 2xHDMI/DVI ports
14. No. of Microphones supported –at least 1.

15. No. of Camera supported (should be from same OEM) -1
16. IPV6 ready.
17. It should support Far End control protocol H.281
18. It should support H.239 dual stream protocol for sending/receiving content/presentation along with Full HD live video.
19. One line level auxiliary audio output to connect external audio system.
20. Interface (HDMI/VGA) to connect a Laptop/PC/Console.
21. Should be IP Based (ISDN/BRI not required)
22. Should support dual monitors for display.
23. Picture-in-picture of side by side picture support.
24. High quality microphones with echo cancellation
25. Support for additional/external high quality microphone
26. Behind Network Address Translation (NAT) firewall traversal.
27. Global Directory- Display of active participants/H.350/LDAP protocol
28. E.164 dialing using H.323 Gatekeeper
29. Web based management for video conferencing endpoint