

Standard Videoconferencing Requirements for Connecting to the Utah Telehealth Network

Overview

Every system that connects to the UTN bridge or member must be capable of dialing and receiving videoconference calls. These guidelines help ensure a quality connection.

Network Ports

Standard Open Ports:	
1720-Static	TCP H.323 call setup (must be bidirectional)
1731-Static	TCP Audio call control (must be bidirectional)
3230-3235 TCP	Dynamic TCP H.245. Can be set to "Fixed Ports" on Polycom systems.
3230-3253 UDP	Dynamic UDP – RTP- - RTCP (audio, video, and control information). Can be set to "Fixed Ports on Polycom Systems.
Data Sharing Ports:	
1503-Static	TCP T.120

Bandwidth

Education, meetings, and clinics typically run at 384 Kbps. A few doctors that depend on color to make diagnosis require 768 Kbps.

Public IP Addresses

The bridge and UTN member site must be capable of both dialing to and receiving calls from remote sites. NAT mapping a public IP address to the specific videoconference system ensures smooth dialing. The bridge must be pre-programmed to receive or dial specific IP addresses.

Port forwarding H.323 is okay for a single videoconference system in a network, but not for multiple. The UTN bridge often rejects calls from port forwarded network because it does not recognize the IP address of the codec.

Videoconferencing Protocols

H.323	Point to point connections to UTN member sites
H.323 or H.320	Connections through UTN's multipoint bridge
G711, G722, Prefer Siren14	G711 & G722 are ITU standards. Our Polycoms work best with Siren14 audio.
H.261, H.263,	H.261 is for ISDN. H.263 is the standard for IP connections. H.264 is

H.264	available to the bridge and only a few members.
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Encryption

HIPAA requires all clinical videoconferences to be encrypted. Most videoconferencing systems since 2004 have AES encryption built into the machines. Theoretically, they should connect to any maker. In reality, Polycoms have a history of trouble negotiating to other makers.

The bridge is fully capable of AES encryption to Polycom systems. It is untested to other makers.

Sites should consider a virtual private network if going to a site without AES encryption. In these cases, it may be best to connect to bridge to bridge for a secure connection.

University Health Care considers its private network to be secure. A UTN member without AES encryption would connect to the UTN bridge to secure calls outside the network. UTN members with AES encryption may securely dial point to point to any AES system outside the network.

UTN Bridge

Capabilities:

- 36 site conferences
- AES encryption
- Far end camera control
- H.239 application sharing
- End of conference alert