

Polycom HDX Series Review

Polycom have been one of the main leaders in hardware based VC systems for many years and have developed reliable and quality VC solutions that will suit almost anyone looking for a professional setup. Polycom's HDX series comes in a few different models and price points. Starting with the HDX 4000 series offering an all in one product (Display, Camera, Mic and keypad) to the HDX 9000 Series, for dedicated room integration. Like most dedicated hardware based VC solutions, where quality and reliability is the main concern, there is no substitute. Hardware based VC does however come at a premium, costing \$8K+ for a basic setup and up to \$300K+ for full room setups. The advantage of such a diverse array of products is the ability to customise a system that suits your environment and requirements.

The main difference between the HDX models comes down to how the system will be used.

- HDX 4000 series are designed for dedicated desktop style VC with limited inputs (i.e. Displays, mic's and resolution) and is usually chosen where minimal space and clutter is desired.
- HDX 6000 to 7000 series are usually coupled with semi portable roll-around stands with multiple display outputs and inputs (model dependant).
- HDX 8000/9000 series are usually integrated into boardrooms and are selected when multipoint room presence is desired.

One main advantage of the HDX systems is its common user interface. Once trained with one model HDX system, an operator can feel confident jumping from one HDX model to the next without having to re-learn the basics. Most HDX systems use the same remote also assisting in user adaption.

- Polycom HDX series main common features include:
- Up to 1080p @ 60fps video quality (model specific).
- High definition audio.
- Point to point, multipoint and virtual meeting room calls.
- Screen sharing (optional multiple display output).
- Bandwidth optimisation.
- Global address books.
- 3rd party application compatibility.
- PTZ camera (Motorised camera movement and zoom).
- Customisable and scalable.

Testing

My testing was conducted on a semi-portable HDX 6000 system with 1 display.

Picking up the HDX remote wakes the system from standby and presents the operator with a standard user interface. From here, I had the ability to:

- *Place a Call* - Allows me to manually input the participants VC number details.
- *Directory* - A shared global address book to look up and dial predefined contacts.
- *Recent Calls* - To redial recently called numbers.

Note: With most HDX systems, the equipment should be always turned on and rarely turned off. This is advisable if multiple operators are using the system and/or the system does not need to be moved. This allows the system to go into standby and be woken by the HDX remote almost instantly saving on time and confusion.

Placing a manual call can be achieved using several different dialling methods, these include:

- Direct IP number input (on-network dialling). If a call is to be made to a participant on the same internal network, dialling the participants direct IP address (displayed at the bottom of the participants HDX home page) will connect a point to point call e.g. 10.11.12.13. Off network dialling (external non associated HDX VC participants) will require a gateway to be dialled in conjunction with the IP address or extension to connect e.g. 203.202.101.10##10.11.12.13.

- Extension number calling - Entering the participants extension number e.g. 2555
- ISDN number calling - e.g. 94837774 (not commonly used due to its inflexibility and expense).

Most HDX systems are set to Auto Answer and Auto Mute turned on to simplify meetings; so the receivers end will be un-muted upon connection. Understanding where and to whom you are making the call can be a bit confusing and it is recommended to conduct a test call prior to the consultation to ensure that you have the correct number and that all systems are correctly working.

Before a connection is made, it is recommended to adjust the camera and zoom (using the remote) to present yourself clearly in the anticipated position. This will save time and distraction when the call is initially made. Camera presets can also be saved prior (and during) a VC for quick camera positioning, if multiple camera angles are needed.

Once connected the remote is all that is needed to control the HDX system. The main features used during a call are:

- End a call
- Near and far camera control
- Volume
- Media (Content sharing)

All these commands worked with good response times and without fault. Media sharing worked well but had a slightly longer delay when switching back and forth (due to the single display output) between the presenter's video feed and the content sharing. HDX 7000+ have the advantage of dual display output, allowing the content to be displayed on a second display and eliminating the need to switch to the desired content.

The Eagle Eye HD Camera was of exceptional quality with the ability to manually control movement and zoom. Practice with the HDX remote is recommended to familiarise camera movement as positioning the camera in the correct position can be a bit fidgety. Video quality was excellent with minor blurring and small artefacts sometimes present. These video issues rectified themselves quickly and with no noticeable audio interruption. Audio was always clear and at times almost too sensitive, picking up noises from clothes papers and even sometimes noises from outside the room. Muting when not using the microphone resolved these issues and is recommended practice for the participant when conducting a multipoint call, although remembering to un-mute the microphone takes practice, especially with impromptu questions and after long delays between speaking.

Content sharing

Content sharing can be achieved by connecting the media directly via cable e.g. DVI or AV cable, or through the internal network utilising Polycom's People+Picture application that needs to be installed on the computer that is sharing the content. Both methods work without issues and the content displayed was crisp and clear, with only slightly longer lag times switching between content using the P+P application. The People+Content method required less setup once installed but lacked the ability to transmit audio.

Pricing

Like all professional VC hardware based installations, the initial cost begins at a much higher entry level than software based VC systems and the Polycom HDX systems are defiantly that. Single endpoint installations will more than likely cost in excess of \$10 for the basic setup, couple that with a maintenance contract extending warranty and support beyond the initial 1yr bundled with the initial purchase, this is not a cheap option. Due to its high prices, complexity and variations in hardware offerings, a specialised and experienced VC sales company's need to be consulted prior to purchase.

Summery

Polycom has been in the game for a long time now and have developed a highly reliable and quality portfolio of VC systems. Hardware based VC solutions at present still out perform software based VC solutions. The majority of broadband connections in Australia are still not fast or reliable enough for software VC's to perform at their optimum. Hardware VC's have the ability to compress the VC signal prior to sending thus reducing the amount of data needed to transmit (up to 50% less), coupled with error correction techniques built into the HDX systems, if quality, reliability and simplicity is desired, consider Polycom.