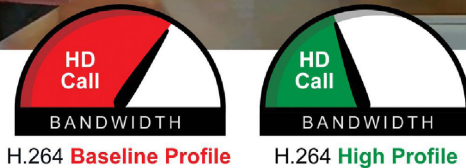
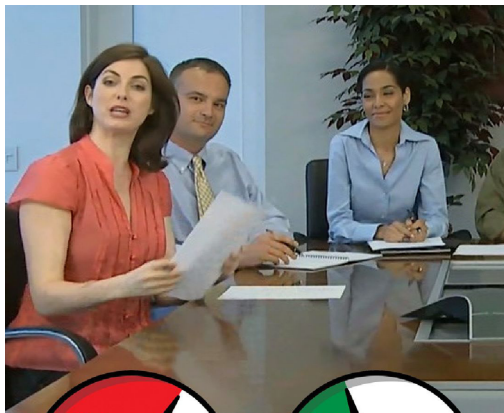




# H.264 High Profile: A Breakthrough in Standards-Based Leadership from Polycom

Reduce Cost, Accelerate ROI, and Increase Efficiency



With the introduction of the first and only H.264 High Profile implementation for real-time video, Polycom continues the tradition of using standards-based technology to create breakthroughs in the visual communication market. H.264 is a well established standard and has been widely implemented and used in its Baseline Profile mode for video applications; the addition of High Profile to this standard brings dramatic bandwidth savings, while maintaining excellent resolution and frame rates.

Experts agree that the shift to High Profile is bigger and more important than the previous video technology breakthrough—the shift from H.263 to H.264 in 2003. While the incremental gain for H.264 over H.263 was limited to the lower bandwidths, below 512 kilobits per second, the gains in performance for High Profile are consistent across the bandwidth spectrum, New High Definition systems are therefore the biggest beneficiaries of High Profile, but gains are captured across the spectrum from CIF to SD to HD.

Polycom's introduction of High Profile is a technology breakthrough that enables drastic reduction of the network resource necessary to video-enable organizations. It allows CIOs to meet budget challenges by limiting or avoiding costly network upgrades and allows organizations to take video to the smaller, remote sites, where bandwidth is limited or costly.

## High Profile Reduces the Cost of New Video Deployments

Video enabling an organization starts with evaluation of the IP network and usually requires upgrades to increase bandwidth and remove bottlenecks

High Profile reduces the required network bandwidth for video up to 50%. High Definition video calls that required over 1 megabit per second are now supported at just 512 kilobits per second. Standard Definition calls that required a minimum of 256 kilobits per second are now supported at as low as 128 kilobits per second\*. See the new H.264 High Profile ROI Calculator at [www.polycom.com/highprofile](http://www.polycom.com/highprofile) to determine your specific bandwidth savings.

High Profile dramatically lowers a key barrier to entry for visual communication, allowing broader deployment in more organizations. CIOs concerned that adding video application may overwhelm their IP networks now have the option to roll out video without redesigning their entire networks.

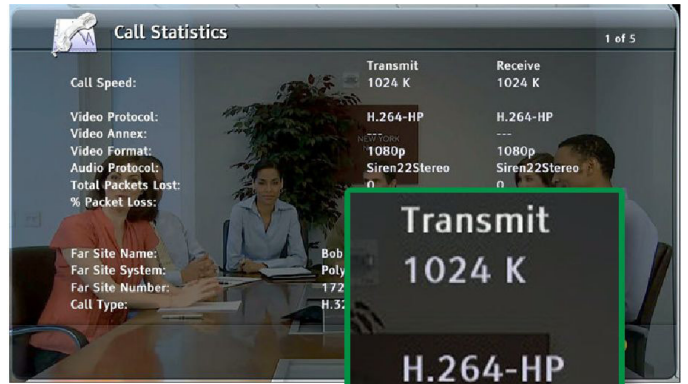
## High Profile Reduces the Cost of Existing Video Deployments

Existing Polycom HDX\*\* users can move to High Profile simply by upgrading their HDX software to release 2.6\*\*\* and immediately enjoy better picture quality. Since most video calls today are placed at 512-768 kilobits per second, the upgrade will mean moving from Standard Definition to High Definition video. HD is proven to not only increase productivity but to also enable immersive experiences, effectively

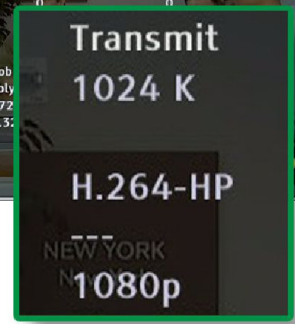
Resolution / Frame Rate	H.264 Baseline Profile (Industry Norm Today) Call Speed in kbps	H.264 High Profile Only from Polycom Call Speed in kbps	Polycom Bandwidth Reduction
CIF30	128	64	Up to 50%!
4CIF30	256	128	
4CIF60	1024	512	
720p30	1024	512	
720p60	1512	832	
1080p30	2048	1024	



**H.264 Baseline Profile**  
1080p statistic capture



**H.264 High Profile**  
1080p statistic capture



replace face-to-face meetings, and lead to travel reduction and immediate cost savings for the organization. See the H.264 High Profile ROI Calculator at [www.polycom.com/highprofile](http://www.polycom.com/highprofile) to see your specific bandwidth savings.

For network administrators, High Profile is a green light for rolling out video to larger user groups. The network resource necessary to run 1000 video calls in the past is now sufficient to support up to 2000 video calls. Since High Profile is supported in all HDX room telepresence and immersive telepresence systems (including even the new HDX 6000), the benefits can be captured from small rooms and huddle systems all the way to the boardroom.

High Profile enables better picture quality and higher scalability; it allows CIOs to meet the growing demand for HD calls in organizations.

**High Profile Brings Cost Effective Multiparty Meetings**

High Profile adds a tremendous amount of value when used in multiparty meetings, where video bridges, or conference servers, are used. Conferencing servers, such as the Polycom RMX® 1500, 2000, and 4000 platforms, are in the core of the visual communication network, and must therefore be connected at very high bandwidth. For example, if the conferencing server supports 80 HD calls at 1 megabit per second each, its link to the IP network must be at least 80 megabits per second. High Profile relaxes this requirement and allows a similar conferencing server to deliver equivalent quality and scale over a link with just 40 megabits per second.

Most important is the way in which the Polycom RMX conference platforms support High Profile. Since the RMX conference platforms support High Profile via transcoding, every time an endpoint that supports H.264 High Profile joins a multiparty call, that system is joined into the conference in H.264 High Profile

mode, regardless of whether any other endpoint in the call supports H.264 High Profile; allowing HDX users to enjoy the benefits of bandwidth savings in every multiparty call. Polycom RMX support of H.264 High Profile allows organizations to appreciate the benefits of High Profile, even while the capability is being rolled out to endpoints across the network. H.264 High Profile is supported on the RMX 1500, 2000, and 4000 conference platforms with v7.0 and with the MPMx modules.

**High Profile Improves Quality and Cost Savings in Immersive Telepresence Meetings**

High Profile will improve the quality and deliver large cost savings to immersive telepresence solutions, such as Polycom® RPX™, OTX™, TPX®, and ATX™ with Version 2.7. Given these are multi-codec solutions, using very large displays, they are connected in high definition at high data rates, sometimes up to 3 megabits per screen. Polycom designed its immersive telepresence solutions using standards-based technology, specifically H.264 Baseline Profile, and as such has the most flexible and bandwidth efficient solution in the market today. The addition of High Profile pushes the efficiency bar even higher and will allow Polycom immersive telepresence systems to deliver a life-like, high definition video experience at much lower bandwidths, that is, in the range of 1.5 megabits per second per screen.

**High Profile Accelerates Return On Investment**

The introduction of High Profile preserves interoperability across the Polycom solution and with other standards-based systems. Polycom HDX systems upgraded to High Profile will always default to High Profile with other High Profile-capable video network elements. Polycom HDX continues to support H.264 Baseline Profile for communication with legacy video systems, such as VSX and third-party systems that do not support High Profile. Therefore, Polycom's implementation of High Profile preserves interoperability across the visual communication network and protects customer investments.

High Profile allows CIOs to limit or avoid costly IP network upgrades when supporting or expanding visual communication deployments. IP network upgrades are a major contributor to the overall deployment cost, and relaxing the bandwidth requirements immediately reduces the number and scope of necessary upgrades to ready the IP network for video traffic. Lower upfront cost leads to shorter ROI.

High Profile is a new addition to Polycom's vast video capabilities, and does not take away any of the benefits of high quality video conferencing that customers enjoy. Lost Packet Recovery, a Polycom-exclusive technology, also works seamlessly with High Profile to provide superior quality in imperfect networks with packet loss. The introduction of High Profile will have no impact on the ability to share and receive high definition Content during a meeting.

High Profile support is one more way Polycom adds value to the Polycom Open Collaboration Network. The use of High Profile is negotiated among Polycom network elements that may be connected to UC environments from Microsoft, IBM, Siemens, BroadSoft, and others.

\* Bandwidth consumption for different video quality levels with Baseline and High profiles

\*\* IP versions only – ISDN versions do not support High Profile

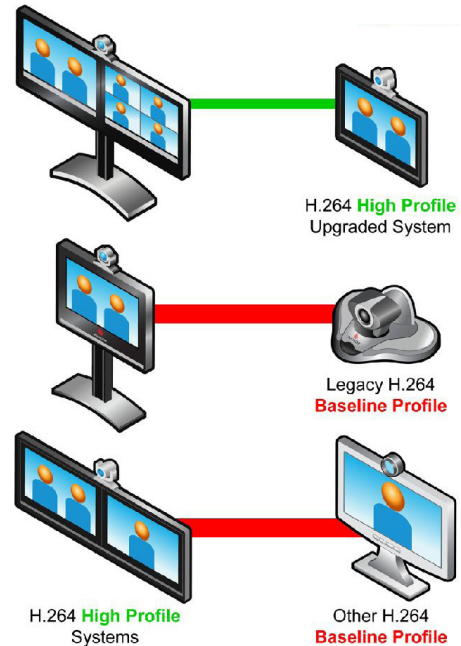
\*\*\* High Profile is supported in HDX software release 2.6 that can run on the following hardware:

All HDX 6000 (Receives up to 720p60 and 1080p30, transmits up to 720p30 and 1080p15)

HDX 7002 Rev C (shipping since early February 2010)

HDX 8002/8004/8006 Rev B (shipping since January 2009)

New HDX 9000 (shipping from April 2010)



*Profile H.264 works with current Baseline Profile systems but maximizes bandwidth when connected with other High Profile systems.*

**Polycom Worldwide Headquarters**  
 4750 Willow Road, Pleasanton, CA 94588  
 1.800.POLYCOM or +1.925.924.6000  
[www.polycom.com](http://www.polycom.com)

