

---

# Find Your Endpoint Devices

---

Use HDX level classifications to make your purchasing decision for Endpoints



# Endpoints serve a crucial position in the virtualization and End User Computing (EUC) domains. However, different industries and users have varied requirements and expectations from these devices, depending on their scope of work. With hundreds of Citrix Ready devices available, it can be challenging to find the right Endpoint for your business. This document can help you understand the specific features and functionalities by segregating all Citrix-compatible Endpoints into three categories—HDX Ready, HDX Premium, and HDX 3D Pro.

[Citrix Ready Marketplace](#) showcases and recommends third-party products and solutions that have demonstrated compatibility with Citrix products. These third-party products undergo rigorous testing to ensure that they qualify Citrix verification criteria. In addition, Endpoint devices are assigned three designations to display a set of functionalities and features.

## Choose the right Endpoint

Citrix Ready Marketplace lists hundreds of Endpoints verified to be compatible with Citrix technologies. However, each of these products has a set of capabilities that can be used for certain use cases. You may find it difficult to validate multiple third-party solutions for your exact requirement. In addition, it can be

challenging to run numerous test cycles with each solution during PoCs (Proof of Concept). To address such concerns, Citrix Ready validates popular user scenarios provided in form of a test kit and categorizes solutions under three levels that bucket similar use-cases together.

## HDX Ready

HDX Ready Endpoints serve the daily task workers who need access to basic business productivity applications like office suites and various enterprise resource planning (ERP) related software for business management. These devices leverage the mobility and flexibility benefits of applications and desktop virtualization offered by Citrix XenDesktop and XenApp. Choose these devices to remotely access your applications and desktops while the workload is handled at the server backend.

HDX Ready qualification validates the client's ability to carry out the following tasks:

- HDX Plug n Play - Redirection for USB 2.0 / 3.0 devices
- HDX 2D Graphics - Server Rendered
  - a. 1080p HD view of slide deck with 8 - 10 Frames per second (FPS) and 105-300ms average screen response time
  - b. Scrolling PDF with 12-18 FPS and 60-80ms average screen response time
  - c. 720p window media video (wmv) codec file with 15-18 FPS and 60-220ms average screen response time
  - d. Client CPU usage remains less than 50% in all above scenarios
- HDX Voice - Generic Chat & Softphone Support
- HDX Video Playback - Server Rendered Flash and Windows Media
  - a. 720p online flash video and .mp4 video file with 15 - 18 FPS, 60ms - 220ms average screen response time
  - b. Client CPU usage remains less than 50%
- Print using Citrix Universal Printer Driver
- HDX/ICA Traffic optimization via CloudBridge (Optional)
- NetScaler Insight Center Monitoring (Optional)

## HDX Premium

HDX Premium Endpoints enhance real-time and secure remote access experience for users. In addition to the basic functionalities offered by HDX Ready Endpoints, these devices enable

unified communication solutions such as Skype for Business (formerly Lync) for better communication and collaboration by leveraging Citrix HDX RealTime Optimization Pack. Enterprises can deliver a dynamic virtual workspace that truly enables a work anywhere, anytime environment. Choose these devices when enabling secure and real time collaboration is critical to business.

HDX Premium qualification validates the client's ability to carry out the following tasks:

- HDX Plug-n-Play - Multi-Monitor
  - Two 1080p HD Monitor support
- HDX Real Time Audio (VoIP)
- HDX Media stream Flash Redirection
  - 720p Flash website with 18-20 FPS rendered from client-side
  - 720p online Flash video with 18- 22 FPS rendered from client-side
- HDX Media stream Windows Media Redirection
  - 720p 30 FPS windows media file rendered from client-side
- HDX Real Time Webcam compression
  - 12-18 FPS, 60-80ms average screen response time
- HDX RealTime Optimization Pack Support
  - P2P video frames over LAN rendering SD 640x480 resolution at 15fps or better
- HDX Smartcard Support
  - Secure authentication with standard PIV compliant device

## HDX 3D Pro

HDX 3D Pro Endpoints cater to the power users who need high-end capabilities to access centrally delivered 3D graphics-intensive apps with powerful performance. These devices leverage the mobility and flexibility benefits of applications and desktop virtualization from Citrix XenApp and XenDesktop with HDX 3D Pro technology. HDX 3D Pro is a set of graphics acceleration technologies from Citrix designed to optimize the virtualization of rich graphics apps. Choose these devices to access applications and desktops for computer-aided design (CAD), Manufacturing (PLM), Geographical Information System (GIS) related software, and Picture Archiving Communication System (PACS) workstations for medical imaging.

HDX 3D Pro qualification validates the client's ability to carry out the following tasks:

- HDX Plug-n-Play - Multi-Monitor
  - Two 1080p HD Monitor support running multiple 3D Apps
- HDX Rich Graphics - 3D Pro
  - 1080p HD view of interactive and non-interactive workloads with 20-24 FPS in H264 mode

- HDX Pixel Perfect Lossless Support
  - 1080p HD view of interactive and non-interactive workloads with 20-24 FPS in Lossless mode
- Space Mouse Support
  - Generic USB Redirection for 3D Mice

**Make informed purchasing decisions**

Your business is unique, and so are your users'

requirements. We understand that choosing from varied devices can make your purchasing task a tad problematic. While you can seamlessly integrate all Citrix Ready products to your Citrix infrastructure, use HDX level classifications to drill down on the devices best suited for your business. This will help you make a purchasing decision that is quick as well as precise.

Here's a comparison for each of the HDX levels:

Features	HDX Ready	HDX Premium	HDX 3D Pro
HDX Plug n Play - USB	✓	✓	✓
HDX 2D Graphics - Server Rendered	✓	✓	✓
HDX Voice - Generic Chat & Softphone Support	✓	✓	✓
HDX Video Playback - Server Rendered Flash	✓	✓	✓
HDX Video Playback - Server Rendered Windows Media	✓	✓	✓
Print using Citrix Universal Printer Driver	✓	✓	✓
CloudBridge HDX Optimization verification	✓*1	✓*	✓*
NetScaler Gateway and NetScaler Insight Center verification	✓*	✓*	✓*
HDX Plug-n-Play - Multi-Monitor Support		✓ (Multiple 2D apps)	✓ (Multiple 3D apps)
HDX Real Time Audio (VoIP)		✓	
HDX Media stream Flash Redirection		✓	
HDX Media stream Windows Media Redirection		✓	
HDX Real Time Webcam compression		✓	
Citrix HDX RealTime Optimization Pack Support		✓	
HDX Smartcard Support		✓	
HDX Rich Graphics - 3D Pro			✓
HDX Pixel Perfect Lossless Support			✓
Space Mouse Support			✓

1\* This newly added scenario is optional in the interim for vendors to test and gain XenApp / XenDesktop compatibility status

---

## Conclusion

This classification of devices is our endeavor to simplify building out your IT infrastructure for virtualization and EUC. In addition, the appropriate Endpoint devices will help you

deliver the pertinent output for your business. You can visit the Citrix Ready Marketplace to explore and evaluate Citrix-compatible products and solutions.

[Explore HDX level classifications >>](#)

## Revision Information

Version	Description	Created By	Date
1.0	Find Your Endpoint v1 release	Sagnik Datta, Citrix Ready	Nov 2015
2.0	Revised test scenarios	Sagnik Datta, Citrix Ready	Aug 2016



### Enterprise Sales

North America | 800-424-8749

Worldwide | +1 408-790-8000

### Locations

Corporate Headquarters | 851 Cypress Creek Road Fort Lauderdale, FL 33309 United States

Silicon Valley | 4988 Great America Parkway Santa Clara, CA 95054 United States

Copyright© 2016 Inc. All rights reserved. Citrix, the Citrix logo, and other marks appearing herein are property of Citrix Systems, Inc. and/or one or more of its subsidiaries, and may be registered with the U.S. Patent and Trademark Office and in other countries. All other marks are the property of their respective owner/s.