

USB Dex™

KVM Over USB 3.0 With Integrated Flash Storage

Control any server — including BIOS — from your laptop over a single USB 3.0 cable. No network. No agents. No crash cart.

USB Dex™ is a hardware-based remote access solution that provides full keyboard, video, and mouse control of virtually any computer without installing software, drivers, agents, clients, or operating system components.

Unlike AnyDesk, TeamViewer, RDP, and other software-based remote access solutions, USB Dex does not require software installation on the target computer and does not use Ethernet, Wi-Fi, VPNs, cloud services, or any IP network connection. There are no background services, security exceptions, software updates, or compatibility concerns.

 **Designed and Manufactured in the USA**



FEATURES AND CAPABILITIES FOR KVM OPERATIONS

Smart-AVI's USB Dex™ delivers the performance, reliability, and security required for modern IT operations where full server control matters and every second counts.

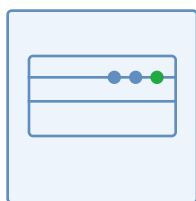
- **No software, drivers, agents, or clients required**
- **No network connection required**
- **Full BIOS, UEFI, and pre-boot access**
- **Works even if the operating system is corrupted or not installed**
- **Compatible with Windows, Linux, macOS, Unix, embedded systems, and proprietary platforms**
- **Supports servers, workstations, industrial computers, and appliances**
- **Compatible with VGA, DVI, HDMI, and DisplayPort systems**
- **Eliminates cybersecurity risks associated with remote access software**
- **Ideal for air-gapped, classified, government, military, and critical infrastructure environments**
- **Single USB 3.0 cable, one cable connects to your laptop. No crash cart required**
- **Live KVM view, recording, file manager & device settings**
- **Mouse keepalive**

- **IT Administration & Server Management** — Manage bare-metal servers and configure BIOS settings directly from your desk. Replaces bulky crash carts and costly KVM switch infrastructure.
- **Bare-Metal OS Deployment** — Boot and configure servers before any OS is installed. Transfer installation files via onboard flash storage.
- **Secure / Air-Gapped Environments** — Access network-isolated machines through a controlled physical USB channel with zero network exposure.
- **Data Centers** — Rack-and-stack operations, emergency access, and routine maintenance without dedicated console infrastructure.
- **Remote BIOS Configuration** — Change firmware settings, update BIOS, and configure boot sequences on any machine.
- **Field Service & On-Site Support** — One compact device replaces a cart's worth of equipment.
- **R&D and Lab Systems** — Interface with test rigs, embedded systems, and development boards without installing software.
- **Embedded & Industrial Systems** — Configure and monitor industrial PCs and HMIs at scale.
- **Manufacturing Floor HMIs** — Mouse keepalive ensures constant process visibility without triggering watchdog timers.
- **Network Operations Centers** — Fast access to any system in the NOC without needing network connectivity to the target.
- **Security & Compliance Audits** — Access and document system states with screen capture and recording.
- **Education / Training Labs** — Rapidly deploy and reset lab machines without network infrastructure.

HOW IT WORKS

Connect any server to your laptop using a single USB 3.0 cable. The USB Dex™ sits between your laptop and the target server, giving you full keyboard, video, and mouse control plus file transfer, screen capture, and clipboard sync — with zero software on the target.

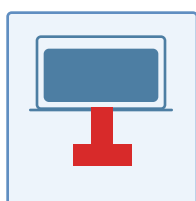
1



Connect to the Target Server

Plug the USB Dex™ HDMI cable into the server's video output and the USB cable into any available USB port. The server requires no software, no OS, no network — even a bare-metal machine with no operating system will work. The USB Dex™ captures the server's video stream and injects keyboard and mouse signals as standard HID devices that any machine will recognise from the moment power is applied.

2



Connect to Your Laptop

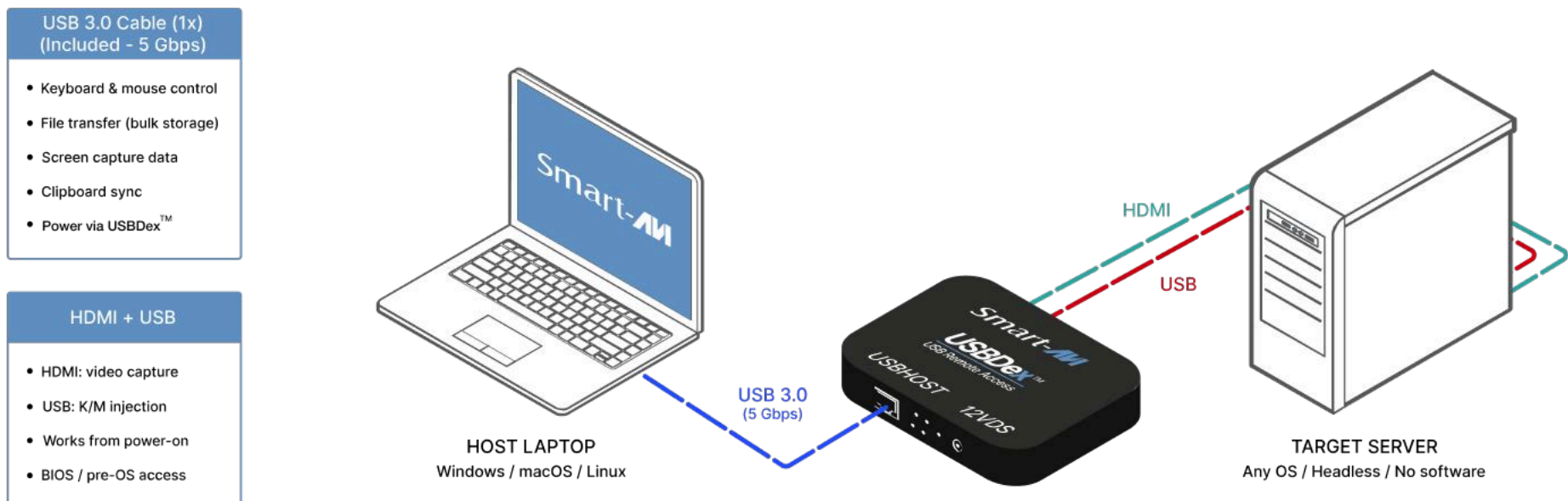
Run a single USB 3.0 cable from the USB Dex™ to your laptop's USB port. That's it. No additional cables, no network connection, no external power required from the laptop side. The host application launches automatically and immediately displays the target's screen inside a resizable window on your laptop.

3



Take Full Control

Your laptop keyboard and mouse are instantly forwarded to the target server. Access BIOS and UEFI from the moment power is applied. Transfer files via the shared onboard flash storage. Capture screenshots or record the screen. Paste clipboard text directly to the target. Enable mouse keepalive to prevent sleep modes on critical systems.



Connection Topology

Connections at a Glance	
HDMI IN	From server video output: Captures the target's display stream
USB (Server)	HID keyboard & mouse injection: Standard USB, no driver on target
USB HOST	Single USB 3.0 cable to host laptop: Carries video, HID, files, and control
12VDC	External power input (AC adapter included)

The USB 3.0 cable carries:

- **Video feed:** Live screen from the target to your laptop window
- **Keyboard & mouse control:** Forwarded from your laptop to the target
- **File transfer:** Bidirectional access to onboard flash storage
- **Screen capture data:** Screenshots and recordings
- **Clipboard sync:** Copy/paste between host and target
- **Power to USBDex™:** Supplementary (primary from 12VDC adapter)

Single USB 3.0 cable from laptop to USBDex™
Full KVM access, file transfer, and screen capture.
No network. No target software. Just plug and play.

SPECIFICATIONS

Video / KVM	
Host Interface	USB 3.0 Type-A
Server Video Input	HDMI
Server HID Output	USB Type-A
Max Resolution	4K @ 30fps (3840 × 2160)
Typical Latency	< 50ms
Flash Storage	Built-in · Shared host & target access
EDID Support	Full pass-through
Driver Required	None (host or target)

Control / Software	
Switching	Direct USB 3.0 from host laptop
Screen Capture	One-click — saves to host or onboard storage
Clipboard	Bidirectional copy/paste host ↔ target
Mouse Keepalive	Configurable — prevents sleep & timeouts
Air-Gap Safe	Zero network traffic to or from target

USB	
Signal Type	USB 3.0 with backward compatibility
Host Interface	USB 3.0 Type-A
Server HID Out	USB Type-A
Emulation	Keyboard and Mouse

Power / Environment	
Power Input	12VDC External
Power Adapter	AC 100–240V, 50/60 Hz (included)
Operating Temp	+32 to +122°F (0 to +50°C)
Storage Temp	–4 to +140°F (–20 to +60°C)
Humidity	Up to 95% (no condensation)
Host OS	Windows, macOS, Linux
Target OS Required	None (agentless)
Approvals	Designed & Manufactured in USA

Part No: USBDK-100 **KVM over USB 3.0 with Integrated Flash Storage. Includes: USBDEX™, PS12VDC-ADAPTER**



Designed and Manufactured in the USA

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