Smart-AVI
SMART AUDIO VIDEO INNOVATION

N2N-KVH100

One Workstation. Every Computer On The Network.



N2N-KVM is a network-based KVM & AV distribution platform that lets operators access, view, and control remote computers from a centralized workstation — over standard IP infrastructure, with no software installed on the source machines.

- Works at the hardware level — video and control go straight through the device's HDMI and USB ports
- No OS dependency, no VPN client, and no agent required on source PCs
- Deploys over any standard gigabit network switch — no proprietary matrix hardware
- One software-configurable platform: the same unit can act as an encoder, a decoder, or a standalone KVM
- Supports CAT5/CAT6 up to 100m

Designed and Manufactured in the USA

FEATURES AND CAPABILITIES FOR REMOTE SERVER MANAGEMENT

Control multiple computers from one workstation

Use less network bandwidth with H.264/H.265 compression

View several systems on one screen with multiview

Switch between sources quickly and seamlessly

Manage devices through desktop manager or web console

Support HDMI and DisplayPort systems

USB 2.0 keyboard and mouse support built in

Adapt the platform for OEM or custom projects

N2N-KVM APPLICATIONS

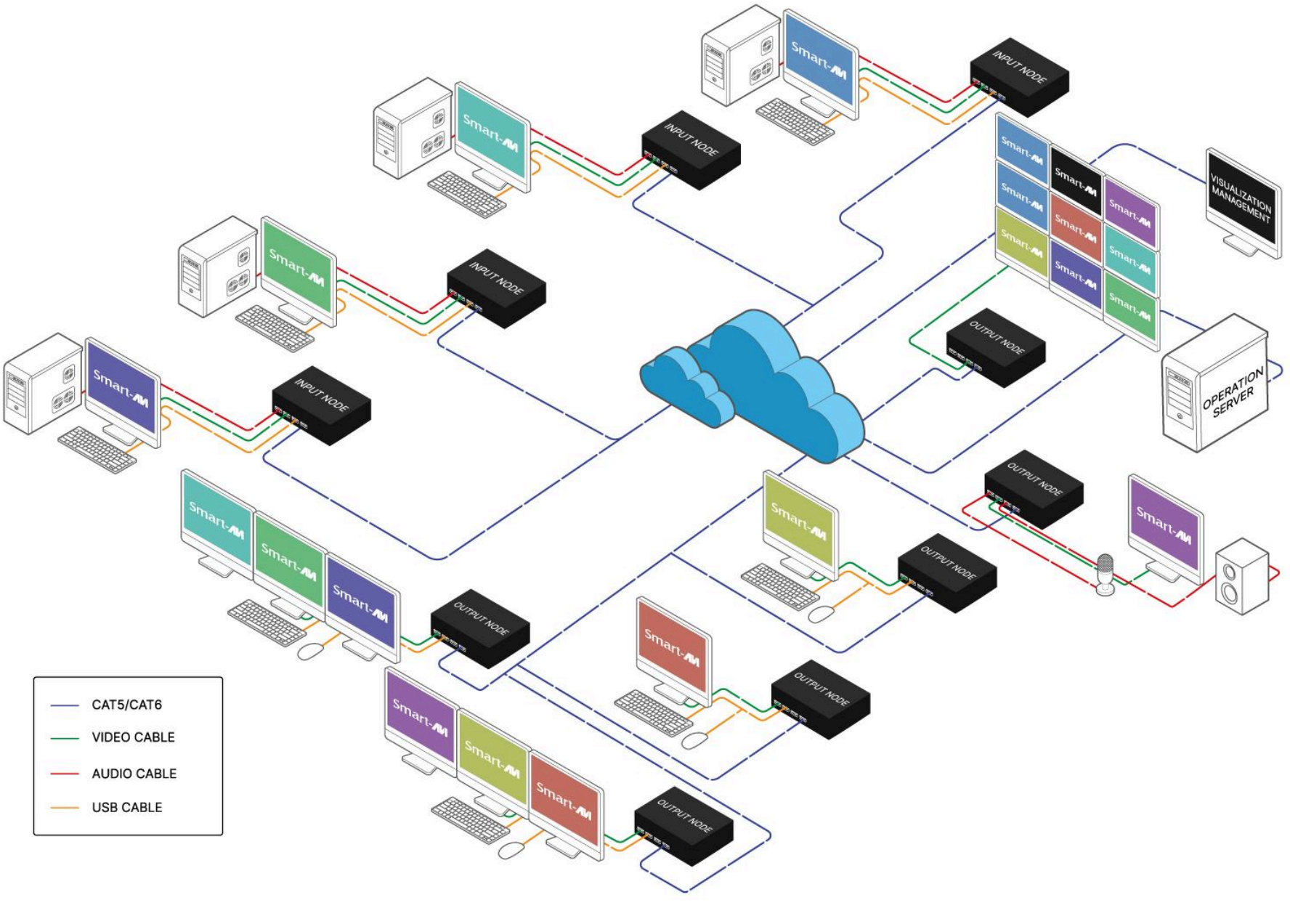
Centralized browser-based monitoring, viewing, and control across multiple locations.

- Command & Control Center
- Data Center Operations
- Security Monitoring
- Server Room Management
- AV / Multimedia Control
- Conference & Collaboration

N2N-KVM lets an operator control, view, and manage multiple remote computers from one centralized workstation over a standard IP network — no proprietary matrix hardware or source-side software required. It's built for applications like data center and server room management, security monitoring, command/control centers, and remote AV/multimedia distribution. The same platform scales from a handful of stations to a full command-room deployment, reaching sources up to 100m over CAT5/CAT6.



Matrix Mode



What travels over the network:

- **KVM stream:** Live HDMI video delivered with H.264/H.265 compression for clear, low-latency control
- **Audio:** Stereo audio carried alongside video to the decoder
- **Matrix switching:** Any source routed to any display via desktop app, browser, or OSD
- **Keyboard & mouse:** Forwarded from the operator station to the selected source in real time
- **Multiview:** Several sources composited onto one display in flexible grid layouts
- **Video walls:** A single source stretched across multiple decoders and monitors

Low bandwidth. Real-time control. No source-side software. Designed and built in the USA.

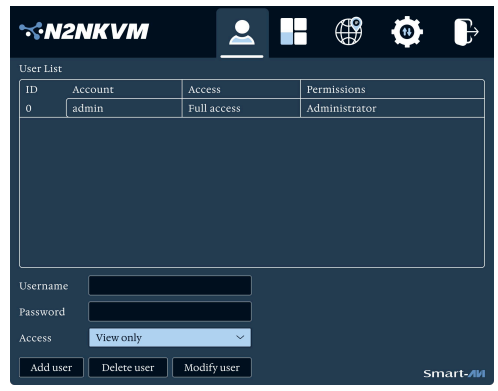
COMPLETE CONTROL, FROM THE SCREEN TO THE WORLD

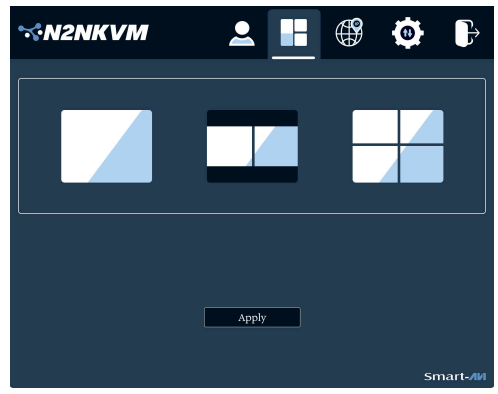
The N2N-KVM Series gives every user in the system the right level of control — from a single on-screen menu at the desk, to full administrative command of the network, to a browser-based console reachable from anywhere in the world.

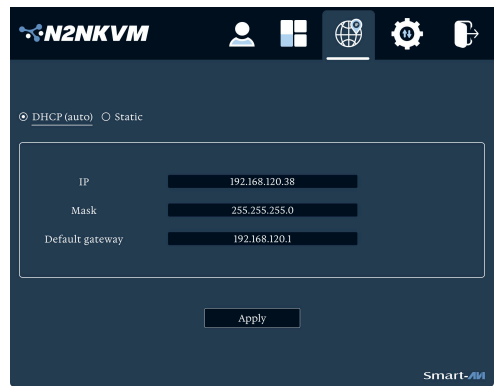
1. Local Control via OSD (On-Screen Display)

Every user gets instant, local control at the point of use — no software or login required.

- Select any transmitter on the network to view and control, directly from the on-screen menu.
- Choose multiple encoders at once to build custom multi-view layouts (single, 1×2, 2×2, and beyond).
- Rename sources and receivers for fast, clear identification across the system.







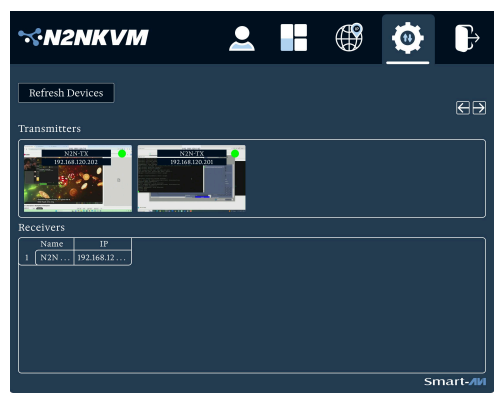
2. N2N Manager — the Administrator's Command Center

N2N Manager is the ultimate solution for administrators, delivering full visibility and control of every encoder and decoder on the network from one desktop application.

- Control and view any encoder or decoder on the network from a single dashboard.
- Discover devices automatically, assign device roles, and configure IP addresses across the entire fleet.
- Create user accounts and set granular access permissions by source or group.
- Monitor real-time device status and activity logs system-wide.

2.1 System Settings Interface

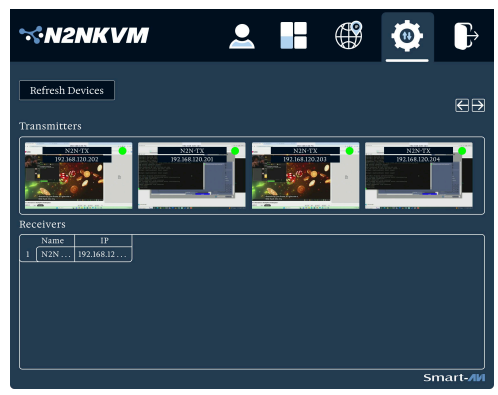
Centralized configuration screen for network, device, and IP settings — the starting point for setting up and maintaining every unit on the system.



3. N2N WebConsole — Control From Anywhere in the World

N2N WebConsole puts the same system-wide control in a standard web browser — no agent installation required.

- Manage the full system — every encoder and decoder — from any browser, on any network.
- Access and operate the system from anywhere in the world with an internet connection.
- Gives remote administrators and operators the same reach as being on-site.



At A Glance

Control Layer	Who It's For	Reach
OSD	Any user, at the display	Local — select, view, rename sources on screen
N2N Manager	Administrators	Full network — configure, monitor, and control every device
N2N Console	Admins & operators, remote	Anywhere — full system control via any web browser



Front



Back

SPECIFICATIONS

N2N-KVH100 HDMI CAT5 4k30 Encoder/Decoder/Codec/KVM

Video	
Video In/Out	Each unit can be setup as encoder or decoder
Encoder In	HDMI 1.4 Compliant, Video Bandwidth Up To 10.2 Gbps Local loop Out HDMI 1.4
Decoder Out	HDMI Port 1.4 Compliant, Video Bandwidth Up To 10.2 Gbps
Video Resolution	Up to 3840x2160x30Hz
Connector	2×HDMI (19-Pin Female)
System	
Interface	EDID Storage & Emulation
Latency	70 ~ 110ms
Protocols Supports	TCP unicast, UDP multicast, RTSP, RTMP
Compression Supports	H.264 / H.265
RS-232	Pass-Through up to 115200
Management	OSD, N2N Manager, N2N web console
Front Panel	LED with IP information
Audio	
Format	PCM 2.0/2.1/5.1/7.1, Dolby Digital 5.1 ch, Dolby Digital Plus, Dolby TrueHD, DTS 5.1 ch
In/Output Interface	3.5 mm Stereo Aux Socket (Female)

USB		
Encoder	USB A HID only Keyboard & Mouse emulation	
Decoder	2x USB Type A, USB 2.0, USB 1.1, USB 1.0 compatible Keyboard & Mouse	
Network Interface		
RJ-45 10/100/1000M Transmission Distance	Up To 100 m	
Other		
Power	Input Voltage	85~264Vac
	Output Voltage	12V DC 3A 36W
Reliability	(MTBF) 135,540 Hours (MIL-HDBK-217F (N2) Parts Count Prediction Calculator)	
Environmental Operating Temperature	0°C to 45°C (32°F to 113°F)	
Environmental Operating Humidity	10 % to 90 %, non-condensing	
ESD Protection	Protection Per IEC 61000-4-2	
Support Warranty	1-Year	
Certification	CE, FCC, RCM, UL	
Dimensions	150mm x 100mmx25mm	
Weight	0.63kg	

Ordering Information		
Part №	N2N-KVH100-S	N2N HDMI 4k30 cat5 ethernet encoder/decoder Includes: [N2N-KVH100 & PS12VD3A]

A working link requires two units of the same part number, one set as transmitter and one set as receiver. Add one unit per additional source or display. For runs beyond 100m, see the 300 Series with SFP fiber.

Designed and Manufactured in the USA

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