Smart-AVI
SMART AUDIO VIDEO INNOVATION



EDPN-ATC-4D

Seamless Dual-Head DisplayPort KVM Switch For Air Traffic Control

Designed for 24/7 operational reliability, this high-performance KVM solution enables air traffic controllers to securely manage multiple critical systems including radar, flight data, surveillance, and weather platforms from a single, unified workstation with specialized ATC resolutions such as 2048×2048 @ 60Hz.

By centralizing IT hardware outside the control room, the system reduces heat, noise, and clutter, while delivering real-time, zero-disruption access to all connected systems that require RS-232.

FEATURES AND CAPABILITIES FOR ATC OPERATIONS

SmartAVI's ATC-dedicated KVM platform delivers the performance, reliability, and security required for modern air traffic control operations where every frame matters and every second counts.

- **True seamless switching** — no video blanking or re-sync
- **Integrated Multiview modes** for simultaneous monitoring
- **Supports specialized ATC resolutions:** Including 2048×2048 and 4K60
- **EDID retention** — monitor/window settings stay intact
- **USB keyboard and mouse emulation**
- **RS-232 support for legacy serial devices**
- **Front Panel, Hotkey, Serial, and Web Switching Options**
- **Stereo audio support**
- **Power failover with dual lockable DC jacks**

HOW IT WORKS



Fullscreen Mode

In the Full Screen mode, one of the four computers is displayed in full screen size and maximum resolution



Dual Mode

In the Dual Mode, the screen is split into two fields of equal size with the screen content of two video sources or computers being displayed in each of these fields.



Picture-in-Picture (PiP)

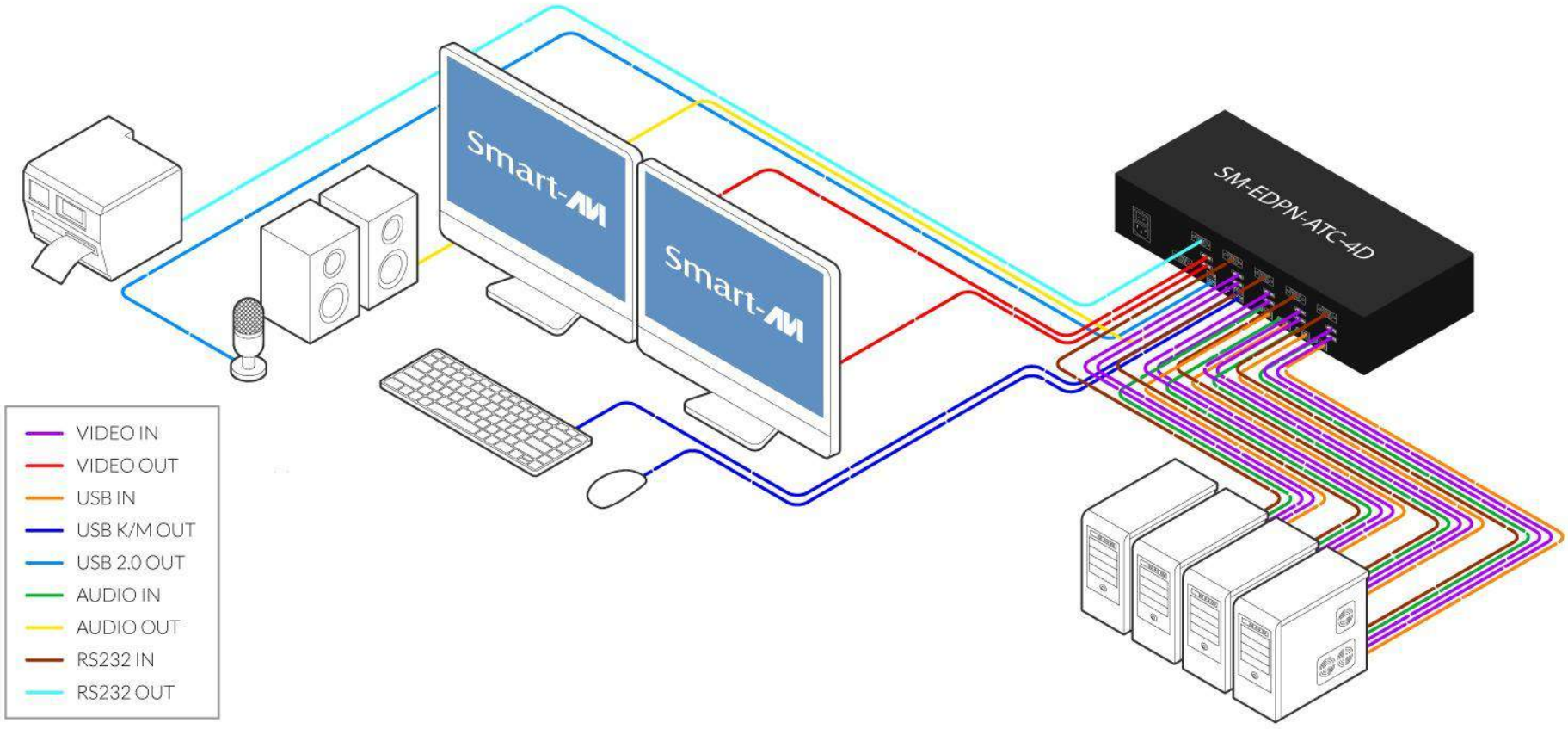
The PIP Mode is fixed in size and position; the full screen displays one of the four video sources, and a smaller image (thumbnail) containing another video source on the right-hand margin of the screen allows for simultaneous monitoring.



Quad Mode

In Quad Mode, the screen is split into four fields of equal size with the screen content of four video sources or computers being displayed in each of these fields.

APPLICATION DIAGRAM



Instant system switching without loss of situational awareness
Supports **Single-Head** and **Dual-DisplayPort**

KEY CAPABILITIES

- **Integrated Multiviewer:** Simultaneous review of multiple imaging sources
- **Ultra-low latency:** Preserving natural cursor and image response
- **True seamless switching:** No screen blanking or re-synchronization
- **4K60 DisplayPort:** Full pixel integrity
- Supports specialized ATC resolutions such as 2048×2048

SPECIFICATIONS

Video		
Format	DisplayPort1.2	
Maximum Pixel Clock	594 MHz	
Input Interface	SM-EDPN-ATC-4D	(8) DisplayPort 20-pin (female)
Output Interface	SM-EDPN-ATC-4D	(2) DisplayPort 20-pin (female)
Resolution & Refresh Rate	3840 x 2160 @ 60 Hz	
Color Capability	24-bit True Color (8-bits per channel)	
Chroma Sampling	4:4:4 (full color), 4:2:2, or 4:2:0	
Input Equalization	Automatic	
Input Cable Length	Up to 20 ft	
Output Cable Length	Up to 20 ft	
Data Rate	1.65 Gbps per color	
Bandwidth (HBR2)	Up to 21.6 Gbps total (5.4 Gbps per lane)	
EDID Support	Full emulation & preloaded profiles	

USB	
Signal Type	USB 2.0, 1.1, and 1.0 w/ internal hub
Input Interface	(4) USB Type B (female)
Output Interface	(2) USB Type A (female) for K/M emulation; (2) for USB 2.0 Transparent
Emulation	Keyboard and Mouse

Control	
Front Panel	Push Buttons with LED Indicators
Hot Keys	Via Keyboard

Audio	
Input Interface	(4) 3.5 mm Stereo Audio
Output Interface	(1) 3.5 mm Stereo Audio
Impedance	600 Ohm
Frequency Response	20 Hz to 20 kHz
Nominal Level	0-1.0 V
Common Mode	Rejection at 60 dB

Other	
Power Adapter	External 120-240 VAC, Internal 120/240 VAC
Dimensions	17.0” W × 2.7” H × 8.69” D
Weight	4.4 lbs
Approvals	UL, CE, ROHS Compliant
Operating Temperature	+32 to +104°F (0 to +40°C)
Storage Temperature	-4 to 140°F (-20 to +60°C)
Humidity	Up to 80% (No Condensation)

Designed and Manufactured in the USA

Tel: (888) 994-7427 ● (702) 800-0005

2917 E Alexander Rd.North Las Vegas, NV 89030