

EDPN-ATC-4S

Seamless Single-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)

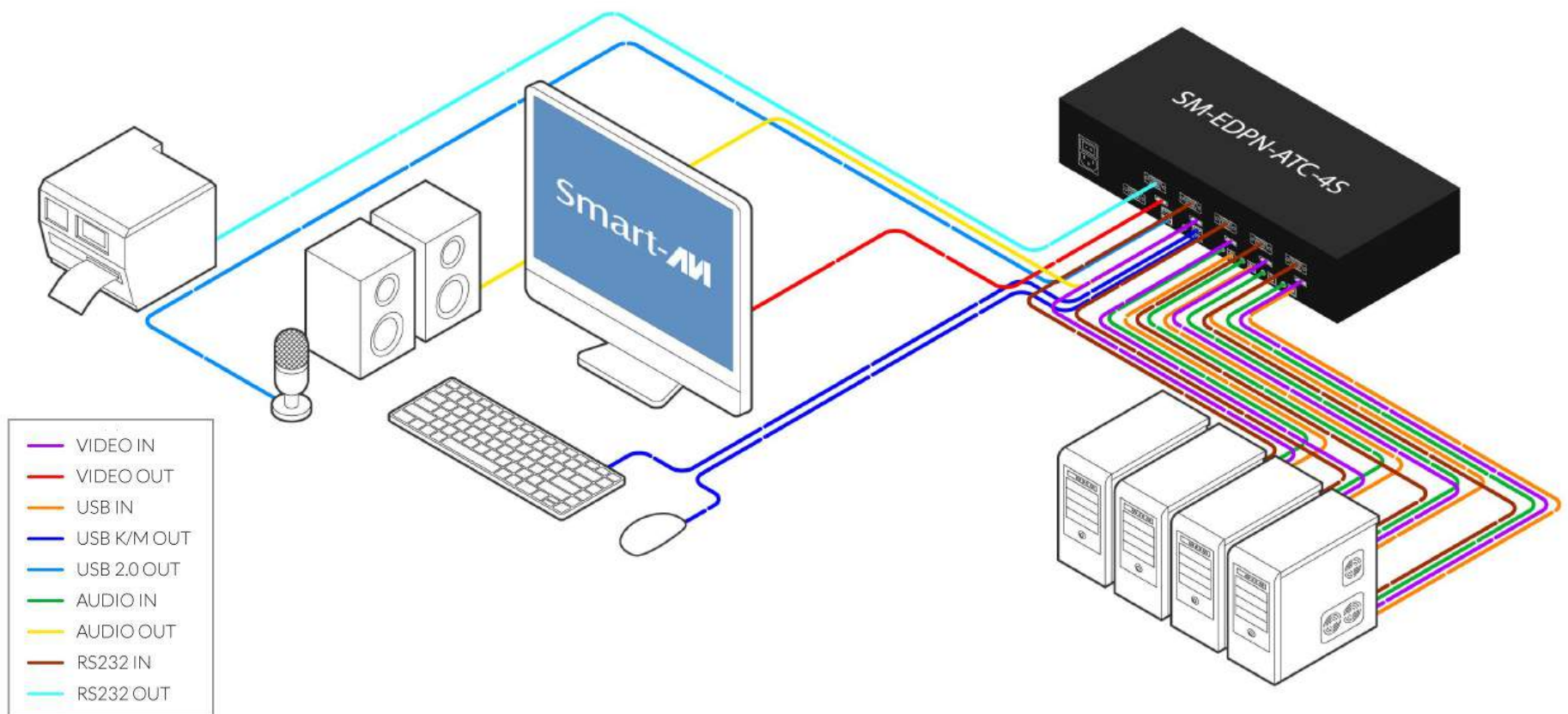
The PiP Mode is fixed in size and position; the full screen displays one of the four video sources, and a smaller image (thumbnail) containing another video source on the right-hand margin of the screen allows for simultaneous monitoring.



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-4S (4) DisplayPort 20-pin (female) |
| Output Interface | SM-EDPN-ATC-4S (1) 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 x 2.7" H x 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