# 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.

- Integrated Multiviewer: Simultaneous system monitoring

- Ultra-low latency: Real-time decision making

- Uninterrupted visualization

- EDID (AUX) Emulation: Window and Monitor Configurations remain intact when switching channels.

- Supports resolutions up to 3840 × 2160 @ 60 Hz

- Supports USB keyboard and mouse emulation

- Supports additional USB 2.0 devices, printers, scanners, web cameras, etc.

- Flash upgradeable firmware

- Stereo Audio support

- True seamless switching: No video blanking or re-sync

- Hot-key commands for quick port selection.

- Specialized ATC resolutions: Including 2048 × 2048

- 4K60 DisplayPort: Full frame integrity

- Precise image timing and color accuracy

- RS-232 for serial communication full RS232 switching to enable to supports legacy printer

- Front panel keys for manual port selection

- Supports power failover – 2 lockable DC jacks for power redundancy to ensure constant availability

- Independent (asynchronous) switching of KVM and peripheral USB/audio ports

- Supports all major Operating Systems like Windows, Mac, Linux, Sun, Unix, DOS, etc.

**Viewing Modes**
Flexible Multiview Modes

**Fullscreen Mode**
Display any single computer in full-screen 4K UHD for focused work.

**Dual Mode**
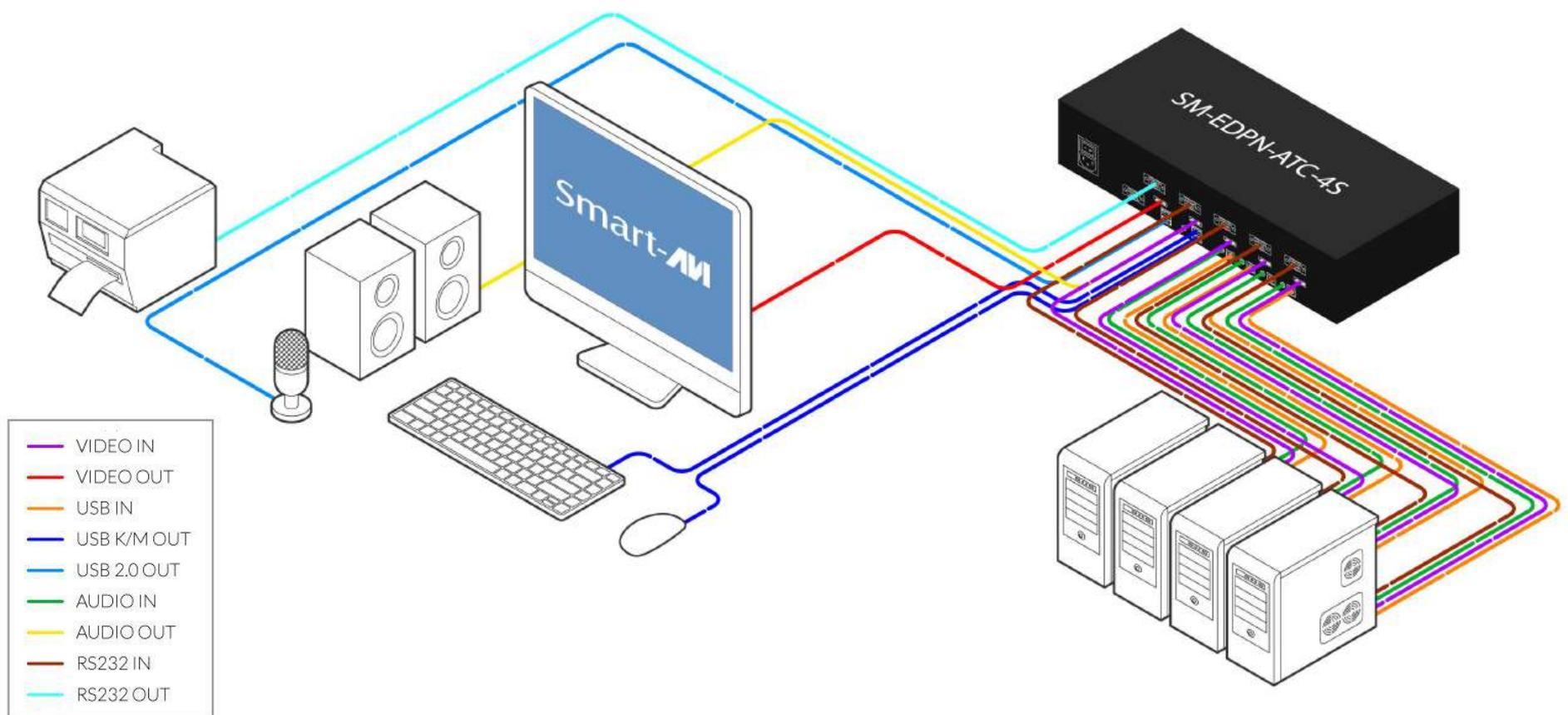View two inputs simultaneously, for comparison or monitoring.

**Quad Mode**
Display all four inputs at once for complete situational awareness.

**Picture-in-Picture (PiP)**
Overlay a secondary source while maintaining focus on a primary system.

# APPLICATION DIAGRAM

- VIDEO IN
- VIDEO OUT
- USB IN
- USB K/M OUT
- USB 2.0 OUT
- AUDIO IN
- AUDIO OUT
- RS232 IN
- RS232 OUT

SM-EDPN-ATC-4S

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

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# 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 | |

## Control

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|---|---|
| **Front Panel** | Push Buttons with LED Indicators |
| **Hot Keys** | Via Keyboard |

## RS-232

| | |
|---|---|
| **Connectors** | 4 DB9 female. One male |
| **Speed** | Up to 115,000 bps |
| **RS-232 Support** | Full Duplex |

## 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 |

## 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) |