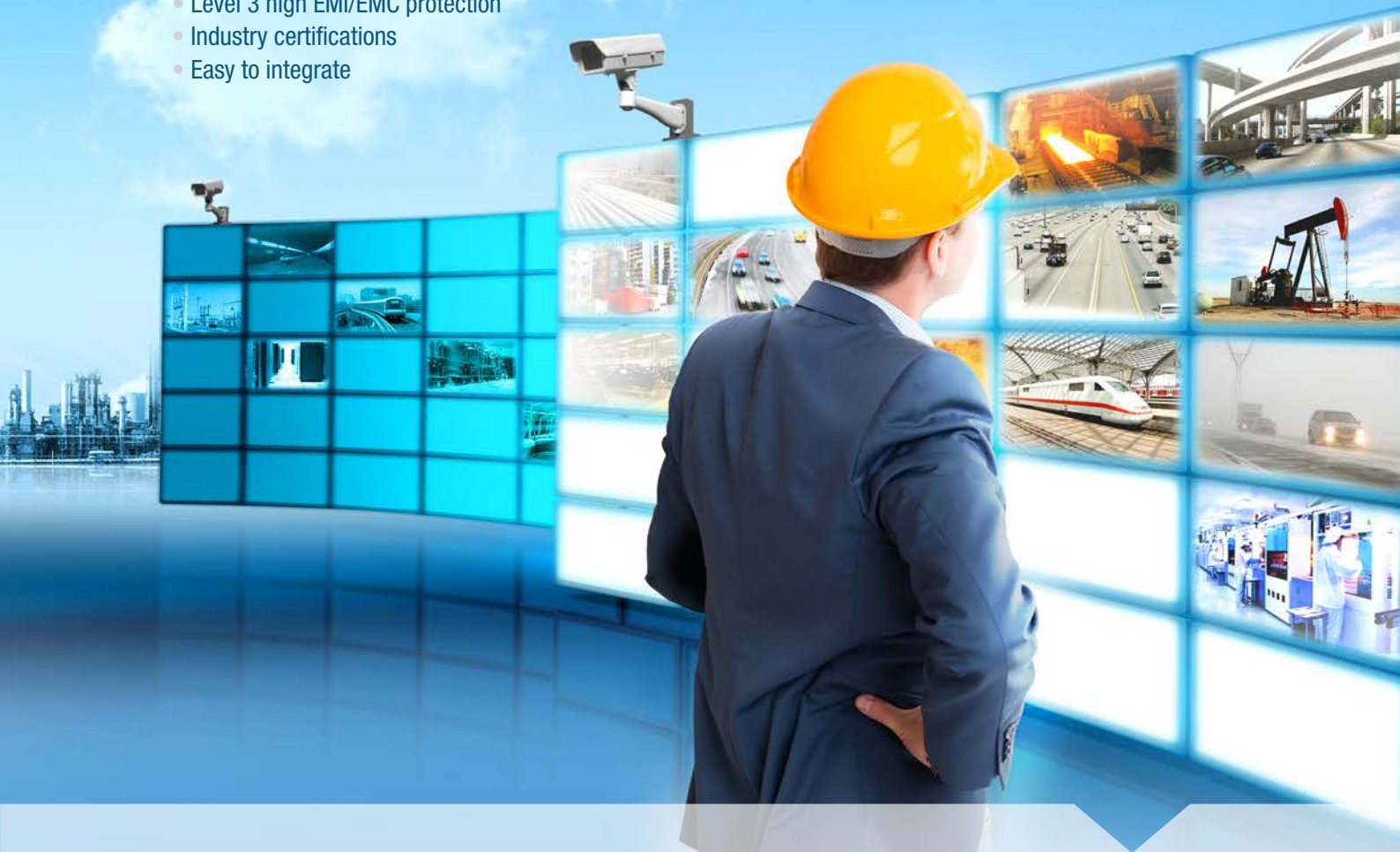


Industrial IP Surveillance Solutions

- Superior image quality
- Wide operating temperature, without fan or heater
- Level 3 high EMI/EMC protection
- Industry certifications
- Easy to integrate



Rugged IP
Cameras



Industrial
Video Servers



Video
Recorders



Recording
Platforms

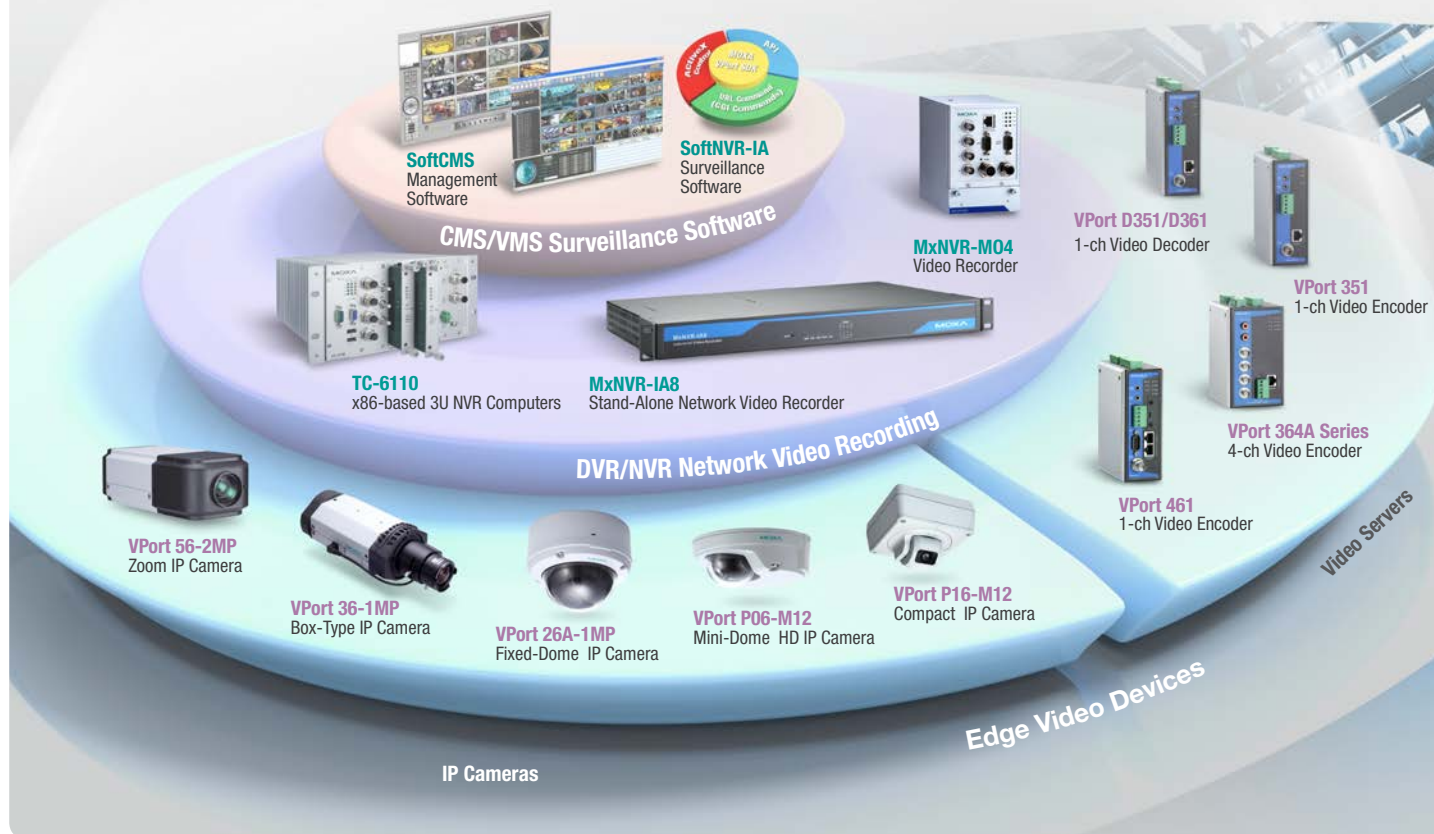


Network
Infrastructure

Upgrade Your IP Surveillance System with Industrial-Grade

To improve safety and security in harsh working environments, building an industrial-grade IP surveillance system is essential, especially for mission-critical video surveillance applications such as oil and gas, railways, ITS, and city traffic systems. In order to provide a constant stream of video images, system reliability is absolutely essential. As a leading provider of rugged IP surveillance solutions with superior video image quality, Moxa provides an array of product solutions that include rugged IP cameras, video encoders, and DVR platforms. Moxa's IP surveillance products feature a wide operating temperature range (-40 to 75°C), without the need for a heater or fan, level 3 EMI/EMC protection, IP66 rain and dust protection, key industrial certifications, and are robust enough to deliver non-stop IP video streaming and recording functionality for extreme applications.

Moxa's IP Surveillance Solutions



> Rugged Design for Industrial-Grade Reliability

Reliability is essential for CCTV systems that must operate 24/7. All of Moxa's IP video products feature rugged industrial designs suitable for outdoor and harsh environments, and allow users to monitor their facilities safely and securely over IP networks.

- Level 3 high EMI/EMC protection
- IP66-rated for rain and dust protection
- IK10/IK9 vandal-resistant form factor
- Versatile installation options for outdoor environments
- Industry certifications
- Long MTBF
- 5-year warranty

> Wide Operating Temperature without Heater or Fan

Moxa's video surveillance products use exceptional thermal conductivity technology to capture HD and Full HD video in areas with wide temperature variations ranging from -40 to 75°C. Moxa's wide temperature IP cameras, video servers, and NVR platforms, which do not require a cooling fan or heater, are designed to increase system reliability in extreme conditions and decrease maintenance costs for system operators.

> Superior Image Quality

Moxa's IP cameras provide best-in-class image quality with advanced image enhancement functions. With full 1080P HD resolution, Moxa's IP cameras use 3D DNR (digital noise reduction), WDR (wide dynamic range), and BLC (backlight compensation) technology to reduce noise and motion blur, overcome poor lighting conditions, and display images in a wide dynamic range of dark to light.

Reliability



Product Coverage

Rugged IP Camera Series

- Box-Type IP Cameras
- Dome-Type IP Cameras
- Compact IP Cameras

P. 3

Industrial Video Servers

- Video Encoders
- Video Decoders

P. 11

Network Video Platforms

- Network Video Recorders
- Network Video Storage

P. 14

IP Surveillance Software

- Video Management Software
- User-Friendly Software Development Kits

P. 18

Network Infrastructure

- Industrial Power-over-Ethernet Switches
- Industrial Wireless Access Point

P. 21

> High Video Performance

Video streaming is a major issue for IP surveillance systems due to the fact that it affects both network and video performance. Moxa's IP video solutions feature flexible and systematic methods for optimizing video streams for high video quality and performance, including:

- DynaStream™: Control video frame rate for system and network efficiency
- Advanced CBR Pro™: Secure your video stream transmission to provide better image quality by eliminating dropped packets
- Multi-stream video: Multiple video streams supported for different application requirements

> Easy to Develop and Integrate

Moxa offers ready-to-use NVR and VMS software for video surveillance systems, and Moxa's user-friendly SDKs (Software Development Kits) provide a variety of software integration tools for use with any type of third-party software, including NVR, VMS, and SCADA.

> ONVIF and Third-Party VMS Compatible

Moxa is an ONVIF user member, and all of Moxa's VPort products support ONVIF specifications for simpler and faster integration with ONVIF-compatible third-party software. Moxa has partnered with the world's leading video management software providers to ensure that Moxa's video surveillance products are easy to integrate with their management systems.

VPort 56-2MP Series

1080P day-and-night H.264 Zoom IP camera



Available September, 2013

- 1080P resolution
- -35 to 75°C operating temperature
- Day-and-night viewing
- Fiber port support



Key Specifications

- **Sensor:** 1/2.5" HD progressive scan CMOS
- **Lens:** 6.3 to 63 mm auto focus zoom lens
- **Auto Iris Type:** DC drive
- **Illumination:** Color: 0.2 lux at F1.8, B/W: 0.1 lux at F1.8
- **White Balance:** ATW/AWC/MWB/Outdoor/Indoor/Fluorescent
- **ICR Control:** Auto or DI control
- **DNR:** Built-in 3D DNR
- **AGC Control:** On/Off
- **Backlight Compensation:** On/Off
- **Auto Exposure:** On/Off
- **Video Compression:** H.264 or MJPEG
- **Video Stream:** Up to 3 video streams (2 x H.264 and 1 x MJPEG)
- **Video Resolution:** Up to 1920 x 1080 at 30 FPS
- **DynaStream™:** Supported for automatic adjustment of frame rate control
- **PTZ:** Digital Pan and Tilt, 10x optical zoom and 16x digital zoom
- **Audio:** Two way audio, 1 line-in or micro-in and 1 line-out
- **Local Storage:** SD Socket
- **Ethernet:** 1 x 10/100BaseT(X) or 1 x 100BaseFX, single mode
- **Power Consumption:** Maximum 7.5 W
- **Power Input:** 12/24 VDC/24 VAC or Power-over-Ethernet (IEEE 802.3af), redundant power design
- **Camera Body Housing:** Metal, IP30 rated
- **Operating Temperature:** -35 to 75°C operating temperature (heater and cooling fan not required)
- **Dimensions:** 78 x 65 x 150 mm (3.07 x 2.56 x 5.9 in)
- **Warranty Period:** 3 years

Rugged Design for Harsh Environments

The VPort 56-2MP is the world's first rugged Full HD IP zoom camera designed for mission critical applications. The camera can operate in temperatures ranging from -35 to 75°C without a built-in or external heater and fan.



Superior Image Quality for 10x Optical Zoom

The full HD resolution (1920 x 1080) H.264 IP zoom cameras come with an advanced optical technology featuring 10x optical and 16x digital zoom to improve the efficiency of your surveillance system and ensure the best video quality. With 3D DNR built in, the VPort 56-2MP provides an extra clear image quality, even when operating in extreme environments.

Optional Single Mode Fiber Port

The VPort 56-2MP-S-SC's fiber Ethernet port can extend network distances up to 140 km (87 miles), providing a viable solution for long distance IP surveillance applications.



Rear view

Available Models

- **VPort 56-2MP**
Full HD zoom IP camera, RJ45 Ethernet port, 24 VAC/VDC/PoE, 0 to 60°C operating temperature
- **VPort 56-2MP-T**
Full HD zoom IP camera, RJ45 Ethernet port, 24 VAC/VDC/PoE, -35 to 75°C operating temperature
- **VPort 56-2MP-S-SC**
Full HD zoom IP camera, single-mode fiber Ethernet port, 24 VAC/VDC, 0 to 60°C operating temperature
- **VPort 56-2MP-S-SC-T**
Full HD zoom IP camera, single-mode fiber Ethernet port, 24 VAC/VDC, -35 to 75°C operating temperature

VPort 36-1MP Series

Rugged HD day-and-night box-type H.264 IP cameras



- 720P with optional IVA function
- -40 to 75°C operating temperature
- Day-and-night viewing



Key Specifications

- **Sensor:** 1/2.7" HD progressive scan CMOS
- **Lens:** Designed for C/CS mount lens (lens not included)
- **Auto Iris Type:** DC drive
- **Illumination:** Color: 0.2 lux at F1.2, B/W: 0.05 lux at F1.2
- **White Balance:** ATW/AWB
- **Dynamic Range:** Color 100 dB, B/W 110 dB
- **ICR Control:** Auto or DI control
- **DNR:** Built-in DNR
- **WDR:** Levels 1-8
- **AGC Control:** 2X, 4X, 8X, 16X, 32X, 64X
- **Flickerless Control:** Indoor/Outdoor mode
- **Auto Exposure:** Level ± 5
- **Video Compression:** H.264 or MJPEG
- **Video Stream:** Up to 3 video streams (2 x H.264 and 1 x MJPEG)
- **Video Resolution:** Up to 1280 x 800 at 30 FPS
- **DynaStream™:** Supported for automatic adjustment of frame rate control
- **PTZ:** Digital PTZ with 4X zoom
- **Local Storage:** SD Socket
- **Power Consumption:** Maximum 7.5 W
- **Power Input:** 12/24 VDC, 24 VAC, or Power-over-Ethernet (IEEE 802.3af)
- **Camera Body Housing:** Metal, IP30 protection. Optional IP68 housing available for outdoor applications
- **IVA Function:** Camera tamper, virtual fence, alert zone, missing object, and unattended object (optional)
- **Operating Temperature:** Standard Models: 0 to 60°C (32 to 140°F), Wide Temp. Models: -40 to 75°C (-40 to 167°F)
- **Dimensions:** 778 x 65 x 150 mm (3.07 x 2.56 x 5.9 in)
- **MTBF:** 541,826 hours
- **Warranty Period:** 5 years

Ready for Extreme Hot and Cold Environments

Moxa's VPort 36-1MP can operate comfortably in extreme temperatures ranging from -40 to 75°C without a fan or heater. With fewer moving parts, Moxa's outdoor IP cameras deliver higher reliability at a lower power draw, greatly simplifying the electrical installation and maintenance of the system.



Superior Image Quality for Day-and-Night Viewing

The VPort 36-1MP series supports a variety of lenses for any application and is compatible with C/CS mount lenses to meet any viewing angle and distance requirements. With a built-in removable IR-cut filter and automatic color mode switching, the VPort 36-1MP is suitable for day-and-night use. Highly-tuned ROI (Region of Interest), and WDR (Wide Dynamic Range) functions enable the VPort 36-1MP to produce exceptionally clear images.



Intelligent Video Analysis

With intelligent video analysis functions and advanced image analysis algorithms, the VPort 36-1MP IP cameras offer quick detection over a wide variety of threats, and allow user-defined motion detection of unauthorized camera tampering, virtual fences, object counting, alert zones, missing objects, and unattended objects.



Available Models

- **VPort 36-1MP**
H.264/MJPEG fixed-box IP camera, 12/24 VDC or 24 VAC power input or power-over-Ethernet, 0 to 60°C operating temperature
- **VPort 36-1MP-T**
H.264/MJPEG fixed-box IP camera, 12/24 VDC or 24 VAC power input or power-over-Ethernet, -40 to 75°C operating temperature
- **VPort 36-1MP-IVA**
H.264/MJPEG fixed-box IP camera, 12/24 VDC or 24 VAC power input or power-over-Ethernet, 0 to 60°C operating temperature, 1 IVA license
- **VPort 36-1MP-IVA-T**
H.264/MJPEG fixed-box IP camera, 12/24 VDC or 24 VAC power input or power-over-Ethernet, -40 to 75°C operating temperature, 1 IVA license

VPort 26A-1MP Series

IP66, day-and-night vandal-proof fixed dome HD IP camera for outdoors



- 720P superior image quality
- Day-and-night viewing
- -40 to 75°C operating temperature



Key Specifications

- **Sensor:** 1/2.7" HD progressive scan CMOS
- **Lens:** Focal length = 3 to 9 mm, F = 1.2
- **Auto Iris Type:** DC drive
- **Illumination:** Color: 0.2 lux at F1.2, B/W: 0.05 lux at F1.2
- **White Balance:** ATW/AWB
- **Dynamic Range:** Color 100 dB, B/W 110 dB
- **ICR Control:** Auto
- **DNR:** Built-in DNR
- **WDR:** Levels 1-8 / off
- **AGC Control:** 2X, 4X, 8X, 16X, 32X, 64X
- **Flickerless Control:** Indoor/Outdoor mode
- **Black Level Control:** High, Medium, Low
- **Auto Exposure:** Level ± 5
- **Video Compression:** H.264 or MJPEG
- **Video Stream:** Up to 3 video streams (2 x H.264 and 1 x MJPEG)
- **Video Resolution:** Up to 1280 x 800 at 30 FPS
- **DynaStream™:** Supported for automatic adjustment of frame rate control
- **CBR Pro™:** Supported for good image quality in limited bandwidth transmissions
- **PTZ:** Digital PTZ with 4X zoom
- **Audio:** 1 line-in or micro-in, 1 line-out
- **Storage:** SDHC socket (supports up to 32 GB)
- **Power Consumption:** Maximum 5.8 W
- **Power Input:** 12/24 VDC, 24 VAC or Power-over-Ethernet (IEEE 802.3af)
- **Camera Body Housing:** Metal, IP66 and IK10 rated
- **Operating Temperature:** Standard Models: 0 to 60°C (32 to 140°F), Wide Temp. Models: -40 to 75°C (-40 to 167°F)
- **Dimensions:** 149 mm (diameter) x 120 mm (height) (5.86 x 2.31 in)
- **MTBF:** 201,721 hours
- **Warranty Period:** 5 years

Wide Temperature with IP66 Housing

With Moxa's thermal design technology built in, VPort 26A-1MP cameras can operate comfortably in extreme temperatures ranging from -40 to 75°C without a fan or heater, making them suitable for a wide range of harsh and outdoor environments.



Rugged Enough for Outdoor Applications

Moxa's VPort 26A-1MP IP cameras feature a metal housing, EN 62262 IK10 vandal-proof dome cover, and are EN 50121-4 compliant for railway applications. In addition, the cameras are covered by a dehumidified membrane for diffusing the moisture inside the camera.

Superior Image Quality for Day-and-Night Viewing

The VPort 26A-1MP is equipped with a megapixel 3 to 9 mm vari-focal lens that meets versatile viewing angle and distance requirements. With a built-in removeable IR-cut filter, and automatic switching from color to B/W images, the VPort 26A-1MP is suitable for day-and-night use. Along with built-in DNR (Digital Noise Reduction) and WDR (Wide Dynamic Range), the VPort 26A-1MP series provides excellent image quality under low illumination or back light conditions.



Available Models

- **VPort 26A-1MP**
IP66, day-and-night vandal-proof fixed dome HD IP camera, 12/24 VDC or 24 VAC power input, -40 to 50°C operating temperature
- **VPort 26A-1MP-T**
IP66, day-and-night vandal-proof fixed dome HD IP camera, 12/24 VDC or 24 VAC power input, -40 to 75°C operating temperature
- **VPort P26A-1MP**
IP66, day-and-night vandal-proof fixed dome HD IP camera, PoE (802.3af) power supply, -40 to 50°C operating temperature
- **VPort P26A-1MP-T**
IP66, day-and-night vandal-proof fixed dome HD IP camera, PoE (802.3af) power supply, -40 to 75°C operating temperature

VPort 16-M12 Series

EN 50155 compliant, high CCD image quality, rugged IP cameras



- CCD image quality
- IK10 vandal protection (Dome Type)
- EN 50155 compliant



Key Specifications

- **Sensor:** 1/3" CCD
- **Lens:** 3, 3.6, 6, 8, and 16 mm fixed focal length
- **Illumination:** 0.02 lux at F2.0 color
- **White Balance:** ATW/AWC
- **De-interlace:** 3D
- **AGC Control:** On/Off
- **Flickerless Control:** On/Off
- **Backlight Compensation:** On/Off
- **Auto Exposure:** On/Off
- **Video Compression:** H.264 or MJPEG
- **Video Stream:** Up to 3 video streams (2 x H.264 and 1 x MJPEG)
- **Video Resolution:** Up to 800 x 600 at 30 FPS
- **DynaStream™:** Supported for automatic adjustment of frame rate control
- **Local Storage:** SDHC socket (supports up to 32 GB)
- **Ethernet:** 1 x 10/100BaseT(X) Ethernet port, 4-pin M12 D-code female connector
- **Power Consumption:** Maximum 6.5 W
- **Power Input:** Power-over-Ethernet (IEEE 802.3af)
- **Housing:** Metal and glass, optional PC dome cover, IP66 rated
- **Dehumidifying Membrane:** GORE protective vent
- **Operating Temperature:** -25 to 55°C (-13 to 131°F)
- **Dimensions:** 125 x 125 x 109.1 mm (4.92 x 4.92 x 4.29 in)
- **MTBF:** 62,965 hours
- **Warranty Period:** 3 years

Compact and Rugged Design, EN 50155 Compliance

The VPort 16-M12, a compact, fixed-IP camera with EN 50155:2007 compliance, is specially designed for rolling stock CCTV applications. In addition to the -25 to 55°C operating temperature, IP66 rain and dust protection, Power-over-Ethernet (PoE), and metal housing with glass lens cover, the VPort 16-M12 also has a built-in dehumidifying membrane for dissipating moisture trapped inside the camera and keeping other moisture out. This innovative design greatly reduces the impact of moisture on the lens.



CCD Image with 3D-Deinterlacing

To provide superior video quality, the VPort 16-M12 adopts a 1/3" CCD image sensor and advanced 3D-deinterlacing hardware enhancement, making it suitable for most lighting conditions. A maximum of 2 H.264 and 1 MJPEG video streams are provided by the VPort 16-M12. In addition, Moxa's DynaStream™ function allows you to change the video frame rate automatically, which can help you control your network bandwidth budget and ease network system management.

Anti-Vibration Ethernet Connector

To increase the reliability of video transmissions through networks in high-vibration environments, the VPort 16-M12 features a 4-pin M12 D-code anti-vibration Ethernet connector to ensure network connectivity.

Available Models

- **VPort 16-M12-CAM3L5430N/P**
EN 50155, 540 TVL CCD image, fixed IP camera with M12 Ethernet connector, 3.0 mm lens, NTSC/PAL modulation
- **VPort 16-M12-CAM3L5436N/P**
EN 50155, 540 TVL CCD image, fixed IP camera with M12 Ethernet connector, 3.6 mm lens, NTSC/PAL modulation
- **VPort 16-M12-CAM3L5460N/P**
EN 50155, 540 TVL CCD image, fixed IP camera with M12 Ethernet connector, 6.0 mm lens, NTSC/PAL modulation
- **VPort 16-M12-CAM3L5480N/P**
EN 50155, 540 TVL CCD image, fixed IP camera with M12 Ethernet connector, 8.0 mm lens, NTSC/PAL modulation
- **VPort 16-M12-CAM3L54160N/P**
EN 50155, 540 TVL CCD image, fixed IP camera with M12 Ethernet connector, 16 mm lens, NTSC/PAL modulation
Note: Check our website for lens cover models.

EN 50155 compliant, HD video image, compact IP cameras



- 720P superior image
- -40 to 70°C operating temperature
- Compact size with 47 mm height
- EN 50155 compliant



Key Specifications

- **Sensor:** 1/2.7" HD progressive scan CMOS
- **Lens:** 3.6, 4.2, 6 mm fixed focal length
- **Illumination:** 0.2 lux at F1.2 color
- **White Balance:** ATW/AWB
- **Dynamic Range:** Color 100 dB, B/W 110 dB
- **DNR:** Built-in DNR
- **WDR:** Levels 1-8
- **AGC Control:** On/Off
- **Flickerless Control:** Automatic or 50/60 Hz mode
- **Black Level Control:** High, Medium, and Low
- **Auto Exposure:** On/Off
- **Video Compression:** H.264 or MJPEG
- **Video Stream:** Up to 3 video streams (2 x H.264 and 1 x MJPEG)
- **Video Resolution:** Up to 1280 x 800 at 30 FPS
- **DynaStream™:** Supported for automatic adjustment of frame rate control
- **CBR Pro™:** Supported for good image quality in limited bandwidth transmissions
- **PTZ:** Digital PTZ with 4X zoom
- **Audio Inputs:** 1 line in, rugged RCA connector
- **Ethernet:** 1 x 10/100BaseT(X) Ethernet port, 4-pin M12 D-code female connector
- **Power Consumption:** Maximum 6 W
- **Power Input:** Power-over-Ethernet (IEEE 802.3af)
- **Housing:** IP66 rain and dust protection, EN 62262 IK9 vandal-proof
- **Operating Temperature:** Standard Models: -25 to 55°C (-13 to 131°F), Wide Temp. Models: -40 to 70°C (-40 to 158°F)
- **Dimensions:** 110 (diameter) x 47 (height) mm (4.33 x 1.85 in)
- **MTBF:** 1,944,678 hours
- **Warranty Period:** 5 years

Wide Operating Temperature

With Moxa's thermal design technology built in, the VPort P06-1MP-M12 is ready for tough mobile applications. It can withstand extreme environmental temperatures ranging from -40 to 70°C without a heater, fan, or other cooling equipment.



Compact and Rugged Design with EN 50155 Compliance

The VPort P06-1MP-M12's 47 mm height makes it ideal for tough vehicle environments with limited installation space. It is compliant with EN 50121-3-2 (EMC), EN 61373 for shock and vibration, and essential sections of EN 50155. Moreover, the VPort P06-1MP-M12 satisfies the IEC 62262 Class IK9 standard, which is the toughest enclosure protection standard, providing users with a true, vandal-proof IP camera.

Advanced Constant Bit Rate Control

CBR Pro™ is an advanced bit rate flow control technology that limits the transmission bit rate based on a user's network bandwidth. This function is designed to secure video stream transmission to provide the best image quality by eliminating the dropped packets that occur when the peak bit rate exceeds the bit rate allowed by the network bandwidth.

Audio Input, and Anti-Vibration Ethernet Connector

VPort P06-1MP-M12 cameras have one audio input that allows operators to record and view video along with audio. To increase the reliability of video transmission over networks in high-vibration environments, the VPort P06-1MP-M12 series features a 4-pin M12 D-code Ethernet connector to ensure network connectivity.

Available Models

- **VPort P06-1MP-M12-CAM36 (-T)**
EN 50155 compliant, HD video image, compact IP camera, 3.6 mm focal lens, -25 to 55°C (T model: -40 to 70°C) operating temperature
- **VPort P06-1MP-M12-CAM42 (-T)**
EN 50155 compliant, HD video image, compact IP camera, 4.2 mm focal lens, -25 to 55°C (T model: -40 to 70°C) operating temperature
- **VPort P06-1MP-M12-CAM60 (-T)**
EN 50155 compliant, HD video image, compact IP camera, 6.0 mm focal lens, -25 to 55°C (T model: -40 to 70°C) operating temperature

EN 50155 compliant, HD video image, hidden IP cameras



- 720P superior image
- Hidden form factor
- Built-in microphone



Key Specifications

- **Sensor:** 1/2.7" HD progressive scan CMOS
- **Lens:** 2.5, 3.6 mm fixed focal megapixel length
- **Illumination:** 0.2 lux at F1.2 color
- **White Balance:** ATW/AWB
- **Dynamic Range:** Color 100 dB, B/W 110 dB
- **DNR:** Built-in DNR
- **WDR:** Levels 1-3
- **AGC Control:** 2X, 4X, 8X, 16X, 32X
- **Flickerless Control:** Automatic or 50/60 Hz mode
- **Auto Exposure:** Level ± 5
- **Video Compression:** H.264 or MJPEG
- **Video Stream:** Up to 3 video streams (2 x H.264 and 1 x MJPEG)
- **Video Resolution:** Up to 1280 x 800 at 30 FPS
- **DynaStream™:** Supported for automatic adjustment of frame rate control
- **CBR Pro™:** Supported for good image quality in limited bandwidth transmissions
- **PTZ:** Digital PTZ with 4X zoom
- **Audio Inputs:** 1, built-in microphone
- **Ethernet:** 1 x 10/100BaseT(X) Ethernet port, 4-pin M12 D-code female connector
- **Power Input:** Power-over-Ethernet (IEEE 802.3af)
- **Housing:** Metal housing with transparent acrylic cover (can be customized)
- **Operating Temperature:** -25 to 55°C (-13 to 131°F)
- **Dimensions:** 150 x 85 x 95 mm (5.90 x 3.34 x 3.74 in)
- **MTBF:** 1,275,915 hours
- **Warranty Period:** 5 years

Hidden and Rugged Design with EN 50155 Compliance

The VPort P06HC-1MP-M12's hidden form factor makes it ideal for applications requiring a hidden camera. It is compliant with EN 50121-3-2 (EMC), EN 61373 for shock and vibration, and essential sections of EN 50155, with standard models designed for T1 temperatures.

Advanced Constant Bit Rate Control

CBR Pro™ is an advanced bit rate flow control technology that limits the transmission bit rate based on a user's network bandwidth. This function is designed to secure the video stream transmission to provide the best image quality by eliminating the dropped packets that occur when the peak bit rate exceeds the bit rate allowed by the network bandwidth.

Built-in Microphone and Anti-Vibration Ethernet Connector

The VPort P06HC-1MP-M12 has one microphone for audio input, allowing operators to record and view video along with audio. To increase the reliability of video transmissions over networks in high-vibration environments, the VPort P06HC-1MP-M12 series features a 4-pin M12 D-code Ethernet connector to ensure network connectivity.

Available Models

- **VPort P06HC-1MP-M12-CAM25**
EN 50155 compliant, HD, H.264/MJPEG hidden IP camera, 2.5 mm lens, M12 Ethernet connector, PoE, -25 to 55°C operating temperature
- **VPort P06HC-1MP-M12-CAM36**
EN 50155 compliant, HD, H.264/MJPEG hidden IP camera, 3.6 mm lens, M12 Ethernet connector, PoE, -25 to 55°C operating temperature

IP Camera Lenses

VP-3112MPIR

3.1-8 mm F1.2 Day & Night Lens

Works with: VPort 36-1MP Series

Mounting Type: CS mount

Iris: DC Auto Iris

Focus: Manual

Zoom: Manual

Dimensions: Ø37 x 48.2 x 55 mm

Weight: 59 g

Angle of View:

Angle	D	1/2.7 type (16:9)	123.1°-48.3°
	H		105.4°-42.2°
	V		57.9°-23.8°



VP-1214MPIR

12.5-50 mm F1.4 Day & Night Lens

Mounting Type: CS mount

Focal Length: 12.5 to 50 mm

Max. Aperture Ratio: 1:1.4

Iris: DC Auto Iris

Focus: Manual

Zoom: Manual

Max. Image Format: 3.2 x 5.8 mm (Ø6.6 mm)

Dimensions: Ø46 x 59.3 x 58.4 mm

Angle of View:

Angle	D	1/2.7 type (16:9)	30.3°-7.7°
	H		26.3°-6.7°
	V		14.5°-3.8°



IP68 Indoor/Outdoor Housing

VP-CI701

Construction: Die cast aluminum alloy

Dimensions: 406(L) x 109(H) x 145 (W) mm

View Window: Tempered glass

Housing Style: Clam shell

Latch: Dual side screw-locking

Weight: 2,200 g



Wallmount Bracket

For mounting the VP-CI701 housing on a wall

VP-CI800

Construction: Die cast aluminum alloy

Dimensions: 213(L) x 146(H) x 80(W) mm

Max. Load: 20000 g

Weight: 690 g



For mounting the VPort 26A on a wall

VP-520L

Height: 160 mm (6.3 in)

Width: 100 mm (3.9 in)

Depth: 210 mm (8.3 in)

Weight: 840 g



Pole Mount Bracket

For mounting the wallmount bracket on a pole

VP-CI815

Construction: Die cast aluminum alloy

Dimensions: 277.4 x 75 x 168.1 mm

Max. Load: 30000 g

Weight: 2400 g

Pole: 770 to 230 mm



For mounting the VPort 26A on a pole or corner with the VP-520L

VP-CPM

Height: 126 mm (5 in)

Width: 156.6 mm (6.2 in)

Depth: 86.8 mm (3.4 in)

Weight: 440 g

Stainless Strap: 2



Pendant Mount Bracket

For mounting the VPort 26A on the ceiling

VP-520HB

Height: 150 mm (5.9 in)

Width: 204 mm (8 in)

Depth: 244 mm (9.6 in)

Weight: 2.7 kg

Straight Tube: 300 mm (11.8 in)



Mounting Kit

For mounting the VPort 26A on a straight tube or pendant

VP-MK2

Height: 69 mm (2.7 in)

Diameter: 160 mm (6.3 in)

Weight: 470 g



IP Camera Selection Guide



	VPort 56-2MP Series	VPort 36-1MP Series	VPort 26A-1MP Series	VPort 16-M12 Series	VPort P06-1MP-M12 Series
Form Factor					
Protection Rating	IP30	IP30	IP66	IP66	IP66
Surface/Ceiling Mounting	✓	✓	✓	✓	✓
Flush Mount	–	–	–	✓	–
Outdoor Installation Accessory	✓	✓	✓	–	–
Camera					
Image Sensor	1/2.5" CMOS	1/2.7" CMOS	1/2.7" CMOS	1/3" CCD	1/2.7" CMOS
Modulation	NTSC/PAL	NTSC/PAL	NTSC/PAL	NTSC/PAL	NTSC/PAL
Lens (mm)	6.3 to 63 mm auto focus zoom lens	C/CS mount lenses	3 to 9 mm vari-focal lens	3.0, 3.6, 6.0, 8.0, 16 mm	3.6, 4.2, 6.0 mm
ICR (IR Cut Filter Removable)	✓	✓	✓	–	–
Minimum Illumination	0.2 Lux @ F1.8, color 0.1 Lux @ F1.8, B/W	0.2 Lux @ F1.2, color 0.05 Lux @ F1.2, B/W	0.2 Lux @ F1.2, color 0.05 Lux @ F1.2, B/W	0.02 Lux @ F2.0, color	0.2 Lux @ F1.2, color
White Balance	ATW/AWC/MWB/Outdoor/Indoor/ Fluorescent	ATW/AWB	ATW/AWB	ATW/AWC	ATW/AWB
Electronic Shutter	AES: On/Off Fixed: 1/50, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 sec.	Auto (1/30 to 1/25000 sec.)	Auto (1/30 to 1/25000 sec.)	Auto (NTSC: 1/60 to 1/120,000 sec. PAL: 1/50 to 1/120,000 sec.)	Auto (1/30 to 1/25000 sec.)
DNR	✓	✓	✓	✓	✓
AGC Control	✓	✓	✓	✓	✓
Backlight Compensation	✓	–	–	✓	–
Flicker Control	✓	✓	✓	✓	✓
Auto Exposure	✓	✓	✓	✓	✓
Image Rotation (flip, mirror, and 180° rotation)	✓	✓	✓	✓	✓
WDR (Wide Dynamic Range)	–	✓	✓	–	✓
Video Stream					
H.264	✓	✓	✓	✓	✓
MJPEG	✓	✓	✓	✓	✓
No. of Streams	3	3	3	3	3
DynaStream™	✓	✓	✓	✓	✓
Video Performance					
Max. Resolution	1920 x 1080	1280 x 800	1280 x 800	800 x 600	1280 x 800
Max. FPS	NTSC: 30 PAL: 25	NTSC: 30 PAL: 25	NTSC: 30 PAL: 25	NTSC: 30 PAL: 25	NTSC: 30 PAL: 25
Connections (Max.)	5 unicast 50 multicast RTSP	5 unicast 50 multicast RTSP	5 unicast 50 multicast RTSP	10 unicast 50 multicast RTSP	5 unicast 50 multicast RTSP
Multicast Push	✓	✓	✓	✓	✓
Network Connections					
10/100 Mbps, M12 Connector	–	–	–	1	1
10/100 Mbps, RJ45 Connector	1	1	1	–	–
Peripherals					
SD Slots	SDXC	SDHC	SDHC	SDHC	–
Network Management and Control					
CBR Pro™	✓	✓	✓	–	✓
RTSP (Real Time Streaming Protocol)	✓	✓	✓	✓	✓
Multicast (IGMP)	v3	v3	v3	v3	v3
QoS	✓	✓	✓	✓	✓
Automatic Configuration	–	DHCP Opt 66/67	DHCP Opt 66/67	DHCP Opt 66/67	DHCP Opt 66/67
Power Requirements					
Power-over-Ethernet (PoE)	✓	✓	✓	✓	✓
12/24 VDC, 24 VAC	✓	✓	✓	–	–
Alarms					
VMD (Video Motion Detection)	✓	✓	✓	✓	✓
Alarm Snapshot Image	✓	✓	✓	✓	✓
Tamper Alarm	Pending	✓	✓	–	✓
Supported Operating Temperature Ranges					
0 to 60°C	✓	✓	–	–	–
-25 to 55°C	–	–	–	✓	✓
-40 to 50°C	–	–	✓	–	–
-30 to 75°C	✓	–	–	–	–
-40 to 75°C	–	✓	✓	–	✓
Standards and Certifications					
CE/FCC	✓	✓	✓	✓	✓
UL 60950-1	✓	✓	✓	✓	✓
EN 50155:2007	–	–	–	✓	✓
EN 50121-3-2	–	–	–	✓	✓
EN 50121-4	✓	✓	✓	–	–
EN 62262	–	–	IK10	IK10 (dome model)	IK9
ONVIF	✓	✓	✓	✓	✓

VPort 364A Series

Excellent video quality, 4-channel H.264/MJPEG industrial video encoders



- 4-channel, H.264
- Dual video streams
- -40 to 75°C operating temperature



Key Specifications

- **Video Compression:** H.264 or MJPEG
- **Video Inputs:** 4 BNC connectors (1.0 Vpp, 75 ohm)
- **Video Stream:** Dual streams (1 x H.264 and 1 x MJPEG)
- **Video Resolution:** Up to 720 x 480 at 30 FPS
- **Video Latency:** Under 200 ms
- **DynaStream™:** Supported for automatic adjustment of frame rate control
- **Audio Inputs:** 1 line-in or micro-in with RCA connector
- **Audio Outputs:** 1 line-out with RCA connector
- **Ethernet:** 1 x 10/100BaseT(X) RJ45 port or 1 x 100BaseFX fiber port (single/multi-mode, SC connector)
- **PTZ Camera Control:** Via RS-232/422/485 PTZ port
- **PTZ Functions:** PAN, TILT, ZOOM, FOCUS, moving speed, preset position (max. 25 positions), and 24 custom commands
- **Operating Temperature:** Standard Models: 0 to 60°C (32 to 140°F), Wide Temp. Models: -40 to 75°C (-40 to 167°F)
- **Power Inputs:** 2 x 12 VAC or 24 VDC/VAC inputs for redundancy
- **Power Consumption:** Max. 7.5 W
- **Housing:** Metal, IP30 protection
- **Dimensions:** 80.2 x 135 x 105 mm (3.16 x 5.31 x 4.13 in)
- **MTBF:** 465,000 hours
- **Warranty Period:** 5 years

Rugged Design for Industrial Environments

The VPort 364A 4-channel industrial video encoders are designed for critical industrial applications. With Moxa's thermal technology built in, the VPort 364A can operate reliably in a -40 to 75°C operating temperature range. In addition, the rugged design includes an IP30 protected metal housing, Level 3 EMI/EMC protection, and DIN rail mounting installation.



Excellent Video Performance

To meet various video stream requirements, the VPort 364A supports simultaneous dual video streams using H.264 and MJEG compression. In addition, the VPort 364A supports Moxa's innovative DynaStream™ technology, which reduces bandwidth consumption when the network is overloaded by automatically decreasing the video frame rate, and increasing the video FPS when emergencies occur.

Two Ethernet/Fiber Ports Built in

To make your network communication more safe and reliable, choose a VPort 364A model with two built-in Ethernet ports, which can be used to set up a simple daisy-chain topology or for network redundancy. For long-distance data transmission, choose a VPort 364A model with two built-in fiber ports to extend network distances up to 140 kilometers (87 miles).



Available Models

- **VPort 364A (-T)**
4-channel H.264/MJPEG industrial video encoder with 1 10/100/1000BaseT(X) port, 0 to 60°C (T model: -40 to 75°C) operating temperature
- **VPort 364A-M-SC (-T)**
4-channel H.264/MJPEG industrial video encoder with 1 multi-mode, SC connector port, 0 to 60°C (T model: -40 to 75°C) operating temperature
- **VPort 364A-S-SC (-T)**
4-channel H.264/MJPEG industrial video encoder with 1 single-mode, SC connector port, 0 to 60°C (T model: -40 to 75°C) operating temperature

VPort 461 Series

1-channel H.264 industrial video encoders for IP surveillance



- 1-channel, H.264
- 3 simultaneous video streams
- -40 to 75°C operating temperature



Key Specifications

- **Video Compression:** H.264 or MJPEG
- **Video Inputs:** 1 BNC connector
- **Video Stream:** Max. of 3 video streams (2 encoders: 1 for H.264, 1 for H.264 or MJPEG)
- **Video Resolution:** Up to 720 x 480 at 30 FPS
- **Video Latency:** Under 200 ms
- **DynaStream™:** Supported for automatic adjustment of frame rate control
- **Audio Inputs:** 1 line-in or micro-in with 3.5 mm phone jack
- **Audio Outputs:** 1 line-out with 3.5 mm phone jack
- **Ethernet:** 2 x 10/100BaseT(X) RJ45 ports
- **PTZ Camera Control:** Via RS-232/422/485 PTZ port or COM port
- **PTZ Functions:** PAN, TILT, ZOOM, FOCUS, moving speed, preset position (max. 25 positions), and 24 custom commands
- **Operating Temperature:** Standard Models: 0 to 60°C (32 to 140°F), Wide Temp. Models: -40 to 75°C (-40 to 167°F)
- **Power Input:** 2 x 24 VDC/VAC inputs for redundancy
- **Power Consumption:** Max. 5.5 W
- **Housing:** Metal, IP30 protection
- **Dimensions:** 52.98 x 135 x 105 mm (2.085 x 5.31 x 4.13 in)
- **MTBF:** 375,000 hours
- **Warranty Period:** 5 years

Rugged Design for Mission-Critical Applications

The VPort 461 is a 1-channel industrial video encoder designed for critical industrial applications. With Moxa's thermal technology built in, the VPort 461 can operate reliably in a -40 to 75°C temperature range. In addition, the VPort 461 has an IP30 protected metal housing, meets NEMA TS2, Section 2 requirements, is UL 60950-1 certified for hazardous locations, and is DIN rail mountable for industrial environments.



Excellent Video Performance

The VPort 461 supports up to 3 video streams simultaneously using H.264 and MJPEG compression formats. In addition, the VPort 461 supports Moxa's innovative DynaStream™ technology to reduce bandwidth consumption when the network is overloaded by automatically decreasing the video frame rate, and increasing the video FPS when emergencies occur.

Two Ethernet Ports for Cascading and Port Redundancy

The VPort 461 has two built-in 10/100 Mbps Ethernet ports for cascading multiple VPort 461 units. The cascade feature reduces the number of switch ports required and makes cabling easier. Port redundancy can also be used to build a backup path for video transmissions in case the primary path gets disconnected.

Available Models

- **VPort 461**
1-channel H.264 industrial video encoder with 2 10/100BaseT(X) ports, 0 to 60°C operating temperature
- **VPort 461-T**
1-channel H.264 industrial video encoder with 2 10/100BaseT(X) ports, -40 to 75°C operating temperature
- **VPort 461-ON**
1-channel H.264/MJPEG industrial video encoder with 2 10/100BaseT(X) ports, 0 to 60°C operating temperature
- **VPort 461-ON-T**
1-channel H.264/MJPEG industrial video encoder with 2 10/100BaseT(X) ports, ONVIF version firmware, -40 to 75°C operating temperature

VPort D361 Series

1-channel H.264/MJPEG industrial video decoders



- 1-channel, H.264/MJPEG video streams
- -40 to 75°C operating temperature
- 2-way audio supported



Key Specifications

- **Video Decoding:** H.264 and MJPEG
- **Video Input:** Accepts video streams from the H.264/MJPEG VPort series
- **Video Outputs:** 1 BNC connector (1.0 Vpp, 75 ohms), NTSC or PAL
- **Video Resolution:** Max. of 540 TVL lines
- **Video Sources:** Up to 64, selected manually by web server or digital inputs, or selected automatically by scanning within a set time interval
- **Audio Inputs:** 1 line-in or micro-in with 3.5 mm phone jack
- **Audio Outputs:** 1 line-out with 3.5 mm phone jack
- **Ethernet:** 1 x 10/100BaseT(X) RJ45 port
- **PTZ Camera Control:** Transparent PTZ camera control with legacy PTZ controller through the RS-232/422/485 PTZ port
- **Operating Temperature:** Standard Models: 0 to 60°C (32 to 140°F), Wide Temp. Models: -40 to 75°C (-40 to 167°F)
- **Power Inputs:** 1 12/24 VDC or 24 VAC input
- **Power Consumption:** Max. 6.5 W
- **Housing:** Metal, IP30 protection
- **Dimensions:** 52.98 x 135 x 105 mm (2.08 x 5.31 x 4.13 in)
- **MTBF:** 541,000 hours
- **Warranty Period:** 5 years

High Video Performance

The VPort D361 video decoder can decode video streams in H.264 and MJPEG at a maximum line resolution of 540 TVL. Providing support for H.264 is particularly important due to its high compression rate. Monitoring multiple cameras that are part of a large CCTV system is easy with the VPort D361, which can be configured to switch between different video sources either manually or automatically within a given time interval. Up to 64 video sources can be included in the list.

Rugged Design for Industrial Environments

Designed for critical industrial applications, the VPort D361 video decoders can operate reliably in temperatures ranging from -40 to 75°C. Furthermore, the VPort D361 series comes with an IP30 protected metal housing, Level 3 EMC/EMI protection, and can be mounted on a DIN rail.



Advanced Functions

The VPort D361 supports many advanced functions, including bi-directional audio for voice-over-IP communication between the video encoder and decoder, two DIs for creating two up and down video source selection control buttons, transparent PTZ control for the synchronized operation of remote PTZ cameras with separate individual drivers from the control center, and SNMP support for easy network management.

Available Models

- **VPort D361**
1-channel H.264/MJPEG industrial video decoder, 0 to 60°C operating temperature
- **VPort D361-T**
1-channel H.264/MJPEG industrial video decoder, -40 to 75°C operating temperature

MxNVR-M04 Series

4-channel H.264/MJPEG streaming video recorder for mobile surveillance



- 4-channel, H.264/MJPEG video recording
- -40 to 75°C operating temperature
- Anti-vibration and EN 50155 compliant



Key Specifications

- **Video Compression:** H.264 or MJPEG
- **Video Inputs:** 4 BNC connectors (1 Vpp, 75 ohms)
- **Video Stream:** H.264/ MJPEG dual streams
- **Video Resolution:** Up to 720 x 480 at 30 FPS
- **DynaStream™:** Supported for automatic adjustment of frame rate control
- **Audio Inputs:** 1 line-in or micro-in with DB9 connector
- **Recording Stream Type:** H.264 @ 120 FPS or MJPEG @ 60 FPS
- **Video File Format:** AVI
- **Storage:** 1 SATA interface for a 2.5-inch hard disk or SSD
- **Ethernet:** 1 x 10/100BaseT(X) with M12 connector
- **Operating Temperature:** Standard Models: 0 to 60°C (32 to 140°F), Wide Temp. Models: -40 to 75°C (-40 to 167°F)
- **Power Inputs:** 1 x 12 VDC or 24 VDC inputs, M12 connector
- **Power Consumption:** Max. 11.5 W
- **Housing:** Metal
- **Dimensions:** 92.8 x 135 x 150.4 mm (3.65 x 5.31 x 5.92 in)
- **MTBF:** 441,797 hours
- **Warranty Period:** 5 years

Note: The hard disk must be purchased separately from a hard disk vendor; it is not included in the MxNVR-M04's standard shipment.

Dual Video Streaming

The MxNVR-M04 is a network DVR solution that supports four-channel video capture, recording, and multicast video streaming for on-vehicle surveillance monitoring. Each channel is capable of simultaneously transmitting and recording H.264 or MJPEG video streams. The non-PC MxNVR-M04 can connect up to four analog cameras in each train-car, and supports multi-video transcoding and streaming for live event viewing, with a maximum frame rate of 120 FPS for H.264 and 60 FPS for MJPEG. Using a two-pane display, the train conductor and driver can easily monitor live video as they review recorded events to ensure passenger and crew safety while operating the train.

Rugged, Anti-Vibration Design for Mobile Applications

With a rugged design that meets EN 50155 criteria for power supply, EMC, vibration, shock, and temperature (T models are rated for a T3 temperature level), the MxNVR-M04 is particularly well suited for rolling stock IP video surveillance applications. The MxNVR-M04 provides reliable data storage with a 2.5-inch hard disk, and meets EN 50155 anti-vibration requirements, which protects video stream transmissions and recordings when the train is in motion. The network DVR also supports auto boot-up and resumes recording upon power recovery.



High Video Performance

The MxNVR-M04 can be triggered to record by system boot, event, schedule, or external commands, such as CGI or SNMP. Video that is stored while the system is disconnected can be retrieved automatically once the power input is recovered. With the embedded DynaStream™ feature, the network DVR can increase network transmission efficiency by dynamically adjusting the video frame rate.

Available Models

- **MxNVR-M04**
4-channel H.264/MJPEG industrial video recorder, 1 SATA socket, M12 Ethernet connector, 0 to 60°C operating temperature
- **MxNVR-M04-T**
4-channel H.264/MJPEG industrial video recorder, 1 SATA socket, M12 Ethernet connector, -40 to 75°C operating temperature

MxNVR-IA8 Series

8-channel industrial network video recorders for VPort video servers and IP cameras



- 8-channel, H.264/MJPEG/MPEG4 video recording
- -40 to 75°C operating temperature
- Schedule and event recording



Key Specifications

- **Recording Streams:** 8 VPort video/audio streams
- **Stream Type:** H.264, MPEG4, MJPEG
- **Recording Modes:** Manual, schedule, alarm
- **Pre-alarm Recording:** Up to 30 sec.
- **Post-alarm Recording:** Up to 60 sec.
- **Search Mode:** Camera, date/time, event
- **Playback Method:** Remove access, FTP file download
- **Storage:** 2 x 2.5" SATAII sockets
- **Ethernet:** 1 auto-sensing 10/100BaseT(X) RJ45 connector
- **Operating Temperature:** Standard Models: 0 to 60°C (32 to 140°F), Wide Temp. Models: -40 to 75°C (-40 to 167°F)
- **Power Inputs:** 1 x 24 VDC inputs with 3-pin terminal block
- **Power Consumption:** Max. of 20 W (with 2.25" hard disks)
- **Housing:** Metal, 19"
- **Dimensions:** 440 x 44 x 325 mm (17.32 x 1.73 x 12.8 inch)
- **MTBF:** 155,570 hours
- **Warranty Period:** 5 years

Tailor-Made for Field Site Applications

With rugged design features such as a -40 to 75°C operating temperature without heater or fan, an IP33 rated enclosure, and protection against high EMI and surges, as well as the ability to save bandwidth when transmitting video streams back to the control center or machine room for video recording, the MxNVR-IA8 is tailor-made for field site applications.

Zero Bandwidth Recording

The MxNVR-IA8 can record and store IP video in its own internal memory, and only uses network resources when responding to a request from the control center or a network client. This means that the MxNVR-IA8 is unaffected by bandwidth limitations. The MxNVR-IA8 can be connected to 8 IP cameras for real-time or scheduled video recording, and operators can set the network video recorder to trigger the recording of an event. Since videos are only transmitted when remote live view and video playback are required, the overall network will experience greater network transmission efficiency while requiring less bandwidth.

Communicate Directly with SCADA

With Modbus/TCP support for communicating with SCADA systems, the MxNVR-IA8 excels in unmanned applications. It's a simple matter to trigger MxNVR-IA8 recording or upload event video in accordance with simple SCADA system configurations.



Available Models

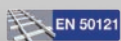
- **MxNVR-IA8**
8-channel industrial network video recorder, 1 10/100/1000BaseT(X) Ethernet port, 24 VDC power input, 0 to 60°C operating temperature
- **MxNVR-IA8 -T**
8-channel industrial network video recorder, 1 10/100/1000BaseT(X) Ethernet port, 24 VDC power input, -40 to 75°C operating temperature

TC-6110 Series

x86-based 3U NVR computers



- **High-performance platform**
with 8 IP camera channels at full D1 live view video
- **Compact 3U rackmount housing**
with wide-range, isolated 24 to 100 VDC power supply
- **SNMP-based scripting system**
for configuration, automating, and monitoring
- **Conformal coating protects against corrosion**
from moisture and dust



Flexibility, Performance, and Reliability in One Box

Moxa's fanless EN 50155 certified TC-6110 computers are specifically designed for use aboard trains. Based around the Intel Atom D525 CPU, the TC-6110 computers feature two Gigabit LAN ports, an RS-232 serial port, two USB 2.0 hosts, and two expansion slots, making them an ideal computing platform that will reliably serve train applications in any capacity you require. Built for train environments, the TC-6110 comes with secure M12 connectors for the Gigabit LAN, USB, and power interfaces, while the expansion slots give flexibility for system integration. Users can easily add modules for additional storage capacity, Gigabit switches, or wireless connectivity over both cellular and Wi-Fi. Every computer in the TC-6110 series is housed in a sealed case and protected by conformal coating on the internal components, giving strong protection against corrosion and vibration. Durable, reliable, and designed for mobile environments, the TC-6110 is an excellent computing solution for any train application.

Scalable Network Video Recording Platforms



V2616 Series

Extreme performance NVR computers

- Intel Core 2 Duo 2.26 GHz CPU
- Up to 4 GB of DRAM
- EN 50155 T1
- 2 storage trays
- Vibration and shock resistance
- RAID 1/0 support
- Power isolation



V2416 Series

Entry-level NVR computers

- Intel Atom N270 1.6 GHz CPU
- Up to 2 GB of DRAM
- EN 50155 TX
- 2 storage trays (hot-swap design)
- Vibration and shock resistance
- Sample code available for LEDs and API programming

1 System Module

- Atom Dual Core D525
- Built-in U-blox GPS module
- Optional Wi-Fi module (IEEE 802.11n)

4 Power Module

- Wide range 24 to 110 VDC input
- 120 W
- 1500 VDC isolated power
- Wide temp. from -40 to 70°C

2 Storage Module

- Anti-vibration kit for commercial HDD
- Intelligent Heating Solution (IHS)

3 Communication Module

- 4 port PoE switch module (coming soon)
- Mini PCIe module (coming soon)



Available Models

- **TC-6110-CT-XPE**
EN 50155-T1 train computer with Atom D525-1.8Ghz CPU, isolated power inputs, and conformal coating. 3U/42HP casing. Comes with Windows Embedded Professional operating system.
- **TC-6110-CT-LX**
EN 50155-T1 train computer with Atom D525-1.8Ghz CPU, isolated power inputs, and conformal coating. 3U/42HP casing. Comes with Debian Linux operating system.
- **TC-6110-CT-T-XPE**
EN 50155-TX train computer with Atom D525-1.8Ghz CPU, isolated power inputs, and conformal coating. 3U/42HP casing. Comes with Windows Embedded Professional operating system.
- **TC-6110-CT-T-LX**
EN 50155-TX train computer with Atom D525-1.8Ghz CPU, isolated power inputs, and conformal coating. 3U/42HP casing. Comes with Debian Linux operating system.

RNAS-1200 Series

Industrial-grade rugged network-attached storage



- Marvell 1.0 GHz processor
- 512 MB DDRII memory onboard
- 2 Gigabit Ethernet ports for network redundancy
- 2 100 GB disks (RNAS-1211-T model only)
- RAID 1 and three other RAID architectures available



EN 50155 TX-compliant, with a fanless design and innovative Intelligent Heating Solution (IHS) for frigid environments

The RNAS-1200 rugged NAS is a fanless system that uses passive heat exchange to keep it cool in high temperatures. This allows it to easily meet the 70°C heat tolerance demanded by EN 50155 TX. It also comes with Moxa's Intelligent Heating Solution, an automated, PCB-integrated hardware utility that will postpone system initialization as it heats up the hard drive, guaranteeing that your system will still boot up even in extremely low temperatures.



Data XPro memory technology protects against data corruption from strong vibration, and drive failure from too much heat

With Moxa's Data XPro, when disk vibration exceeds a configured threshold the RNAS-1200 automatically protects against corruptions by saving data into a non-volatile 1.5 GB solid-state memory buffer; only after vibrations reduce to acceptable levels will the RNAS-1200 start to shift the data back from the buffer onto the main drive, and if the system suddenly crashes all your data will still be there once power is restored.



Dual PoE+ Gigabit LAN ports for power and data redundancy on a draw of less than 25 W

The RNAS-1200's two Power over Ethernet Plus (PoE+) network interfaces can be used independently for full network and power redundancy, or aggregated into one logical network interface for high bandwidth throughput. Just as impressively, these two Gigabit PoE+ LAN ports power the RNAS-1200 on a draw that comes in under 25 W.



15 second RAID 1 synchronizations on RNAS crashes

In the past, synchronizations across 300 GB drives would take hours, if not days; but with Moxa's implementation of FOSS write-intent bitmap technology, drive synchs following crashes only take about 15 seconds in RAID 1 mode. Now, there's no reason not to have full RAID redundancy.



15 Sec. RAID 1 Disk Sync.

SNMP for convenient network management

RNAS comes with a custom MIB file that customers can use to integrate the RNAS-1200 into any SNMP-based management system. The RNAS ships with the ability to:

- Notify administrators on mechanical drive failures
- Notify remote administrators when the drive is full
- Automate device setups for mass deployments



Friendly disk array setting

The RNAS-1200 provides an easily understood, web-based UI that simplifies device configurations to click-and-go convenience. Furthermore, the RNAS-1200 lets you point-and-click your way to a RAID 1 architecture that pairs full RAID redundancy with account management at the user and directory level, allowing you to prioritize and secure your data according to the local system's particular needs and uses.



Available Models

- **RNAS-1201-T**
Network-attached storage with 2 M12 Gigabit PoE+ LAN ports, and -40 to 70°C operating temperature
- **RNAS-1211-T**
Network-attached storage with 2 M12 Gigabit PoE+ LAN ports, 2 pre-installed 100 GB hard disks, and -40 to 70°C operating temperature

100/200/500-channel central management software designed for large scale surveillance systems



- Up to 500 channels
- TV wall function support
- H.264/MPEG4/MJPEG viewing
- PTZ control function supported

Live View

- Supports 1, 4, 6, 9, 10, 13, or 16 live video displays with TV wall function
- Supports MJPEG, MPEG4, and H.264 using VPort products (except the VPort 2000 series and VPort 3310)
- Camera tree display and channel group setting for quick selection
- Complete remote PTZ control
- Auto-scan function for monitoring numerous channels simultaneously.



Video Playback

- Search by device/time/date/event to conveniently locate video segments
- Quick playback by double-clicking an event from event search results
- Full screen display in playback mode
- Video wall view for critical live video monitoring
- Directly download remote video file in .avi format.



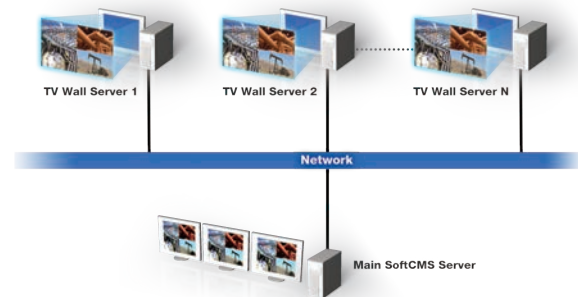
Emap

- Layered architecture supports virtually unlimited mapped locations
- Map tree display to easily organize map locations
- One-click access to live camera view
- Adjustable multi-angle camera icon to depict camera angle at actual location
- Camera icon alert for instant alarm notification



Matrix TV Wall

- Can install an unlimited number of physical monitors
- Display an unlimited number of live channel views with guaranteed frame rate
- Create a large TV-Wall environment for live monitoring



Operation Facilitator

- Intuitive graphical user interface
- 2-way audio
- Remote I/O control
- Vital sign monitoring
- Area/location categorization
- Detailed system logs record actions taken by operator



Licensing Options

- **SoftCMS-100**
IP CCTV central management software with 100-channel license
- **SoftCMS-200**
IP CCTV central management software with 200-channel license
- **SoftCMS-500**
IP CCTV central management software with 500-channel license

SoftNVR-IA

64-channel IP video surveillance software designed for industrial automation



- Up to 64 channels
- Built-in OPC Server
- H.264/MPEG4/MJPEG viewing
- Dual monitor display

OPC Communication



- Can receive event tags sent from an automation system to trigger video recording and other actions
- Can send event tags to the automation system with system information and the status of each channel

Live View

- Supports 1, 4, 6, 9, 10, 13, 16, 25, 32, 64 live display
- Supports MJPEG, MPEG4, and H.264 video streams (VPort models only)
- Supports up to 64 channels in the camera list
- Easy-to-use with drag and drop video display selection
- Can provide snapshot images in JPEG format
- Supports image tuning, including brightness, saturation, contrast, and hue
- Supports 2-way audio for voice communication between field sites and the control center
- Supports dual monitor and full screen display
- Supports display screen rotation
- Supports the PTZ control panel defined in VPort products
- Supports i-frame (key frame) decode only, which reduces the display frame rate immediately to save system resources for other higher priority tasks

Video Recording

- Video recording can be triggered manually or by event
- Video files are in AVI format, and can be played back on all popular media players (requires SoftNVR-IA codec)
- The storage hard disk can be selected from network hard drives
- Supports the FIFO recycle function for long time video recording
- Can configure the number of days recorded video files will be stored
- Supports pre-event video recording for up to 30 seconds

Schedule and Alarm Events

- Alarm events: digital input and video loss
- Can accept events from the automation system via OPC communication
- Alarm triggered actions: popup display, go preset, play sound, trigger DO (relay)
- Can set up a weekday schedule
- Schedule settings can be based on camera and event

Playback and Search

- Play back up to 4 recorded videos simultaneously
- Supports timeline selection when in video playback mode
- Supports stop, speed up, slow down, rewind frame-by-frame, and forward frame-by-frame
- Search video records by camera, time, or event
- Can take snapshot images when in video playback mode



Emap

- Load a BMP emap to easily identify camera locations
- Up to 32 emaps can be built in to the list
- Video images can be set to pop up when placing the cursor over a camera icon
- Can select three types of camera icons and up to 8 lens directions
- Double click on the camera to open the camera's live display video
- A camera icon can be configured in flash once an alarm goes off



Remote Access

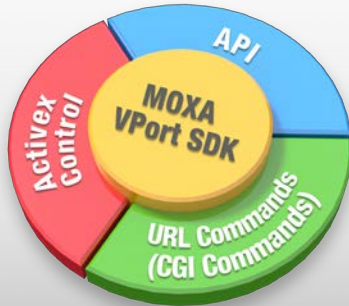
- Remote live view via web access
- Remote playback of recorded video via web access
- Capable of searching a specified recorded video by event, time, and camera
- Remote control of PTZ camera

Available Models

- **SoftNVR-IA V3.0**
64-channel IP video surveillance software for industrial automation systems

VPort SDK PLUS

User-friendly software development kits for third-party developers



With the growing popularity of IP networks, more and more users are integrating their video management systems with other monitoring and control systems (SCADA and HMI, for example) to get the the benefits of centralization and interoperability. Moxa's VPort SDK PLUS, which supports VPort series video servers and IP cameras, assists third-party developers with this intergration. SDK PLUS helps with building customized video management systems and integrating VPort series products into comprehensive monitoring and control systems. For wider compatibility, the SDK supports three major technologies: URL (CGI) Commands, ActiveX Control SDK PLUS, and API SDK PLUS.

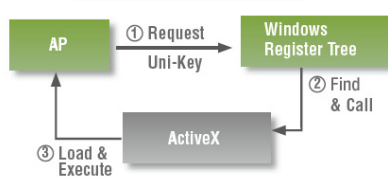
URL (CGI) Commands

URL commands are easy-to-use CGI commands used with HTML programming for web systems. Users can acquire video images and control VPort series products from their own customized web pages by embedding these CGI commands into the HTML source code. All of the URL commands are listed in the VPort CGI command manual.

ActiveX Control SDK PLUS

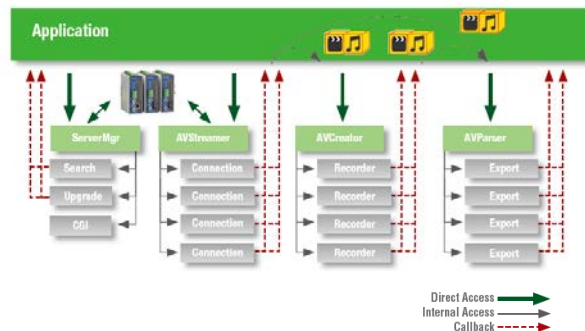
ActiveX control is an OCX component that uses Microsoft COM (Component Object Model) technology to enable software components to communicate. ActiveX control is widely used with platforms that support WIN32, IE Plug-in, and Visual Basic, and is also popular in automation system software such as SCADA systems. Moxa ActiveX Control SDK PLUS is a user-friendly, customized tool for programmers that supports a variety of parameters for customized viewing, recording, PTZ camera control, event triggering, and recorded video playback. Moxa ActiveX Control SDK PLUS is provided free of charge, and supports VB, VC, and C# development environments, as well as plug-ins for web applications and automation tools (SCADA software, for example). Third-party developers who want to use ActiveX SDK can download it from Moxa's website.

ActiveX Work Process



API SDK PLUS

For some video management applications, ActiveX control SDK PLUS may not provide users with enough functionality. In this case, users can use the API SDK, which includes a detailed C library, to program their own customized solutions in a Visual C++ or C# environment. API SDK PLUS includes a total of 4 DLL modules, and currently supports WIN32 platforms. API SDK PLUS is provided free of charge. However, since API SDK PLUS uses proprietary technology and the programmer must be an experienced, professional C programmer, we are not releasing API SDK PLUS publicly. Third-party developers who would like to use API SDK PLUS should contact a Moxa sales representative to apply for a free copy. Some verification is required.



Third Party Platform Integration

With ONVIF compatibility, Moxa's IP cameras offer great system flexibility and provide seamless integration with major surveillance platforms, such as Milestones, Genetec, and Avigilon. In virtually any application, users can quickly add Moxa's extreme weather IP cameras to existing surveillance systems.



Check out VMS software partners: http://www.moxa.com/ip_surveillance_partners

EDS-P510A-8PoE Series

8+2G-port Gigabit PoE+ managed Ethernet switches



- 8 IEEE 802.3af/at PoE+ ports
- 2 Gigabit RJ45/SFP combo ports for uplink
- Up to 36 watts of output per PoE+ port
- Intelligent PoE power management
- PoE diagnostics for powered device mode analysis
- 3 kV surge protection for harsh environments



Maximized Performance

The EDS-P510A-8PoE series includes Gigabit PoE+ managed Ethernet switches with 8 IEEE 802.3af/at PoE+ ports and 2 Gigabit RJ45/SFP combo ports. The switches deliver up to 36 watts per PoE+ port (up to 240 watts total output) at operating temperatures of up to 75°C, making them ideal for bandwidth and power hungry devices used in extreme conditions. With long distance transmission of up to 120 km, the EDS-P510A-8PoE switches offer the flexibility needed for industrial network applications.

Easy Maintenance

The EDS-P510A-8PoE series features intelligent PoE power management, including power scheduling, PD failure detection, PoE output settings, and remote PD reboot, which enable remote monitoring and management. The switches are also equipped with an innovative PoE diagnostic function that can analyze powered device modes and recommend PoE port settings. The smart PoE LED indicators allow users to detect the power status, and make installation and onsite troubleshooting easier. With advanced Turbo Ring and Turbo Chain network redundancy (recovery time < 20 ms with 250 switches) and redundant power inputs, reliability and availability for industrial Ethernet networks is increased.

Industrial Grade Design

The EDS-P510A-8PoE series offers -40 to 75°C wide temperature operation for applications in harsh environments. The switches feature 3 kV surge protection to safeguard against electrical hazards and have a proven track record for industrial application requirements, such as rail wayside and transportation, with EN 50121-4 and NEMA TS2 compliance.

Available Models

■ EDS-P510A-8PoE-2GTXSFP

Managed Gigabit PoE+ Ethernet switch with 8 PoE+ 10/100BaseT(X) ports, and 2 combo 10/100/1000BaseT(X) or 100/1000BaseSFP slots, -10 to 60°C operating temperature

■ EDS-P510A-8PoE-2GTXSFP-T

Managed Gigabit PoE+ Ethernet switch with 8 PoE+ 10/100BaseT(X) ports, and 2 combo 10/100/1000BaseT(X) or 100/1000BaseSFP slots, -40 to 75°C operating temperature

More products for industrial Power-over-Ethernet solutions:

Managed PoE/PoE+ Switches

Preliminary



IKS-6728-8PoE
24+4G-port modular switches with up to 24 PoE+ ports

Available in Q3, 2013



EDS-P506A-4PoE
6-port DIN rail switches with 4 PoE+ ports



TN-5524-8PoE
24-port EN 50155 switches with 8 PoE ports

M12 connectors



EDS-G205A-4PoE
5-port full-Gigabit DIN rail switches with 4 PoE+ ports



TN-5308-4/8PoE
8-port EN 50155 switches with 4 or 8 PoE ports

M12 connectors



INJ-24A
Gigabit 60W PoE+ Injectors

AWK-3131/4131 Series

Industrial IEEE 802.11a/b/g/n wireless AP/bridge/client



- Data rate of up to 300 Mbps
- MIMO increases data throughput and range
- Channel bonding/40 MHz transmits more data
- Millisecond-level Turbo Roaming
- -40 to 75°C operating temperature range
- One RJ45/SFP Gigabit combo port
- Outdoor IP68-rated housing (AWK-4131)



Improved Higher Data Rate and Bandwidth

- High-speed wireless connectivity with up to 300 Mbps data rate
- MIMO technology to improve transmit/receive capabilities of multiple data streams
- Increased channel width with channel bonding technology

Designed for Harsh Industrial Environments

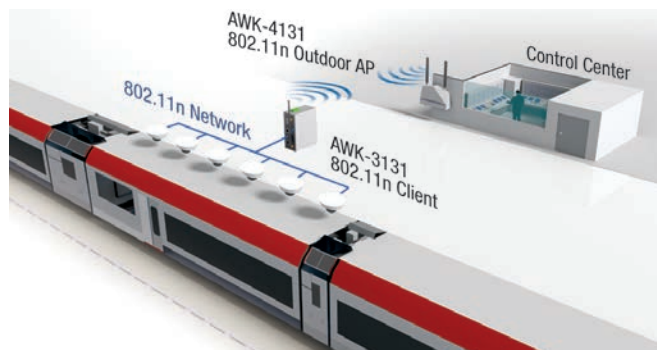
- Dual 12-48 VDC power inputs and PoE
- -40 to 75°C operating temperature range
- Outdoor IP68-rated housing (AWK-4131)
- Long distance wireless transmission of up to 10 km
- EN 50155, EN 50121-1/4, and UL 60950-1/EN 60950-1 certified

Available Models

- **AWK-4131 Series**
IEEE 802.11a/b/g/n IP68 wireless AP/bridge/client, -40 to 75°C operating temperature with M12 connector
- **AWK-3131 Series**
IEEE 802.11a/b/g/n wireless AP/bridge/client, -25 to 60°C or -40 to 75°C operating temperature
- **AWK-3131-M12 Series**
IEEE 802.11a/b/g/n wireless AP/bridge/client, -25 to 60°C or -40 to 75°C operating temperature with M12 connector

Optimized Video over 802.11n WLAN

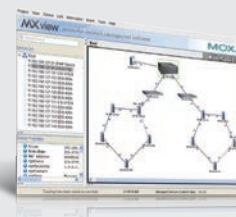
For train video surveillance, if each carriage has six cameras installed, and each camera runs in full D1 with a 2 Mbps data rate, then just two carriers will need a total data rate of 24 Mbps. This poses obvious challenges for 802.11a/b/g networks, which only provide up to 20 Mbps of throughput. Moxa offers 802.11n products with up to 120 Mbps of throughput that can deliver demanding video streaming applications on trains. Additionally, MIMO technology and frame aggregation can transmit superior quality video streams.



Automation Friendly Network Management Software

MXview, Moxa's industrial network management software, uses smart visualization features to display your network topology in real time, allowing you to diagnose the health of your network and keep your system up and running. A free trial version can be downloaded from Moxa's website.

- Easy-to-use graphical interface
- Monitors Moxa's edge-to-core devices and all connected SNMP devices
- Port-level physical wiring topology
- Integration with SCADA and other NMS





Reliable Networks ▲ Sincere Service

Industrial IP Surveillance Solutions

Moxa's IP surveillance solutions include video devices and surveillance systems that use communication interoperability and system integration to ensure the security of industrial facilities over IP networks.



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