

VPort P16-2MRシリーズ

EN 50155、1080P画像、赤外線IPカメラ



機能とメリット

- 1/3”プログレッシブスキャンカメラ、最大解像度1920 x 1080、最大30 fps
- 内蔵IR照明器およびICR（赤外線カットフィルター除去）により昼夜を問わず画像を提供
- DNRおよびWDRを使用した高品質なビデオ画像
- 最大で4つの独立したH.264またはMJPEGビデオストリームに対応
- DynaStream™により最適化されたネットワーク効率を実現
- CBR Pro™により制限された帯域幅でも高品質の画像を伝送
- ローカルストレージ用のSDXC（最大2 TBのSDカード）に対応
- オーディオ入力用内蔵マイク x 1、外部センサー用デジタル入力 x 1
- 標準および相互運用性のためのONVIFサポート

認証



EN 50155



製品紹介

堅牢なVPort P16-2MRカメラはフルHD（1920 x 1080）のビデオ画像を生成し、多様な設置方法や環境で使用されるモバイルIPビデオ監視アプリケーションに必要な汎用性と耐久性を備えた、4つのH.264/MJPEG対応ビデオストリームを特徴としています。さらに、このカメラはEN 50155の必須検査項目に準拠しており、防犯耐衝撃性（EN 62262 IK8）、-25～55°Cまたは-40～70°C（Tモデル）の動作温度、堅牢なM12イーサネットポート、PoE電源入力、内蔵マイク、デジタル入力、IP66防雨防塵保護等級、および昼夜両方で画像を生成可能なIR照明器を特徴としています。¹

仕様

Memory

microSD Slot	SDXC
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Input/Output Interface

Digital Input Channels	1
Digital Inputs	+13 to +30 V for state 1 -30 to +1 V for state 0 Max. input current: 8 mA
Connector	5-pin A-coded male M12 connector with 20 cm cable

Ethernet Interface

PoE Ports (10/100BaseT(X), M12 D-coded 4-pin female connector)	1
Standards	IEEE 802.3af for PoE

Ethernet Software Features

Protocols	TCP/IP, IPv4/IPv6, UDP, HTTP, RTP/RTSP, ARP, UPnP, FTP, TFTP, SMTP, NTP Client, DNS, DDNS, QoS, IGMP v3, ICMP, SNMPv1/v2c/v3, DHCP Opt66/67, HTTPS
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1. 本製品は、EN 50155規格で定められた鉄道車両アプリケーションに適しています。詳細については、こちらを参照してください：www.moxa.com/doc/specs/EN_50155_Compliance.pdf

Security Functions

Password	User-level password protection
Filter	IP address
Encryption	HTTPS

Power Parameters

No. of Power Inputs	1
Source of Input Power	PoE (IEEE 802.3af)
Input Current	0.26 A @ 48 VDC

Camera Characteristics

Sensor	1/3-in 1080P progressive scan CMOS
Lens	VPort P16-2MR36M Series: f=3.6mm, F1.6, Diagonal 99°, Horizontal 70°, Vertical 39° VPort P16-2MR42M Series: f=4.2mm, F1.6, Diagonal 82°, Horizontal 62°, Vertical 34° VPort P16-2MR60M Series: f=6.0mm, F1.8, Diagonal 62°, Horizontal 43°, Vertical 24° VPort P16-2MR80M Series: f=8.0mm, F1.6, Diagonal 42°, Horizontal 33°, Vertical 17°
Minimum Illumination	Color: 0.2 lux, at F1.2 (Gain High, 50 IRE, 1/30 sec) B/W: 0.05 lux, at F1.2 (Gain High, 50 IRE, 1/30 sec) Note: 0 lux if IR illuminator is on
Camera Angle	Pan 350°, Tilt 65° (controlled manually)
Day & Night	Auto/Color/BW; ICR control
Synchronization	Internal
White Balance	ATW/AWB
Electronic Shutter	Auto, Fixed (1/30 to 1/25000 sec)
S/N Ratio	Maximum 50 dB (AGC off; DNR on)
ICR Control	Auto (light sensor control) or DI control
IR Illumination	IR LED illuminators, 5-meter (max.) effective distance; On/Off controlled manually (night mode) or by the light sensor
DNR (digital noise reduction)	Built-in 2D/3D DNR
WDR (wide dynamic range)	100 dB
AGC (auto gain control)	2X, 4X, 8X, 16X
Flickerless Control	Automatic, 50 Hz, 60 Hz modes
Image Rotation	Flip, Mirror, 90°, 180°, 270° rotation
Image Setting	Manual tuning with saturation, sharpness, and contrast

Video Interface

Video Compression	H.264 (ISO/IEC 14496-10) or MJPEG
Video Output	via Ethernet
Video Streams	4 independent H.264 or MJPEG video streams

Video Resolution and FPS (frames per second)	NTSC		PAL	
	Size	Max. FPS	Size	Max. FPS
	QCIF	176 x 112	176 x 144	25
	CIF	352 x 240	352 x 288	25
	VGA	640 x 480	640 x 480	25
	4CIF	704 x 480	704 x 576	25
	Full D1	720 x 480	720 x 576	25
	SVGA	800 x 600	800 x 600	25
	HD	1280 x 720	1280 x 720	25
	WXGA	1280 x 800	1280 x 800	25
	Full HD	1920 x 1080	1920 x 1080	25
Video Viewing	DynaStream™ support for changing the video frame rate automatically CBR Pro™ for good image quality in limited bandwidth transmissions 3 privacy mask areas provided Adjustable image size and quality Timestamp and text overlay OSD (On Screen Display) position adjustable Maximum of 5 simultaneous unicast connections, 50 multicast clients			

Audio Interface

Audio Format	Mono, PCM (G.711) AAC
Audio Inputs	1 x built-in microphone

Camera Software Development

Video Standards	ONVIF Profile S
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Camera Alarm Software Features

Intelligent Video	Camera tampering detection
Video Motion Detection	3 independently configurable areas
Shock Detection	Built-in G sensor
Scheduling	Daily repeat timing schedule
Imaging	JPEG snapshots for pre/trigger/post alarm images
Custom Alarms	HTTP event servers for setting customized alarm actions
Email/FTP Messaging	Automatic transfer of stored images via email or FTP as event-triggered actions
Pre-Alarm Buffer	50 MB video buffer for JPEG snapshot images
Video Recording	Event recordings stored on the SD card

Software Requirements

Memory Size	2 GB
Operating System	Windows 7 or above
Browser	Internet Explorer 9.x or above
Multimedia	DirectX 9.0C or above

Physical Characteristics

Housing	IP66 rain and dust protection Metal housing, PC dome cover IK8 vandal resistant protection
Dimensions	125 x 125 x 120.7 mm (4.92 x 4.92 x 4.8 in)
Weight	890 g (1.96 lb)
Installation	Panel mounting
Protection	-CT models: PCB conformal coating

Environmental Limits

Operating Temperature	Standard Models: -25 to 55°C (-13 to 131°F) Wide Temp. Models: -40 to 70°C (-40 to 158°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)
Ingress Protection	IEC 60529, IP66
Salt Spray Test	ASTM-B117
Vandal Resistance	EN 62262, IK8
Altitude	2000 m

Standards and Certifications

EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Freefall	IEC 60068-2-31
Railway Fire Protection	EN 45545-2
Safety	UL 60950-1
Shock	IEC 60068-2-27, IEC 61373, EN 50155
Vibration	IEC 60068-2-64, IEC 61373, EN 50155
Railway	EN 50155 (complies with a portion of EN 50155 specifications)

MTBF

Time	997,474 hrs
Standards	Telcordia SR332

Warranty

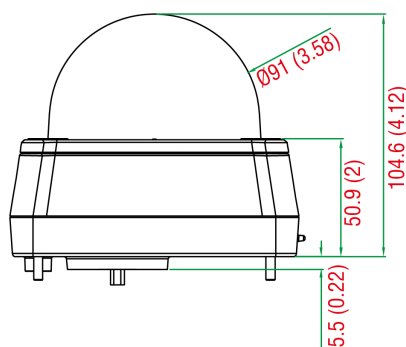
Warranty Period	5 years Note: Limited warranty on moving parts; see Moxa's online warranty policy for details.
Details	See www.moxa.com/jp/warranty

Package Contents

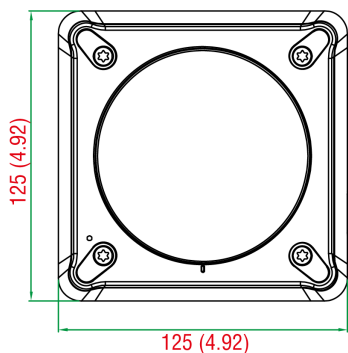
Device	1 x VPort P16-2MR Series camera
Installation Kit	1 x sticker 1 x L-type Torx screwdriver 4 x indented hexagonal head tapping screws, nuts, gaskets, and spring washers
Documentation	1 x document and software CD 1 x quick installation guide 1 x warranty card

寸法

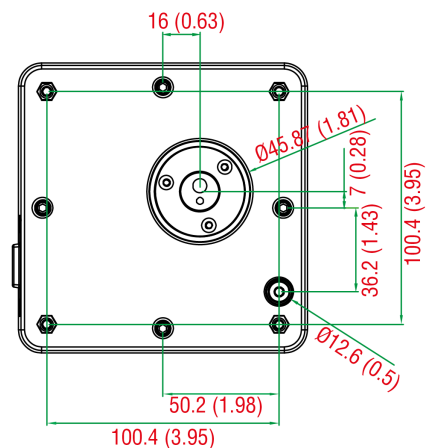
単位：mm（インチ）



前面図



底面図



上面図

注文情報

Model Name	Lens	Local Storage	Operating Temp.	Conformal Coating
VPort P16-2MR36M	3.6 mm	microSD slot, SDXC interface	-25 to 55°C	–
VPort P16-2MR42M	4.2 mm	microSD slot, SDXC interface	-25 to 55°C	–
VPort P16-2MR60M	6.0 mm	microSD slot, SDXC interface	-25 to 55°C	–
VPort P16-2MR80M	8.0 mm	microSD slot, SDXC interface	-25 to 55°C	–
VPort P16-2MR36M-T	3.6 mm	microSD slot, SDXC interface	-40 to 70°C	–
VPort P16-2MR42M-T	4.2 mm	microSD slot, SDXC interface	-40 to 70°C	–
VPort P16-2MR60M-T	6.0 mm	microSD slot, SDXC interface	-40 to 70°C	–
VPort P16-2MR80M-T	8.0 mm	microSD slot, SDXC interface	-40 to 70°C	–
VPort P16-2MR36M-CT	3.6 mm	microSD slot, SDXC interface	-25 to 55°C	P
VPort P16-2MR42M-CT	4.2 mm	microSD slot, SDXC interface	-25 to 55°C	P
VPort P16-2MR60M-CT	6.0 mm	microSD slot, SDXC interface	-25 to 55°C	P
VPort P16-2MR80M-CT	8.0 mm	microSD slot, SDXC interface	-25 to 55°C	P

Model Name	Lens	Local Storage	Operating Temp.	Conformal Coating
VPort P16-2MR36M-CT-T	3.6 mm	microSD slot, SDXC interface	-40 to 70°C	P
VPort P16-2MR42M-CT-T	4.2 mm	microSD slot, SDXC interface	-40 to 70°C	P
VPort P16-2MR60M-CT-T	6.0 mm	microSD slot, SDXC interface	-40 to 70°C	P
VPort P16-2MR80M-CT-T	8.0 mm	microSD slot, SDXC interface	-40 to 70°C	P

アクセサリ（別売）

Camera Mounting Kits

VP-FMK1	Flush-mounting kit for the VPort P16
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