Mobile Cameras

Mobile Cameras from March Networks® cover every conceivable imaging requirement for video surveillance in bus and rail deployments. The combination of forward, side and dome cameras ensures full video coverage for internal and external vehicle views, and offers transit authorities exceptional video of passengers, pedestrians and vehicular traffic.

IMAGE QUALITY

Our mobile cameras are designed to record high-quality video in the most challenging lighting conditions, including near darkness and bright sunlight. Models with True Day/Night (TDN) design and an optional IR illuminator enable video to be recorded in complete darkness. Models with Wide Dynamic Range (WDR) provide clear images of subjects even when they are backlit by bright sunlight from windows.

INDUSTRIAL DESIGN

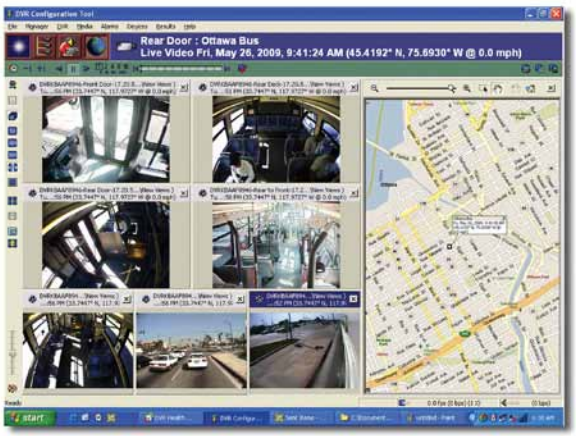
The mobile dome cameras feature vandal-proof aluminum housings with polycarbonate domes built to withstand the tough environmental conditions found on bus and rail vehicles, including exposure to dust and humidity. The MicroDome Camera is extremely compact and designed for flush or surface mount configurations, while the exterior Color Side Camera includes a tempered-glass window for protection from harsh environmental and physical conditions outside of the bus. The Color Forward View Camera's installation bracket with rubber cup allows the camera to be mounted against a windshield in a manner that minimizes glare or reflection caused by the glass. All the mobile cameras are vandal resistant, offer ingress protection and comply with the industry standard J1455 for shock and vibration.

ADVANCED, INTEGRATED SOLUTION

The cameras are supported by March Networks' Mobile DVRs and VideoSphere Mobile Software for comprehensive video monitoring, recording and playback. Their settings can be configured and monitored remotely over the wireless network or LAN/WAN. Health analytics software includes camera tampering alarms, which alert maintenance staff to obscured, covered or spray-painted cameras. Rapid visual checks of camera alignment and focus are provided through the auto-downloading of thumbnail images at specified intervals. A camera synchronization alarm is registered immediately upon disconnection of either the video or power cables. Conditioned 12 VDC camera power supplied by our Mobile DVRs ensures a reliable, uninterrupted power supply, as well as the ability to continue recording for a specified time following vehicle shutdown.

FEATURES

- Wide Dynamic Range
- True Day/Night camera and IR Corrected lens
- Shock and vibration hardened
- Dust and humidity protection
- Wide temperature ranges
- Vandal-resistant housing
- Auto white balance
- Focal length options
- Superior image quality and color reproduction
- Low power consumption
- Microdome, dome, side and forward view designs
- Dome housings with multiple lens options



March Networks' Mobile Cameras portfolio provides transportation authorities with complete bus coverage and exception video quality.

Mobile Cameras

Technical Specifications

Model	MicroDome	WDR Dome
Sensor type	1/3" CMOS WDR, progressive scan	1/3" CMOS WDR, progressive scan
Fixed tilt angle	70° from center line	70° from center line
Lens	Manual iris; 2.9, 3.6, 4.3 or 6 mm	Manual iris; 2.9, 3.6, 4.3 or 6 mm
Light sensitivity - color	0.6 lux	0.6 lux
Light sensitivity – True Day/Night mode (slow shutter mode)	< 0.08 lux b/w	0.1 lux
Wide dynamic range	102 dB typ; 120 dB max	102 dB typ; 120 dB max
Signal-to-noise ratio	> 48 dB	> 50 dB
White balance	Auto tracking, manual, preset	Auto tracking, manual, preset
Backlight compensation	Yes	Yes
AGC, auto iris	Yes	Yes
Video output	NTSC/PAL selectable (1V p-p; 75 Ω)	NTSC/PAL selectable (1V p-p; 75 Ω)
Video connector	BNC	BNC
Maximum resolution	480 TVL (color); 520 TVL (b/w)	480 TVL (color); 520 TVL (b/w)
Power supply	12 VDC (10-16 VDC)	12 VDC (10-14 VDC)
Power consumption	< 1.5 W	2.0 W
Power connector	Molex 2-pin	Molex 2-pin
Operating temperature	14 to 131ºF / -10 to 55ºC	14 to 131ºF / -10 to 55ºC
Relative humidity	< 90% non-condensing	< 90% non-condensing
Weight	0.6 lbs / 0.255 kg 0.65 lbs / 0.26 kg	2.55 lbs / 1.1 kg (surface)
Dimensions (HxD)	1.7 x 3.15 in / 4.25 x 8 cm (flush mount) 2.34 x 3.15 in / 5.85 x 8 cm (surface mount)	3.72 x 5.5 in / 10 x 14 cm (surface mount)
Mechanical	Aluminum housing, polycarbonate dome	Aluminum housing, polycarbonate dome
Mounting options	Flush, surface with adaptor included	Surface mount
Environment	Interior	Interior
Certifications		
Safety	CE/UL	CE/UL
EMC	EN55022, 55024, 55025	EN55022, 55024, 55025
Shock & vibration	J1455	J1455
Ingress protection	IP66	IP66
Vandal resistance	IEC 62262	IEC 62262

Model	Color Side View	Color Forward View
Sensor type	1/3" CCD, progressive scan	1/3" CCD, progressive scan
Fixed tilt angle	30° from base plate	80 – 100° from post
Lens	Manual iris; 2.4 mm	Auto iris; 4 – 9 mm varifocal
Light sensitivity	0.3 lux	0.3 lux
Signal-to-noise ratio	> 50 dB	> 48 dB
White balance	Auto	N/A
AGC, auto iris	N/A	Level control adjustment
Video output	NTSC/PAL selectable (1V p-p; 75 Ω)	NTSC/PAL selectable (1V p-p; 75 Ω)
Video connector	BNC	BNC
Maximum resolution NTSC/PAL	525 TVL	570 TVL
Power supply	12 VDC	12 VDC
Power consumption	1.4 W (120 mA)	2.4 W (200 mA)
Power connector	Molex 2-pin	Molex 2-pin
Operating temperature	-22 to 176ºF / -30 to 80°C	-4 to 158°F / -20 to 70°C
Relative humidity	10% – 95%	10% – 95%
Weight	1.1 lbs / 0.5 kg	2.0 lbs / 0.91 kg
Dimensions (WxHxD)	3.5 x 2.63 x 6 in / 9 x 7 x 15.3 cm	3.39 x 8.44 x 6.36 in / 8.6 x 21.5 x 16.2 cm
Mechanical	Aluminum housing	Aluminum housing
Mounting options	Surface mount	Ceiling mount
Environment	Exterior	Interior
Certifications		
Safety	CE/UL	CE/UL
EMC	EN52022, 55024, 55025	EN52022, 55024, 55025
Shock and vibration	J1455	J1455
Ingress protection	IP66; NEMA 4	IP66; NEMA 4
Vandal resistance	IEC 62262	IEC 62262

Dome Infra-Red Illuminators

The IR illuminator enhances camera performance in low-light conditions and is typically deployed with our TDN cameras. Mounted inside an aluminum housing with a polycarbonate dome, these units are most often used to illuminate the front door camera view.

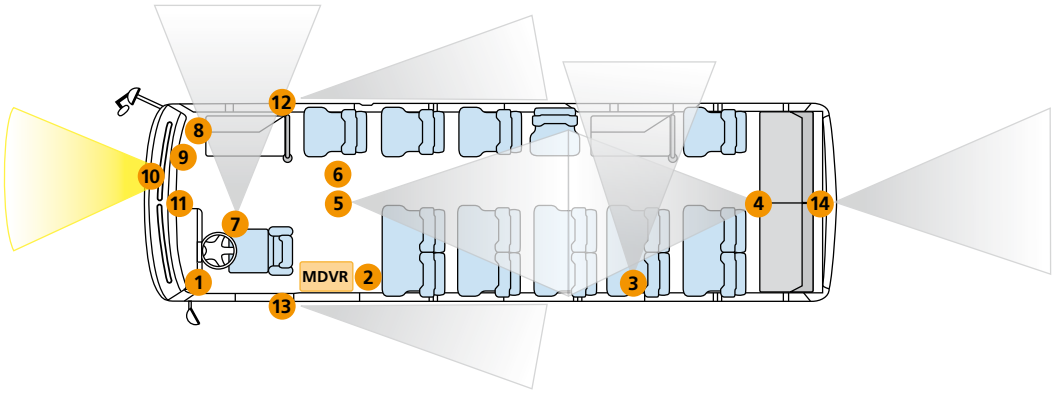
Technical Specifications

- Power: 1.8 W (120 mA)
- Range: 25 m
- Tilt angle: 70° from center
- Surface and flush mount units
- Weight: 1.2 lbs / 0.5 kg
- Dimensions (HxD): 5.5 x 3.7 in / 14.0 x 9.4 cm
- Wavelength: 850nm

Typical Camera Deployment

A typical, eight-camera bus configuration, providing exterior forward and rear-facing coverage, and curbside and roadside views, as well as interior views of passengers and front and rear doors. The typical locations of vehicle peripherals[1] are also shown.

1 Status LED and tag module
2 System interface
3 Rear door camera
4 Rear to front camera
5 Front to rear camera
6 Video monitor and in-vehicle advertising
7 Front door camera
8 GPS antenna
9 Wireless antenna
10 Forward camera
11 Microphone
12 Curbside camera
13 Roadside camera
14 Rear camera



NOTE: [1] Refer to March Networks Mobile Peripheral Devices datasheet.

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North America — 1 800 563 5564
Latin America — +1 613 591 8181
Europe, Middle East and Africa — +39 0362 17935
Asia Pacific — +61 1300 089 419
www.marchnetworks.com

March Networks EMEA
Via Lavoratori Autobianchi, 1
Edificio 23
20033 Desio - Milano - ITALY
Phone: +39 0362 17935
Fax: +39 0362 1793590

March Networks
Corporate Headquarters
303 Terry Fox Drive
Ottawa, Ontario - CANADA K2K 3J1
Phone: +1 613 591 8181
Fax: +1 613 591 7337