



Maco Corporation INDIA Private Limited (MACO) is a solution provider in mining sector for last two decades. MACO represents world class technology in mining.

Maco provides **ANSUL, USA brand Auto fire Detection and suppression system** for all kind of off-road mobile HEMM, and other engineering solutions like **Clutch & Brakes (Danfoss, USA), Ground Engaging Tools (ESCO USA), Refuge Chambers for UG Mines (MineARC Systems, Australia), High Performance Wire ropes for underground mining (WIRECO, Germany), Mine Ventilation Monitoring System (Maestro, Canada)** and other accessories products for mining industry to meet your mining requirements in both open cast and underground Mines on Pan India basis.

We have earned recognition as a critical equipment / product supplier and service provider in the mining sector. Our service support centers are located in West Bengal, Rajasthan, Jharkhand, Odisha, Madhya Pradesh, Chhattisgarh, Hyderabad and Bangalore.

MACO has a comprehensive service support system. All service people are trained by our principal / partners as per Inter- national Standard.

We have central warehouse in West Bengal and other storage facility at different location, which can fully meet market demand and avoid machines stop caused by parts shortage. We provide solutions round the clock to ensure equipment can be restored on an immediate basis.

1967 Year of Establishment

1000+Clients

500+Employees

35+Partners



Operator Fatigue Monitoring System:

Operator Fatigue Monitoring System uses cameras, infrared sensors, or biometric data (like eye movements, blink rate, head position, or steering patterns) to identify signs of drowsiness or inattention. When fatigue or distraction is detected, the system issues warnings through alarms, vibrations, or visual alerts to prompt the driver to stay alert or take a break, enhancing road safety

Technical Features

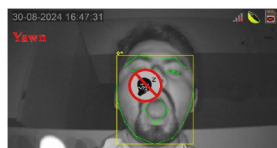
- Integrated AVM Algorithm - No additional control box; Monitor integrates 360 AVM algorithm for panoramic images; No blind spots around 360°
- HD Video - 1080P high-definition fish-eye camera input with good real-time display, offering HD and stable images.
- HB IPS Screen - HB and HD IPS screen, large viewing angles.
- One-minute Calibration - Automatic calibration can be finished in 1 minute, and it supports automatic plane correction, saving time and effort.
- 3D/2D Switching - Multiple viewing models, 3D/2D view switching freely.
- Super Rear View Mirror - 3D effect supports super rearview mirror, fully covering lane, making safer when merging in the high speed.
- Resource Integration - Radar access is supported, and the vehicle is fully protected.
- Other Functions - Optional capacitive touch screen; trigger wire and GPS access are both supported.
- Control box is not required since monitor integrates AVM algorithm - The monitor is directly equipped with AVM algorithm to realize 360° bird view and seamless monitoring to ensure safe driving.
- One-minute calibration - The 360 system comes with automatic calibration, which can be done in 1 minute through the touch screen or remote control. Only four calibration mats are needed, and they can be placed randomly to achieve accurate calibration.



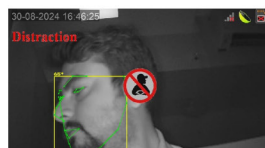
Description	Remarks
LCD Dimension	10.1 inch
Resolution	1024 x 3 (RGB) x 600
Contrast	600 : 1
Brightness	600 cd/m2
Aspect Ratio	16:9
Display Model	3D/2D views switching freely
Video Input	Max.4CH*1080P 25FPS/30FPS and 4CH * 720P (25FPS/30FPS)
Power Supply	10 -32V
Power Consumption	Max. 25W
Loudspeaker	1W/8Ω
Operating Temp. & humidity	-20~+70°C, RH 90%MAX
Storage Temp. & humidity	-30~+80°C, RH 90%MAX



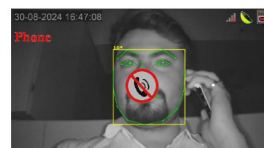
Fatigue Driving Alarm



Yawn Alarm



Distraction Driving Alarm



Phone Call Alarm



No Driver Alarm

Rear View Camera:

A rear-view camera captures video footage while reversing, providing real-time visual assistance to avoid obstacles. It comes with the optional features that records the footage to an internal storage for up to 24 hours, useful for evidence in case of incidents.

Technical Features:

- 1080P high definition
- IP69K waterproof
- Wide viewing angle: 130° / 110° / 100° / 70° / 50° / 35°
- Night vision distance: 8m~10m (26.25ft~32.81ft)
- Wide power supply: DC 12V / DC10~32V
- Anti-vibration: ISO 16750-3 2012 (5.9G)
- Mirror / Normal image
- Smart-IR optional
- Working temperature: -20°C ~ +70°C

Features of Camera:

Description	Remarks
Image Device	1/2.9" CMOS
Frame Rate	25 fps / 30 fps
Effective Pixels	1920(H) x 1080(V)
Pixel Size	2.8 μ m × 2.8 μ m
Scanning System	Progressive Scanning
Sync. System	Internal
Resolution	1080P
Video Output	1.0Vp -p, 75Ohm
Gamma Consumption	0.45
AGC	Auto
Signal to Noise Ratio	Better than 52dB
White Balance	Auto
Electronic Shutter	1/25 (1/30) ~ 1/50,000 Seconds
BLC	Auto
Operating Temp. & Humidity	-20°C ~ 70°C ~, RH 95% MAX.
Storage Temp. & Humidity	-30°C ~ 80 °C, RH 95% MAX.



Proximity Sensor:

A proximity sensor detects objects around the vehicle using electromagnetic signals. It alerts the driver to obstacles, enhancing safety while parking or manoeuvring in confined spaces.

Technical Features:

- 77GHz Millimeter-wave Radar technology
- Support detection range and width Limit
- AHD Image alarm overlapping
- Detection distance and alarm mode can be set on the computer by connecting the control box to computer with a USB to UART conversion cable
- Support Wi-Fi connection, users can configure the detection distance and alarm mode by computer or mobile phone
- All-weather operations; work 24 hours

Description	Remarks
Operation Frequency	76.00...77.00GHz
Transmitter Type	FMCW
Power Supply	10 to 32V DC
Detection Range	Detection length limit 0.2~40m, width limit, up to 5 detection zones(distance of each zone can be configured)
Detection Zone Visualization	Green (furthest)yellow(middle), Red (closest)
Detection Tolerance	+/- 15 cm
Antenna Beam Angle	120° (Horizontal), 14° (Vertical)
Trigger Input ×1	Trigger from vehicle, high active Range above +10Vdc, up to supply voltage
Alarm Output ×1	Switched to Ground when activated Loading up to 1.0A
Operating Temperature	-20 ~ +70°C
Storage Temperature	-30 ~ +80°C
Waterproof Rating	IP69K (sensor),IP66(Control Box)
Anti vibration	ISO 16750 -3 2012 (5.9G)
Dimension	Sensor: 106.6(W) ×72.9(H) ×34.5(D) mm Control Box: 152.6(W) ×89.2(H) ×53.8(D) mm
Weight	158.8Grams (sensor), 240Grams (control box)



Electronic Mirror System:

An electronic mirror system replaces traditional mirrors with cameras and digital displays, offering a wider field of view, reduced blind spots, and clearer visibility in poor weather or low light conditions.

Features:

Pedestrians & Vehicle Detection and Warning It can identify pedestrians and vehicles such as cyclists, electric bikers, and pedestrians on foot. Pedestrian and vehicle detection and warning function.

Two-in-one that combines in-vehicle DVR and monitor a major upgrade of invehicle monitor! It can record and replay driving videos. With built-in G-sensor, support G-sensor alarm recording triggered by collision detection. All of these functions can help you free from unreasonable damage and responsibility.

1080P high definition video support 2-channel camera input, provide split-view image; can be perfectly integrated with the rearview system to achieve comprehensive vehicle monitoring

3s output speed quick turn-on, start displaying images and recording videos within 3 seconds after powered.

IPS screen high contrast, high brightness. It could restore the true color, presenting the brighter and more delicate display with much higher resolution.

Replacement for Traditional Rearview Mirror Having solved the problems of being poor visibility at night, susceptible to rainy, snowy and foggy weather and having strong reflection, etc. on traditional rear-view mirrors.

Data security ACC time-lapse recording; super capacitor power-down protection, to prevent the loss of video data.

Description	Remarks
LCD Dimension	12.3"
Resolution	1920x 3 (RGB) x 720
Brightness	1000cd/m2
Contrast	1000 : 1
Viewing Angle	U: 85, D: 85, L: 85, R: 85.
Aspect Ratio	24 : 9
Video Input	4- channel camera input, support mutiple resolutions (1080P25/1080P30)
Storage	Micro SD Card
Operating temp. & humidity	-20~+70°C , RH90%MAX
Storage temp. & humidity	-30~+80°C , RH90%MAX
Power Consumption	Max.32W (with cameras)
Power Supply	10 -32V
Anti vibration	ISO 16750 -3 2012 (2.13G)



360-Degree Camera:

A 360-degree camera provides a bird's-eye view of the vehicle's surroundings using multiple cameras placed around the car. It stitches these views together to help the driver navigate tight spaces, park, or avoid obstacles more effectively.

Technical Features:

- **Integrated AVM Algorithm** - No additional control box; Monitor integrates 360 AVM algorithm for panoramic images; No blind spots around 360°
- **HD Video** - 1080p high-definition fish-eye camera input with good real-time display, offering HD and stable images
- **HB IPS Screen** - HB and HD IPS screen, large viewing angles
- **One-minute Calibration** - Automatic calibration can be finished in 1 minute, and it supports automatic plane correction, saving time and effort
- **3D/2D Switching** - Multiple viewing models, 3D/2D view switching freely
- **Super Rear View Mirror** - 3D effect supports super rearview mirror, fully covering lane, making safer when merging in the high speed
- **Resource Integration** - Radar access is supported, and the vehicle is fully protected
- **Other Functions** - Optional capacitive touch screen; trigger wire and GPS access are both supported
- **Control box is not required since monitor integrates AVM algorithm** - The monitor is directly equipped with AVM algorithm to realize 360° bird view and seamless monitoring to ensure safe driving.

Description	Remarks
LCD Dimension	10.1 inch
Resolution	1024 x 3 (RGB) x 600
Contrast	600 : 1
Brightness	600 cd/m2
Aspect Ratio	16:9
Display Model	3D/2D views switching freely
Video Input	Max.4CH×1080P 25FPS/30FPS and 4CH * 720P (25FPS/30FPS)
Power Supply	10-32V
Power Consumption	Max. 25W
Loudspeaker	1W/8Ω
Operating Temp. & humidity	-20~+70°C, RH 90%MAX
Storage Temp. & humidity	-30~+80°C, RH 90%MAX

Camera Features:

- 1080p high definition
- IP69K waterproof
- Anti-vibration: ISO 16750-3 2012 (5.9G)
- Wide power supply: DC 12V
- Working Temperature: -20°C ~ +70°C
- Wide viewing Angle: 170°/150°

Description	Remarks
Effective Pixels	1920 (H) X 1080 (V)
Pixel Size	2.8um×2.8um
Scanning System	Progressive Scanning
Sync. System	Internal
Video Output	0.9 Vp-p, 75Ohm
Gamma Consumption	0.45
AGC	Auto
Dynamic Range	81dB
White Balance	Auto
BLC	Auto
Frame Rate	25/30fps
Operating Temp. & Humidity	-20°C ~ 70 °C, RH95%MAX.
Storage Temp. & Humidity	-30°C ~ 80 °C, RH95%MAX.
Minimum Illumination	0.01Lux
Power Supply	DC12V
Waterproof Rating	IP69K
Audio	No
Lens	f =1.99 mm/2.3mm
Viewing Angle	170°/150°



ADAS AI Dashcam:

ADAS AI Dashcam is an all-in-one device with a built-in 4G/WiFi/GPS antenna and DMS camera. It features a 2K front camera for real-time monitoring and ADAS functions like lane departure and forward collision warnings. The device also monitors the driver's status, providing audible and visual alerts for abnormal behavior. Compact and easy to install, it supports remote monitoring and alarms, enhancing fleet management efficiency

Features:

All-in-one Design With built-in 4G/WiFi/GPS antenna, front view/DMS camera. Fully function; One-step sticking, easy installation .

Built-in AI algorithm, support ADAS & DMS function, advance warning driver's attention to potential danger, will trigger sound and visual alert when driver has any abnormal driving behaviors .

2K Front View Camera to minitor front driving images; Support WDR, excellent day and night effect.

Fleet Management by Built-in GPS/ 4G, remote real-time monitoring and alarming, convenient for remote command and dispatch, one-button alarm for driver if there's emergent events ; built-in intercom function, support remote command & dispatch; Built-in G-Force, analyze driver's behaviors and carry out training courses; support multiple alarm recording, loop recording .

Advanced heat dissipation, compact and beautiful; Multiple interfaces, available for various sensors; Support 2-4 channel additional camera, no need for an extra control box; OBD(CANBUS) vehicle information collection .



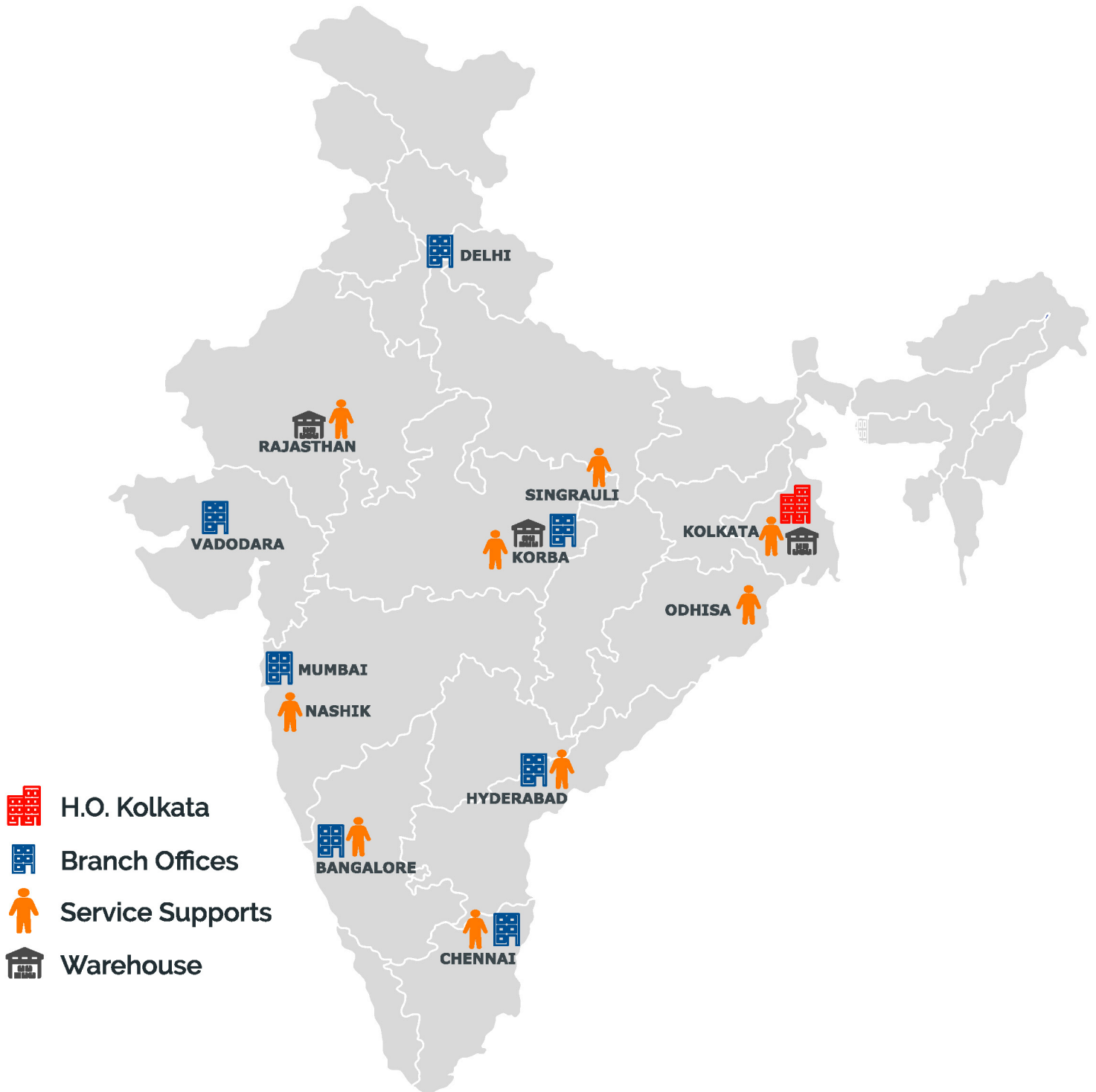
System	Operating system	Linux
	Operating interface	Mobile APP/WebUI
	Video permission	Administrator & user setting
Video	Video input	Built-in 2K+Built-in 1080P+External 2*1080P
	Video output	PAL: 25 fps, NTSC: 30 fps
	Compression	H.264/H.265
Audio	Audio input	Built-in mic
	Audio output	Built-in speaker
	Record format	Synchronized video & audio recording
	Audio compression	ADPCM
Digitaprocessing	Video resolution	2K/1080P/720P/D1
Storage	Video bit rate	64kbps~10Mbps/channel
	Audio bit rate	32kbps
	Storage consumption	56~2700MB(channel*hour
	Disk Media	Micro SD card x 2, max 512GB*2
Alarm	Alarm input	6 CH
	Alarm output	2 CH
Interface for communication	RS232	1 CH
	RS485	1 CH
	CAN	2 CH
	RJ45	1 CH
	USB	1 CH
Wireless	2G/3G/4G	Optional
	WIFI	2.4g
	WIFI hotspot	Optional
GPS	Optional	
G-Force	Six-axis sensors	Optional
Software	Windows client	Optional
	iOS client	Optional
	WebClient	Optional
Power	Input	10~32V
	Output	12V@4A
	Power Supply	less than 8W
	Standby Power Consumption	Not Optional
Electrical specifications	Operating temp. & humidity	-20~60°C, RH 80%MAX
	Super Capacitor	Optional

Seat Belt Warning System:

A seat belt warning system detects if occupants are not wearing seat belts and alerts them through visual or audible signals. It enhances passenger safety by encouraging seat belt use while driving.



Our Presence across India



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Building Relationships



CORPORATE OFFICE-

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