



Mobile Command & Control Vehicle for Commissionerate of Police - Mysuru & Hubballi

Introduction

The Mobile Command and Control Vehicle (MCCV) is a custom made, robust vehicle, outfitted with specialized surveillance, communication & monitoring equipment for homeland security applications. The custom designed vehicle is capable of supporting diverse mission critical applications of military, security or police forces. The MCCV can be easily deployed at the site of emergency or at a location that has potential threat, to take complete control of the situation by providing seamless 360° surveillance and monitoring. It enables rapid communication and coordination among multiple agencies and higher law & order authorities responding to the situation, providing them complete real-time situational awareness.

This case study showcases Mistral's capability in designing a Mobile Command & Control Vehicles for law enforcement agencies, aimed to manage and monitor massive rallies, conventions and protests.



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The Customer

The MCCV is designed for Commissionerate of Police for Mysuru & Hubballi-Dharwad cities, under the jurisdiction of the Karnataka State Police. The Police were keen on inducting Mobile Command & Control Vehicle with modern surveillance and monitoring system - to their armory for tactical operations and providing special strength to the 'police eye'.

The Requirement

The customer wanted a tactical solution for incident management necessitating mobility, advanced video surveillance cum monitoring and an efficient communication system. The solution had to be highly efficient in terms of its surveillance & monitoring capabilities and act as a Command Centre during emergencies, massive rallies, conventions and protests. The MCCV had to have an efficient connectivity medium with the Police Head Quarters & Police Control Rooms for quick, effective communication, providing real-time situational awareness enabling rapid decision making.

Solution Provided

Mistral designed a highly integrated state-of-the-art Mobile Command & Control platform with two primary operators, namely Communication and CCTV. The vehicle is self-contained in terms of power generation with a silent petrol Genset and UPS providing up to one hour of battery back-up. The system can also operate using raw power according to the situation.

The Communication operator comprises of an Integrated Communication Switch, a Digital Console System that combine radio and telephony interfaces, enabling the user's radio walkie-talkies to converse with multiple frequency devices such as GSM Phones and UHF/VHF/HF radios. The feature keeps the officers and first responders always on top of the situation by seamlessly communicating and engaging with higher authorities and general public, wherever applicable, during an emergency to initiate quick necessary actions as the situation demands.

Features & Sub-systems

PTZ Camera	Mast mounted HD resolution, PTZ Camera with VMS
Communication	GSM & Wireless radios for multiple agency coordination
Video Wall	For Common Operation Picture & Situational Awareness
Body-Worn Cameras	For streaming the video from site to MCCV in Non LOS wireless mechanism
LED Flood Lights	Mast mounted heavy-duty LED Flood Lights for night operations
PA System	PA System with 4 speakers and wireless microphone
Satellite TV	Mobile DTH TV Antenna
Power System	5.5 KVA Petrol Genset & 3 KVA Online UPS with one Hr battery backup



The CCTV Operator includes four full HD resolution cameras installed on four sides of MCCV and an advanced mast-mounted PTZ Camera to record & stream finer details of the situation. The vehicle is also equipped with 10 battery powered wireless cameras for rapid deployment at strategic locations in the area of surveillance. These cameras play a vital role, recording the scene from various angles and heights as deployed, to provide deeper intelligence to the monitoring team in MCCV. The vehicle also has four long-range Non Line of Sight [Non LOS] Body Worn Wireless Cameras that can be worn by the police personnel, streaming the live camera footage to the MCCV.

The MCCV stores an advanced Drone with a high definition Camera and control station. The drone records and stream the video from a wider field of view to MCCV. The drone can be controlled and directed to get clearer and closer video of the incident site.

MCCV is designed to accommodate four command & control officers. The 65" High definition monitor enables simultaneous display of information from various cameras. A Mobile Dish TV Antenna provides the Mobile Command Centre with live Satellite DTH TV channel feeds, which provide the on-field officers with updated media news about the current situation. All the electronic systems are installed in vibration & shock-proof racks to prevent damages due to long drives and uneven terrain.

Customer Benefits

- ▶ The vehicle was installed with specially designed computerized consoles and communication operators that can instantly connect to police control rooms and fire personnel, law enforcement, government or national agencies to avail their support to respond to the situation
- ▶ Vehicle mounted cameras can capture and stream video at a radius of 800 meters and the pan-tilt camera can record visuals to a range of 1 km
- ▶ Each MCCV does the work of around 60 policemen, and the vehicle has all the facilities to monitor and communicate the scenario for further analysis and decision making.
- ▶ MCCV is highly effective in isolated areas where accessibility to law & order resources are limited, and on-scene management becomes crucial to ensure control over the situation.
- ▶ MCCV can be deployed by the respective agency during Critical Situations such as VIP Security Bandobast, Religious Congregations, Security Drills, Political Rallies and Law & Order among others.



Mistral Solutions Pvt. Ltd.,
No.60, 'Adarsh Regent',
100 Feet Ring Road,
Domlur Extension, Bangalore - 560 071
Tel: +91-80-4562-1100
Fax: +91-80-2535-6444
E-mail: info@mistralsolutions.com

Mistral Solutions Inc.,
43092 Christy Street
Fremont, CA 94538
USA
Tel: +1-408-705-2240
E-mail: usa@mistralsolutions.com

Branch Offices:
INDIA
• Hyderabad
• New Delhi
USA
• Dallas, Texas