

# MMCP– Mini Mobile Communication Pack



MMCP



VSAT

## Mini Mobile Communication Pack (MMCP)

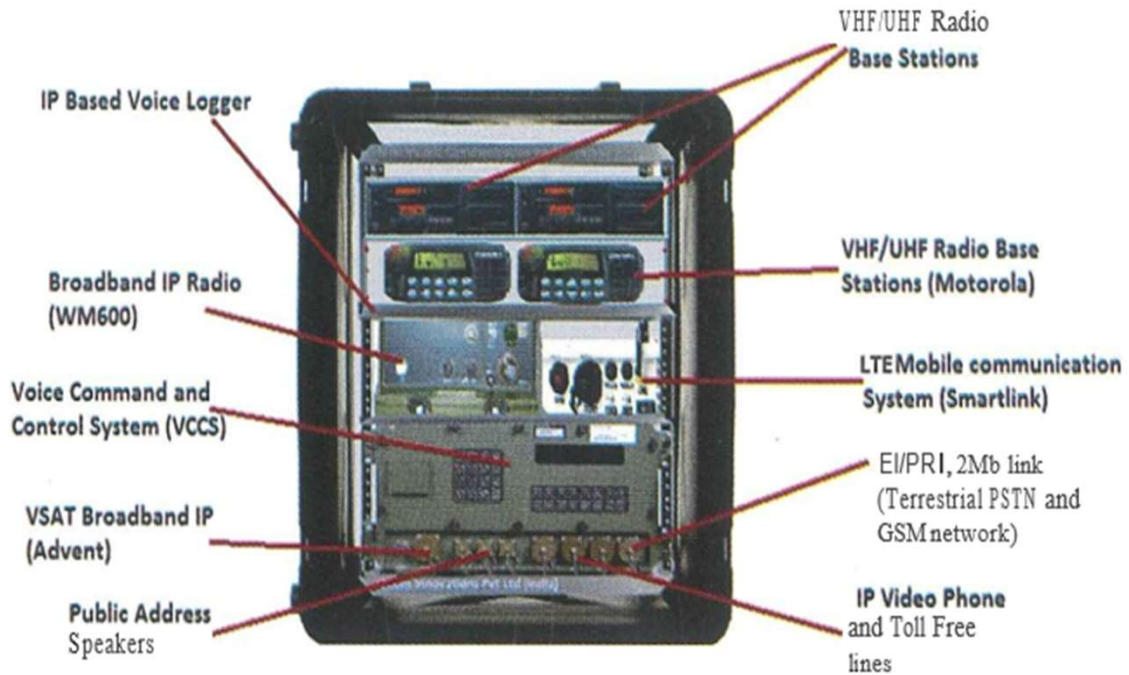
Natural and man-made disasters, such as earthquakes, floods, plane crashes, high-rise building collapses, or major nuclear facility malfunctions; pose an ever-present challenge to public emergency services. Police, fire departments, public health, Special Forces, Defence, CAPF and other organizations have to react not only efficiently and individually, but also in a coordinated manner. This results in need for both intra and inter organization coordination. Since coordination requires communication upstream and downstream within and between organizations in real-time. The need arises for an integrated communication and information system for disaster management that provides efficient, reliable and secure exchange of voice, video and data. To achieve effective communication, MMCP has coverage, redundancy, and seamless meshing of new and existing telecommunication infrastructure along with HF/VHF/UHF Radio's, LTE subscribers, IP Phone users and can be utilized as a backhaul media for Voice, Video and data transfer through VSAT link.

MMCP provides assured multi services of audio, video and data augmented to various stakeholders. This is the communication node connected at the last mile and operating in a tactical environment.

## Application & Functionality

- MMCP is a Portable Emergency Communication Box, which helps in setting up communication network in any disaster effected area, for Disaster Management and Strategic Mobile Connectivity to remote locations.
- It provides Real-time two-way communication between HQ and deployed formations in disaster effected locations, when all communication structures have collapsed or are nonfunctional.
- It seamlessly integrates various signaling protocols, both wired and wireless, such as HF/VHF/UHF Radios, 3G/LTE, Broadband IP Radio, Analog, IP Phones and provides backhaul media for Voice, Video and Data transfer through VSAT link.
- Fully ruggedized to work in harsh environmental conditions.
- It is an IP based next generation communication system which is a complete Network-In-A-Box (NIB).
- It augments better coordination between all responders (disaster relief and rescue forces) engaged in Search & Rescue operations.
- Enables backhaul through latest VSAT systems using IP interfaces for achieving higher bandwidths for data and video transmission.
- Provides secure Captive Cellular Network with Software Defined Radios (BTS) capable of operating on multiple frequency bands.

# MMCP – Mini Mobile Communication Pack



MMCP – The Solution

## Solution Specifications

- MMCP is a solution - It consists of Command & Control Unit (CCU) to which various plug-in modules/interfaces can be added as optional accessories
- IP based switching up to 512 ports
- Supports up to 6 Radio Nets (HF/VHF/UHF)
- Supports up to 4E1/PRI ports
- E1/PRI interface for connection to terrestrial or tactical networks and traditional PABX's
- Fast Ethernet for SIP trunk interface over Wide Area Network (WAN).
- Voice, data and video switching for LTE and VSAT
- Built-in SIP server for LTE subscribers, VoIP Phones and other telephony subscribers.
- 10/100 Mbps man machine interface (MMI) for local/remote management Redundancy for greater survivability using duplicated CPU and power supply (PSU)
- Rugged , 12U, 19" rack for easy transportation and handling
- 12/24V DC Vehicle powered
- Man-portable carrying case
- Built in an amplifier for announcements\*
- Range of 2.5G/LTE subscribers is 1KM (with commercially available cell phones)
- Extended range using hopping and relaying
- Quick to deploy, 5 minutes to operation
- IP based voice logging

This publication is not to be regarded as a complete system specification, or to be used as a contract document. We reserve the right to change the design or specifications without prior notice.

# MMCP – Mini Mobile Communication Pack

## Technical Specifications

### System and Maintenance

Modular Concept, redundancy and Memory backup  
Built-in Protection on all interfaces  
Power on Self-test (POST)  
Built-in test equipment (BITE)  
GUI based Local management (GUI)  
Remote Management  
Vehicle Powered

### LTE Services

Operating Band	FDD, TDD
Network Protocol	S1-AP, GTP, X2
LTE Band Supported	1,2,3,4,5,7,8,11,12,13,14,16,17, 18,20,21,24,25,26,27,28,30,31
Operating Band (MHz)	1.4, 3, 5, 10, 15, 20
Modulation	64 QAM, 256 QAM
Output Power	20 Watt
Network	IPV4, IPV6

### Protocols

E1 CAS, E1 QSIG  
ISDNPRI  
SIP  
Codecs Supported: G711,, G.729, G.723  
DTMF  
2G.3G.LTE

### Environmental Data

Operating Temperature	-30°C to +55°C
Storage Temperature	-40°C to +70°C
Relative Humidity	95% +50°C

### CCU Subscriber Services

Auto call Back	Hotline
Call Forward	DND
Call Hold and Transfer	Conferencing
ISDN Services	Fax Over IP
Abbreviated Dialing	Radio Over IP
Direct Outward Dialing	Video call
Call data Record	Call Statistics
E.164 numbering	Flexi Numbering

### VSAT Services

Bands	Ku, X, DBS, Ka, C Band
Size	1m, 1.2m, 1.9m Dia
Power	<20W
Time to ON	5 minutes
Download Speed	Up to 10 Mbps

### Dimensions and Weight

Depth	73 cm
Width	70 cm
Height	75 cm
Weight	<70 Kg

### References

MIL-STD-810G	Ruggedization
MIL-STD-461E	EMI/EMC

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