FAST Installation

Box Contents

PMRS Unit

Video/Power Adapter

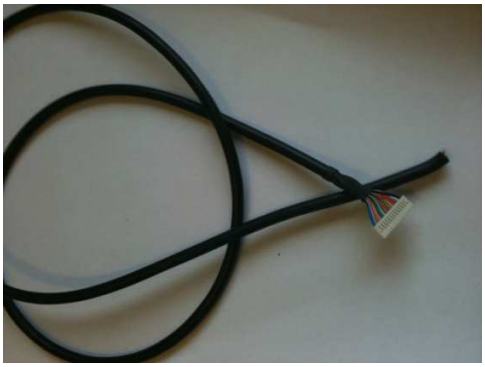
GPS Antenna

5V Charger

USB Cable

12V – 5V Car Adapter

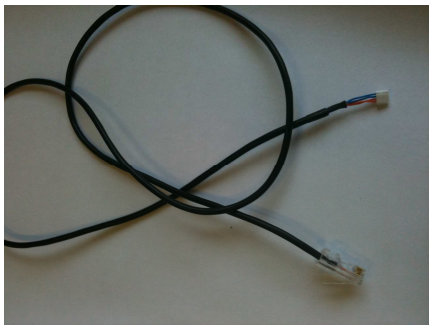
PTZ+GPIO



Voice splitter

GSM Antenna (Optional)

LAN



Required Items

SIM Data Card

3G/HSPA/EDGE/GPRS
SIM Data Card from cellular provider is required for the unit.

Camera(s)

Any analogue PAL/NTSC camera with a RCA MALE connection for video output can be connected to the PMRS unit. The unit supports 1 camera. The unit's battery can feed power to a 5V camera for portable use.

Micro SD Card

A Micro SD Card is required for recording in the MRS device. The speed of the SD Card will vary depending on the make.

1-1 Document Scope:

This document describes the operation of the PMRS system.

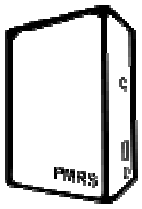
1-2 Terminology:

Term:	Description:
PMRS	Personal Media Relay System
GPS	Global Positioning System
GSM	Global System for Mobile Communications
3G	3rd Generation Mobile Telecommunications
HSPA	High Speed Packet Access
EDGE	Enhanced Data rates for GSM Evolution
GPRS	General packet radio service
M2M	Multi Unit to Multi Client
P2P	Peer to Peer
PTZ	Pan, Tilt, Zoom
VMD	Visual Motion Detection
GPIO	General Purpose Input, Output
SMS	Short Message Service
APN	Access Point Name
LAN	Local Area Network
WLAN (WI-FI)	Wireless Local Area Network

1-3 Introduction:

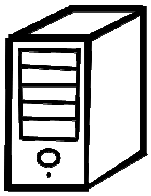
Infodraw PMRS is a portable handheld multimedia streaming and monitoring system from the field. It allows users to stream live video/audio/location from anywhere over the cellular 3G/ HSPA/ EDGE/ GPRS networks and can be monitored from any location upon alarm/ request. The media streaming is done using PMRS units which can be carried handheld or located either on mobile vehicles or fixed locations. The units can be monitored remotely from fixed/mobile control centres, mobile phones/PDAs or an internet web client.

1-4 System Components:

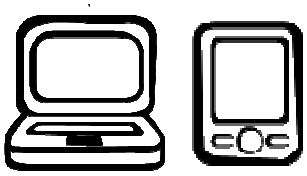


The system consists of the following components:

- **PMRS units** which can stream 1 video channel, 1 audio channel and GPS location over the cellular network to the MRS server.



- **MRS Server** which communicates with units and clients.



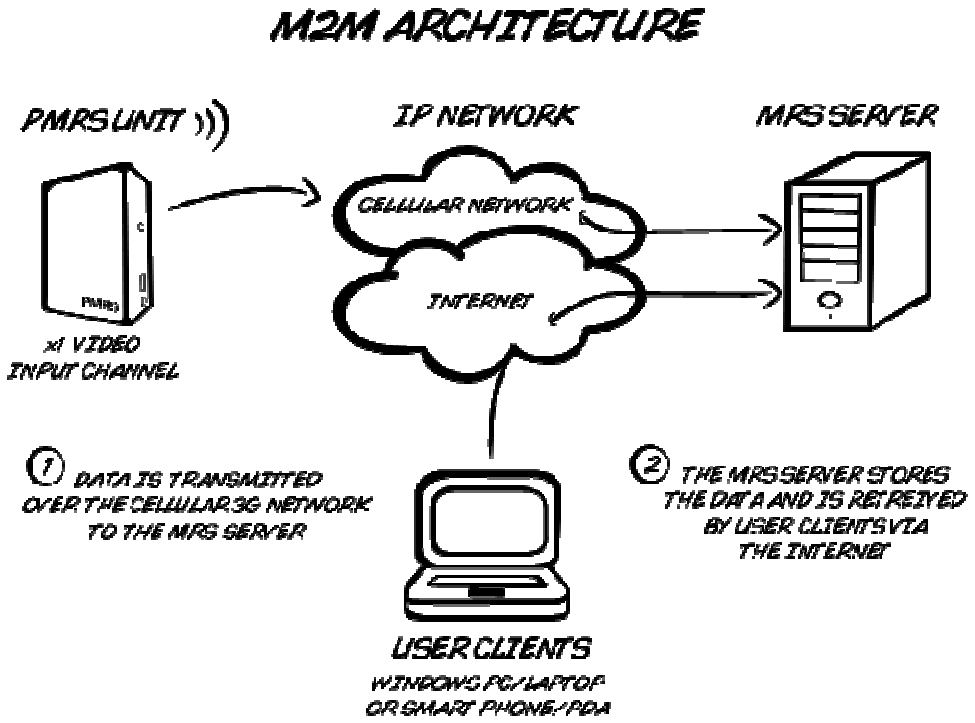
- **MRS Client** which communicates with the server and has viewing and control capabilities for all connected units.

1-5 System Architecture:

The system has 2 major architectures:

- **M2M architecture (recommended)**. This architecture is based on a server with a fixed IP address. Multiple units can communicate with the server as well as multiple clients. All clients are connected to the server only and have viewing and control capabilities.
- Server can be reside in any PC with global IP address or inside the unit
- In case the server is inside the unit and static IP is received from cellular provider, this IP can be SMS to any cell phone

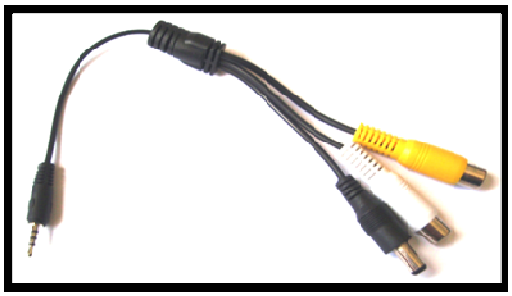
1-5-1 M2M Architecture:



Unit Hardware Interfaces:

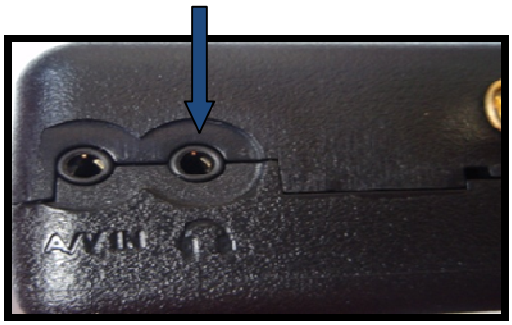
Video Input/ Audio Input/ 5V Power Output:

The unit has a standard input jack (2.5mm) which supports the video input, audio input and 5V power output to the camera from the unit.



Video / 5V Power Adapter Cable:

The unit has a standard adapter cable which has a RCA Female connector for Video input, a 5V DC Power connector for Power output to the camera (Max 5V). Connect the adapter cable to the Video/ Power input jack shown above (A/V IN). White connector (audio) not in use



Audio In/Out:

The unit has a standard output jack (2.5mm) which supports audio splitter cable, located next to the **"A/V IN"** input jack.

GPS Antenna Connector:

The GPS antenna has a SMA interface located on the top of the PMRS unit.

Connect the GPS antenna to the SMA GPS connector.

GSM Antenna Connector (Optional):

The PMRS has an internal GSM antenna. However an external GSM antenna connector can be added to the PMRS if required and has a SMA interface which will be located on the top corner of the PMRS unit next to the GPS antenna.

SIM Card Slot:

The SIM card slot is located on the side of the unit. Pull the notch out to insert the SIM card.

Dip Switches:

The PMRS has 4 Dip Switches located on the side of the unit. The dip switches are for setup and operation. The functions of each switch are described below in order from left to right:

1) USB HOST/CLIENT AND CELLULAR OPERATION:

i. USB client -up position (**setup through PC**)
ii. Normal cellular operation - down position

2) USB IN/OUT:

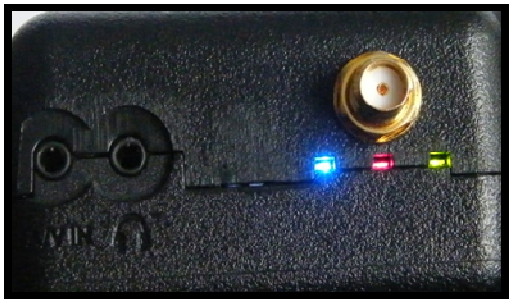
i. USB out to connector -up position (**setup through PC or WIFI**)
ii. USB in onboard - down position

3) MICROPHONE:

i. Disable – up position
ii. Enable – down position

4) SPEAKER:

i. Disable – up position
ii. Enable – down position

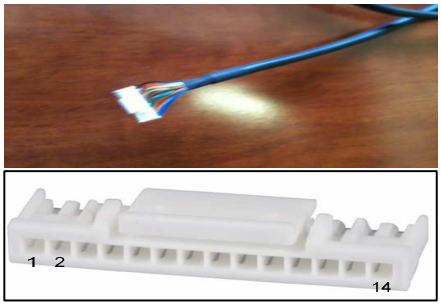


LED's:

The PMRS has 3 LED's located on the top side of the unit. The 3 LED's indicate the following:

1) Green LED – External power is connected.

2) Red LED – Software status, blinks when software is running.
3) Blue LED (on) – Modem is on.
4) Blue LED (flashing every second) – Modem is connected to cellular provider.



1-6-13 I/O Cable:

The i/o Cable has several different coloured wires for specific purposes such as PTZ and GPIO. The definitions of the wires are listed below.

HDMI	COLOR	FUNCTION
1	BLUE	GPIO IN 1
2	BLUE-WHITE	GPIO IN 2
3	ORANGE	GPIO IN 3
4	ORANGE-WHITE	GPIO IN 4
5	GREEN	GPIO OUT 1
6	GREEN WHITE	GPIO OUT 2
7	BROWN	GPIO OUT 3
8	BROUN-WHITE	GPIO OUT 4
9	GRAY	PTZ TX+
10	YELLOW	PTZ TX-
11	RED	5V
12	PURPLE	TTL TX
13	WHITE	TTL RX
14	BLACK	GND

1-6-14 I/O Cable and LAN Cable Input:

The i/o Cable and LAN Cable Input is located on the bottom side of the PMRS unit.