

FAST Installation (PMRS-102)

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Preface: This manual Consists of 3 main parts:

Chapter one: [Introduction](#)

Chapter two: [Hardware interfaces](#)

Chapter three: [Installation](#)

Required Items

SIM Data Card



4G/3G/HSPA/EDGE

SIM Data Card from a 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.

SDs with storage above 32GB have to be formatted to FAT32 format.

Chapter 1 - Introduction

1-1 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.



1-2 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.



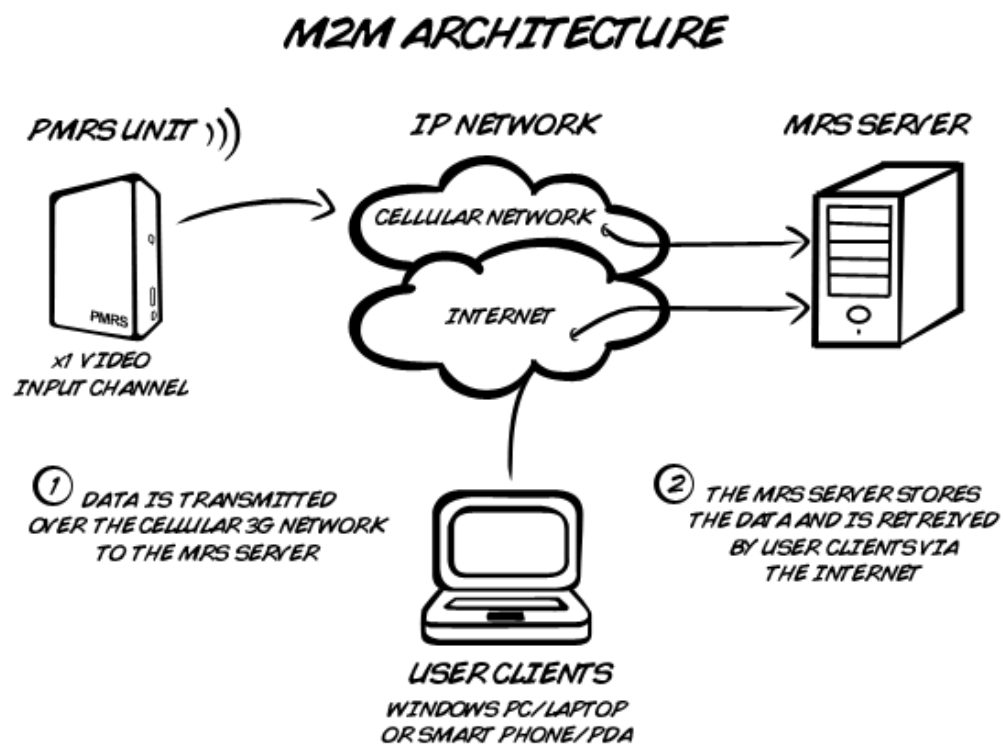
- **MRS Client** which communicates with the server and has viewing and control capabilities for all connected units.



1-3 System Architecture:

- **Server-Based – M2M (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 and have viewing and control capabilities.
- Server can reside in any PC with global IP address or inside the unit.
- If the server is inside the unit and static IP is received from the cellular provider, this IP address can be sent via SMS to any cell phone on activation.

1-3-1 Server Based Architecture:

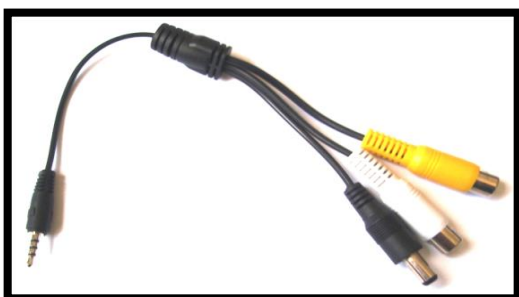


Chapter 2 - Unit Hardware Interfaces



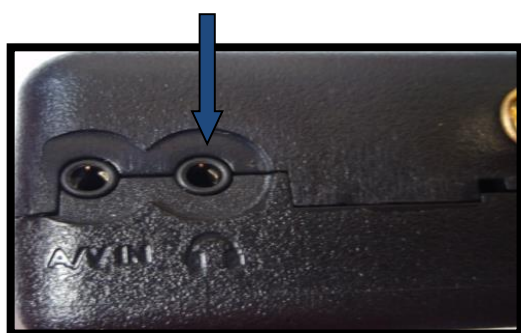
1-4-1 Video Input/ Audio Input/ 5V Power Output:

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.



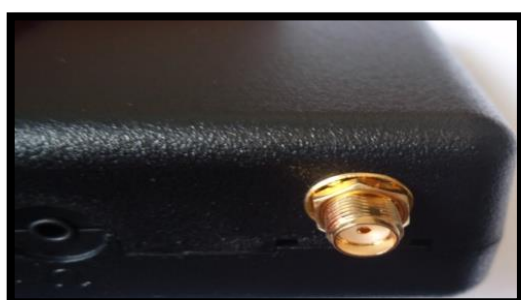
1-4-2 Video / 5V Power Adapter Cable:

The unit has a standard adapter cable which has a RCA Female connector for Video input, a RCA Female connector for Audio input and 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).



1-4-3 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.



1-4-4 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.



1-4-5 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.



1-4-6 SIM Card Slot:

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



1-4-7 Alarm Button:

The PMRS has a built in alarm button located on the side of the unit. The button can be used in emergencies and can be set up to trigger a variety of actions on the MRS monitor (Refer to Alarm Button Section).



1-4-8 USB Client:

The USB client is used for configuring the device's parameters using the **Device Config** application. Connect the USB cable between here and a PC when configuring the unit. Dip switch must be set correct in order to communicate through usb



1-4-9 Micro SD Slot:

Insert a Micro SD card into the Micro SD slot for recording on the PMRS device.



1-4-10 5V Power Input:

The 5V power input is located on the side of the unit. Connect the 5V charger here.



1-4-11 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:

UP - USB client – Configuration mode

DOWN - Normal cellular operation

2) USB IN/OUT:

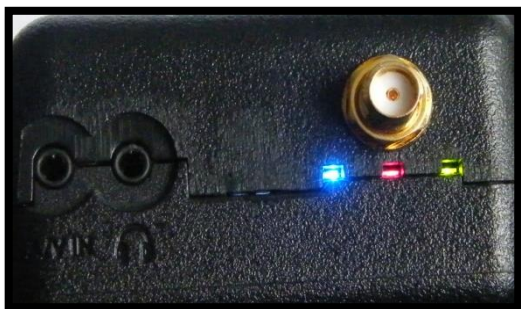
UP - USB out to connector – Configuration mode

DOWN – USB on board – Cellular streaming video.

3) BUILT-IN MICROPHONE:

UP – Disabled

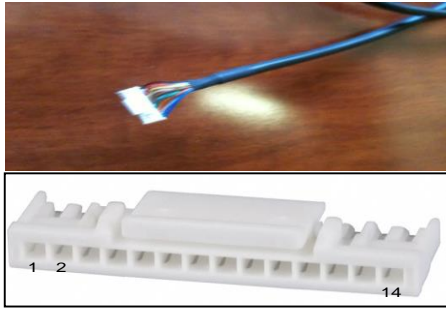
DOWN - Enabled



1-4-12 LED's:

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

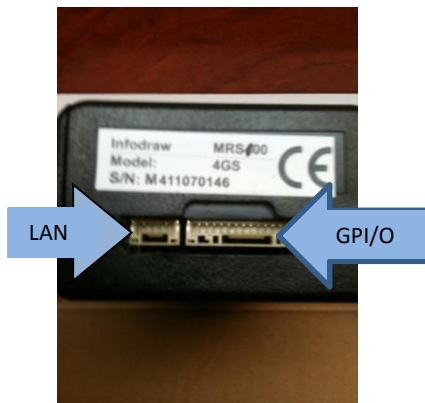
- 1) Green LED – External power is connected.
- 2) Red LED – Software status, blinks when software is running.
- 3) Blue LED (on) – Modem is on.
- 4) Blue LED (flashing every second) – Modem is connected to a cellular provider.



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	WHITE-BLACK	GPIO IN 2
3	ORANGE	GPIO IN 3
4	RED-BLACK	GPIO IN 4
5	GREEN	GPIO OUT 1
6	PURPLE	GPIO OUT 2
7	PINK	GPIO OUT 3
8	BROWN	GPIO OUT 4
9	GREEN-BLACK	PTZ TX+
10	GREY	PTZ TX-
11	YELLOW	5V
12	RED	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 are located on the bottom side of the PMRS unit.

Chapter 3 - Installation

PMRS software can be downloaded from <http://www.infodraw.com/dlds>

Installation on **Server** Computers

1. Open ports 12654 (TCP) and 12655 (UDP) on the firewalls of your computer and your router.
 2. Make sure the IP of the server is static and external and can be reached from the outside.
 3. Open the web browser and enter the website www.infodraw.com/dlds
 4. Open the folder of the latest version (5.4.0.5 – for example)
 5. Open the folder of the Service program and run the .msi file attached
- If you want to activate more than one device simultaneously please contact Infodraw-Israel R&D to purchase a server license.

3-2 Set Parameters

Every device needs to have its parameters changed in order to connect to the server. The MRS Device configurator allows the user to make changes in the settings of the device, changes that would take effect on activation.

There are two stages to installing and setting up the configurator:

- a. [Installing the drivers \(Difference depending on OS\)](#)
- b. [Setting parameters](#)

3-2-1 Install drivers (Device Configurator – 7 and below)

1. Browse to the website: www.infodraw.com/dlds
2. Open the folder of the latest version of the PMRS ("5.4.0.5" for example).
3. Enter the "MRS device config" folder and activate the **Setup_MRS_DeviceConfig.msi** file.
4. Change the 2 dip switches (1 & 2) to external USB mode (up position).
5. Insert the USB cable into the unit and to the PC.
6. Activate the PMRS device.
7. Open the MRS Device Configurator program.
8. Open the driver menu and Download drivers
9. Click on test mode – the computer will restart (**Only** for windows Vista, 7 - 64-bit OSs)
10. If the drivers are not automatically installed, update the drivers by inserting the path to the folder where the drivers were downloaded (on stage 7) on the "MRS Device" in the **device manager**.
11. Turn on the unit and wait about 2 minutes.
12. After a few seconds system shows new hardware is detected.
13. Turn on the device.



3-2-2 Install Drivers (Device Configurator – WIN 8.1 and above)

If you have a Windows 8 OS please follow these instructions and then follow the installation instructions of the 64bit OS above.

1. Open the Device configurator
2. Open the '**Driver**' menu
3. Choose **Restart with options**
4. System will restart to a "**Choose an option**" screen
5. Select "**Troubleshoot**" from "**Choose an option**" screen
6. Select "**Advanced options**" from "**Troubleshoot**" screen.

7. Select "**Windows Start-up Settings**" from "**Advanced options**" screen
 8. Click "**Restart**" button
 9. System will restart to "**Advanced Boot Options**" screen
 10. Select "**Disable Driver Signature Enforcement**"
 11. Once the system starts, install the Infodraw drivers as you would on Windows 7 (64-bit OS) – Described in the in the 2 pages preceding this one.
- Steps 1-10 will have to be repeated with every activation of the computer in order for the configurator program to recognize the device.

3-2-3 Set the parameters on the PMRS Device

1. Once the unit is connected to the PC, parameters are loaded.
2. Go to connection screen.
3. Choose *Remote Server*
4. Fill in the IP address of your Server
5. Save parameters (write to device - in the "File" menu) or click on the candle icon that is placed on the top-left side of your screen. Wait for about 10 seconds (you should see "parameters saved" in the status bar).
6. Turn off the device, and wait for about 20 seconds.
7. Change back the 2 dip switches to a down position (as shown) for normal work with modem.
8. Connect the antennas to the device
9. Insert the SIM card (notch is outside)
10. Insert the micro SD card.
11. Turn on the device.



3.3 How to view the video (MRS monitor)

1. Open your browser to www.infodraw.com/dlds
 2. Open the folder of the latest MRS version and in it, open the folder of the Monitor-Client.
 3. Run the **Setup_MRS_Client.msi** file and install the program.
 4. After installation is complete, open the MRS Monitor program.
 5. Go to the session menu and click on "Connection"
 6. Fill the "Remote Server" circle.
 7. Enter the IP address of the server (If you are on the server computer- enter 127.0.0.1).
- A more comprehensive manual is available at <http://www.infodraw.com/pmrs100usermanual.pdf>