



# **M-900R**

## **User's Guide**

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**HuneTec Co.,Ltd**

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## General Information

### Introduction

- # ReFLEX 2.7.2 Two-way Telemetry Device
- # Small Size
- # Serial interface for smart GPS antenna.
- # 8 GPIO for telemetry
- # System code format: ReFLEX™ 2.7.2, 1600, 3200, 6400 bps

### RF Specification

- # Tx Frequency Range: 896 MHz ~902MHz
- # Rx Frequency Range: 929 MHz ~932MHz, 935 MHz ~942MHz
- # Channel Spacing: 12.5 KHz/10KHz
- # Frequency Deviation: 800Hz and 2400Hz
- # Signaling Modulation: 4 level FSK

### Physical Specification

- # Operating temperature range: -30°C ~ +60°C (22F~140F)
- # Dimensions
  - Size: 86×62×23mm
  - Weight: 300g

# Power Consumption

- Rx Consumption: 15mA
- Tx Consumption: 250mA
- Idle Current: 2mA

# Display

- LED (Red,Green)

# Accessories for Serial Port Interface

- I/O Cable
- Data Cable
- Smart GPS antenna

The serial port interface provides a connection to the programming fixture and external GPS device.

## Manufacturers

**Hunetec Co.,LTD**

7<sup>th</sup> fl. Chosun-Nae-Hwa Bldg.,4-1 Soonae-dong, Bundang-ku,  
Sungnam-si, Kyungki-do, Korea 463-020

Telephone : +82-31-712-6868

Facsimile : +82-31-712-6889

## Specifications

### 1. Receiver

Item	Specification
Frequency	929~932MHz, 935~942MHz
Channel Spacing	12.5KHz / 10KHz
Bit Rate	1600~6400bps
Signaling Modulation	2 or 4 Level FSK
Frequency Deviation	800Hz and 2400Hz
Receiver Sensitivity	20uV/M with 80 char(TBD)
Frequency Accuracy	1ppm
Adjacent Channel Rejection	> 50dB from Sensitivity to -80dBm > 40dB at -70dB Signal Level > 30dB at -60dB Signal Level
Co-Channel Rejection	< 15dB at -105dBm < 10dB at -102dBm < 6dB at -95dBm
Spurious Response Rejection	> 55dB at -105dBm
Image Rejection	> 55dB at -105dBm
Inter-Modulation Distortion Rejection	> 50dB from Sensitivity to -80dBm > 40dB at -70dB Signal Level > 30dB at -60dB Signal Level
Simulcast Delay Spread Tolerance	> 1/4 symbol width at -105dBm and 15dB C/I > 1/4 Symbol width at -102dBm and 10dB C/I > 1/4 Symbol width at -55dBm and 6dB C/I

### 2. Transmitter

Item	Specification
Frequency Range	896~902MHz
Channel Spacing	12.5KHz/10KHz
Bit Rate	800~9600bps
Signaling Modulation	4Level FSK
Frequency Deviation	800Hz and 2400Hz
Frequency Accuracy	-2.5ppm < X < 2.5ppm
Frequency Stability	-1.0ppm < X < 1.0ppm
Output Power	0.75W into Antenna
ERP	0.2W minimum over 8 positions
Spurious Emission In-Band/Out-Band	< -50dB
Occupied Bandwidth	8.5KHz

## **Installation**

Please follow the next steps.

1. Put the device at any place you want.
2. Put the GPS antenna at any place to be able to see the Sky.
3. Connect GPS cable to device CON2
4. Connect power cable to device CON1
5. Reset the device by contact switch at the right side of the device.
6. After reset, confirm the red 'ReFLEX' LED blink.

## **Registration**

It is different from each service provider. So, please see the service manual or contact the service provider.

## FCC Warning Statement

**NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.**

**“CAUTION: Exposure to Radio Frequency Radiation.**

**The antenna used for this transmitter must be installed to provide a separation distance of at least 20cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.**