

# MIL-RAM TECHNOLOGY



## Features

- Eliminates costly hard wiring between
- field installed transmitters and control
- systems — cuts installation costs up to 60%
  
- 902-928 MHz or 2.4 GHz frequency hopping
- spread spectrum technology — User FCC license
- not required — virtually immune to interference
  
- Multi-Process: transmit/receive data from any
- 4-20mA transmitter including gas detection,
- temperature, humidity, flow, pressure, pH,
- conductivity, level, weather stations, etc.
  
- Each field-installed Radio Transmitter
- accepts up to eight 4-20mA signals and
- transmits high resolution wireless data to
- Radio Receiver at control system. Also avail-
- able, digital inputs at Radio Transmitter and
- relay outputs at Radio Receiver. (Modbus soon)

Mil-Ram's **Multi-Process Wireless Telemetry System** utilizes 902-928 MHz frequency hopping spread spectrum technology to link *any* field-installed 4-20mA transmitter with new or existing control systems (controllers, PLC's, etc.) accepting standard 4-20mA inputs. One or more **radio transmitters** (MPT900T) are installed in the field and each can accommodate up to eight 4-20mA transmitter inputs. Each field **radio transmitter** (designed for hazardous or ordinary locations) converts the 4-20mA signals (16-bit, high resolution A/D conversion) into wireless data (sensor readings) and sends the data packets to a **radio receiver** (MPT900R) located at the control system. This **receiver** converts the wireless data back to discrete 4-20mA analog outputs for direct connection to control system. The Mil-Ram system simply and reliably replaces the wire that traditionally interconnects the 4-20mA transmitter and control system. A Mil-Ram wireless installation provides tremendous **cost savings** as installation costs associated with hard-wired systems can greatly exceed the cost of the equipment. The Mil-Ram **Multi-Process Wireless Telemetry System** is practical and cost effective for small systems consisting of only a few monitoring points up to much larger systems utilizing several hundred remote points. Distances between the field installed 4-20mA transmitter and control system can exceed 20 miles line-of-sight. Actual distances depend on antenna selection and specific factors in the environment (buildings, structures, terrain, etc.). Signal **repeaters** (MPT900RP) are available to extend distances especially in areas where line-of-sight installation is not possible. Additionally, field installed 4-20mA transmitters and **radio transmitters** can be powered by solar panels in the event local power is not readily available or practical.

## MPT900 MHz/2.4 GHz *Multi-Process Wireless* Frequency Hopping Spread Spectrum Telemetry System



Wireless Radio Transmitter (MPT900T) and Wireless Radio Receiver (MPT900R)

The Mil-Ram Wireless Telemetry System is **Multi-Process** in that *any* 2-, 3- or 4-wire field installed process transmitter/transducer (**temperature, pressure, humidity, flow, pH, conductivity, etc.**) that generates a 4-20mA signal can be equipped with a **radio transmitter** and the data continuously sent to the control system via wireless communications. The **radio transmitters/receivers** utilize advanced data recognition techniques to ensure data reliability and integrity; corrupt data is automatically rejected. The **radio transmitters/receivers** have LCD displays for easy configuration which simply involves selection of specific addresses for each field installed 4-20mA transmitter. Addressing provides a unique identity for each 4-20mA transmitter to eliminate cross-talk interference with other devices.

The **Wireless radio transmitters/receivers** are quickly and seamlessly integrated into any new or existing control system to provide continuous and reliable data links between field installed transmitters and the control system.

**MIL-RAM**  
Patented Technology  
*no false alarms*  
ISO 9001:2000 Certified

**888-4MILRAM**

**1-888-464-5726**

# MPT900MHz/2.4GHz Multi-Process Wireless Telemetry System

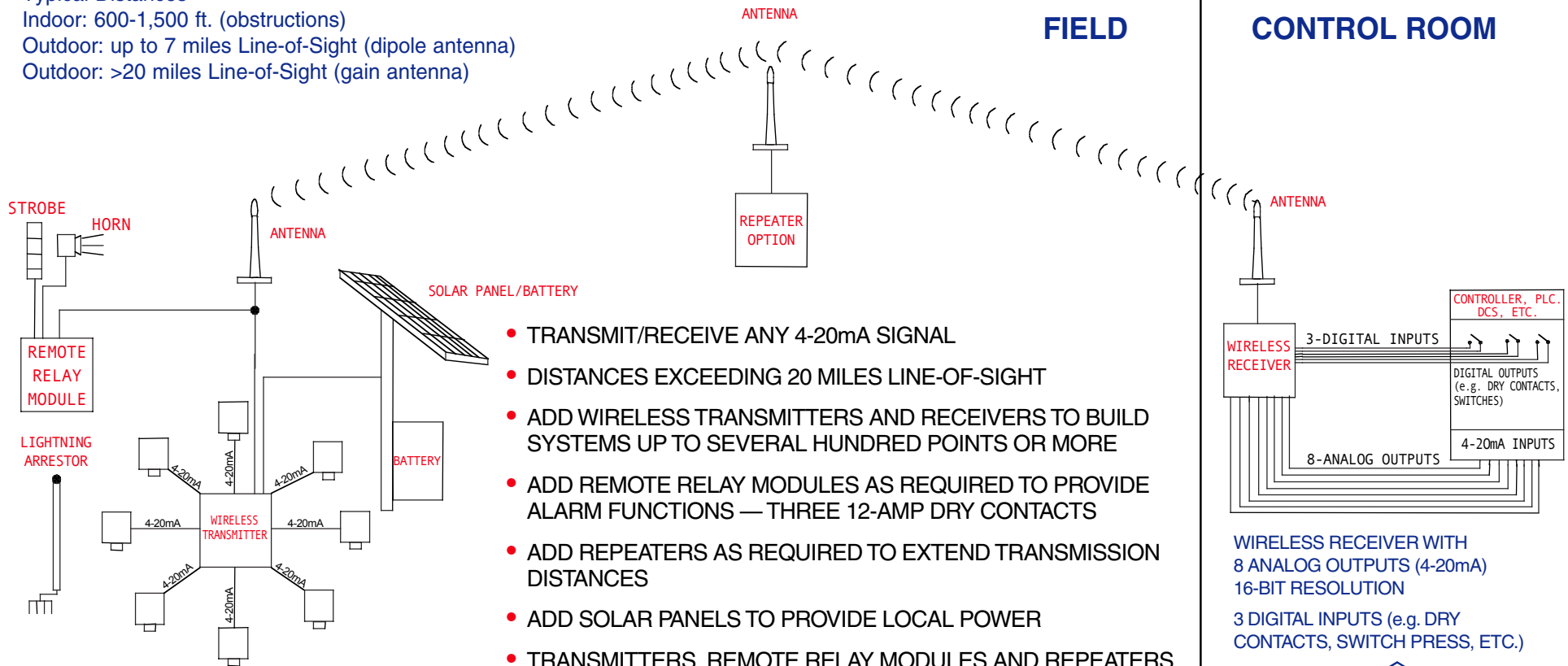
## Frequency Hopping Spread Spectrum Technology

### Typical Distances

Indoor: 600-1,500 ft. (obstructions)

Outdoor: up to 7 miles Line-of-Sight (dipole antenna)

Outdoor: >20 miles Line-of-Sight (gain antenna)



- TRANSMIT/RECEIVE ANY 4-20mA SIGNAL
- DISTANCES EXCEEDING 20 MILES LINE-OF-SIGHT
- ADD WIRELESS TRANSMITTERS AND RECEIVERS TO BUILD SYSTEMS UP TO SEVERAL HUNDRED POINTS OR MORE
- ADD REMOTE RELAY MODULES AS REQUIRED TO PROVIDE ALARM FUNCTIONS — THREE 12-AMP DRY CONTACTS
- ADD REPEATERS AS REQUIRED TO EXTEND TRANSMISSION DISTANCES
- ADD SOLAR PANELS TO PROVIDE LOCAL POWER
- TRANSMITTERS, REMOTE RELAY MODULES AND REPEATERS AVAILABLE IN CLI, GR, B, C, D ENCLOSURES OR NEMA 4X PLASTIC ENCLOSURES

WIRELESS TRANSMITTER WITH UP TO 8 ANALOG INPUTS (4-20mA), 16-BIT RESOLUTION

#### APPLICATIONS

PRESSURE	RAIN FALL
TEMPERATURE	WEATHER STATIONS
FLOW	CONDUCTIVITY
LEVEL	pH
GAS DETECTION	ANY PROCESS TRANSMITTER
HUMIDITY	GENERATING A 4-20mA OUTPUT
WIND VELOCITY	

NOTE: Specifications subject to change without notice.

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[www.wirelessmil-ram.com](http://www.wirelessmil-ram.com)



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