Product Brief

MARS-24

Multi Antenna Reader System

Overview

The Multiple Antenna Reader System (**MARS**) is an RFID reader/writer designed to meet the requirements to verify, inventory, monitor and control a large number of valuable items located in display cases, cabinets, presentation areas and on gaming tables and shelves or on a conveyor at high speed.

The **MARS-24** is a high performance system for PJM StackTag® and PJM ItemTag® RFID tags. It provides high speed operations with multiple antennas.

Product Description

The **MARS-24** is capable of operating up to 24 antennas. These antennas can be arranged as required to operate 24 separate read/write stations or any combination of multi-axis stations that will identify tags in multiple orientations.

The **MARS-24** is particularly well suited to

- gaming
- jewelry
- document management
- pharmaceutical and retail applications

The **MARS-24** features:

- The ability to identify, read and write reliably to many hundreds of tags a second
- Reliable identification of tightly stacked and overlapping or touching tags
- Capable of writing reliably a unique 96-bit number such as an Electronic Product Code (EPC) at a rate of 3,000 tags per minute
- Ability to identify and read 96-bit numbers at a rate of 15,000 tags per minute
- Operates PJM StackTag® and PJM ItemTag® simultaneously
- A powerful processing platform allowing for stand-alone reader operation
- Ability to detect the movement of tags between read and write stations (antennas) instantly
- Removal of tags from the reader sets off an alarm signal (custom software feature)
- Very good connectivity offering both Ethernet and USB interfaces
- General purpose digital I/O Interface
- Complies with ISO/IEC 18000-3 Mode 2





Specifications

- Read and write operations
- No user-serviceable parts
- ISO/IEC Compliance: 18000-3 Mode 2
- Operating Frequency 13.56 MHz

- External Dimensions (L x W x H):
  without mounting brackets: 380 x 170 x 80 mm
  with mounting brackets: 380 x 205 x 120 mm
- Net Weight: 3 kg (without external antennas)

- Low Voltage Input: 12 VDC @ 2 A
- Operation environment: Indoor use
- Temperature range: +10°C to +45°C
- Humidity: 10% to 80% (non-condensing)
- Minimum Host Computer Requirements:
  Windows XP SP2/ 500 MHz CPU/ 128MB RAM
- Host Interface: USB and Ethernet

- Command Data Rate of 424 kbit/s
- Reply Data Rate of 106 kbit/s per channel
- Number of Reply Channels: 8
- Number of External Antennas: up to 24
- Antenna Connection Cable of 1.5 m length
- Single axis antennas with dimensions:
  Round: 60 mm diameter and 124 mm diameter
  Rectangular: 60 x 420 mm, 120 x 240 mm
  and 202 x 352 mm
  (special antennas are available on request)

About Magellan
Magellan Technology Pty Ltd, Sydney, Australia, is a technology developer, manufacturer and licensor of advanced read/write 13.56 MHz RFID systems. Magellan designs and offers RFID chips, inlets, a complete portfolio of reader/writers and operating software. Magellan's Phase Jitter Modulation (PJM) technology complies with the International Standard ISO/IEC 18000 Part 3 Mode 2.

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