



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 for applications in

- gaming
- jewelry
- document management
- pharmaceutical sectors
- retail

The **MARS-24** features:

- The ability to identify, read and write reliably to up to 600 tags per second
- Reliable identification of tightly stacked, overlapping or touching tags
- Capable of writing reliably a unique 96-bit number such as an Electronic Product Code (EPC) at a rate of 50 tags per second
- Ability to identify and read 96-bit numbers at a rate of 250 tags per second
- 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
- Certified for FCC, CE, CSA/UL, Canadian and Australian standards
- MTBF 200,000 Hrs
- AFR 4.3%
- External dimensions (L x W x H):
without mounting brackets: 380 x 180 x 80 mm
- Net weight: 3 kg (without external antennas)
- Low voltage input: 12 VDC @ 2.5 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 dia. and 124 mm dia.
Rectangular: 60 x 420 mm, 120 x 240 mm
and 202 x 352 mm
(special antennas are available on request)



For further information on technology, delivery terms and conditions and prices please contact your nearest Magellan Technology office:

Magellan Technology Pty Ltd
65 Johnston Street
Annandale NSW 2038
Australia
Phone: +61 2 9562 9800
Fax: +61 2 9518 7620
info@magellan-technology.com

Magellan Technology Europe Ltd.
Units 7 & 8
Parker Court, Dyson Way
Staffordshire Technology Park,
Beaconside
Stafford ST18 0WP
UK
Phone: +44 1785 218540
Fax: +44 1785 218541
info@magellan-rfid.com

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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Issue date: May 2007
PB-MARS-24-0507-engl