



Global Product Certification
EMC-EMF Safety Approvals

EMC Technologies Pty Ltd

ABN 82 057 105 549
Unit 3/87 Station Road
Seven Hills NSW 2147 Australia

Telephone +61 2 9624 2777

Facsimile +61 2 9838 4050

Email syd@emctech.com.au

www.emctech.com.au

APPENDIX M OF TEST REPORT T080316_F

OPERATIONAL DESCRIPTION

FCC ID: TVN-MARS-24E
Manufacturer: Magellan Technology Pty Limited
Test Sample: MARS-24 RFID Desktop Reader
Model: MARS-24E
Serial Number: 7014360
Part Number: 63-70-034

Date: 20th May 2008

Melbourne

176 Harrick Road
Keilor Park, Vic 3042
Tel: +61 3 9365 1000
Fax: +61 3 9331 7455

Sydney

Unit 3/87 Station Road
Seven Hills NSW 2147
Tel: +61 2 9624 2777
Fax: +61 2 9838 4050

Brisbane

1/15 Success Street
Acacia Ridge Qld 4110
Tel: +61 7 3875 2455
Fax: +61 7 3875 2466

Auckland (NZ)

47 MacKelvie Street
Grey Lynn Auckland
Tel: +64 9 360 0862
Fax: +64 9 360 0861



Dear Sir

REFERENCE: MARS-24E Antenna Connection

The MARS-24E product uses the same antenna connection as used for Magellan Technology's MARS-1-2-4-6 product (FCC ID TVN-MARS-1)

It is our opinion that this new device meets the requirements for antenna connection in the following aspects:

Marketing.

Page 6 of the user manual states that the product must be installed and maintained by professional service trained personnel only.

The following marketing methods are used:

- The equipment is never sold at retail or to the general public. We manufacture and sell our products only to licensed users.
- The equipment is sold through only exclusive and formal license arrangements.
- Only PGIC (a system integrator company) is licensed by Magellan to install this equipment in the USA.
- PGIC technicians are professionally trained in installation methods and procedures by Magellan and by PGIC.
- PGIC already has trained professional installers to ensure that equipment is professionally installed and supervised.

Nature of the Application.

The devices are intended solely for the use by casinos in the gaming industry. On installation the antennas are embedded in the casino tables to which only professional people will have access. The general public do not have any knowledge about the installation of the devices and therefore do not have general access.

Installation.

Section 5 of the user manual contains a dedicated section relating to antenna installation.

The following statement has being included in the user manual, important information section, installation sub-section (at page 6):



Magellan's RFID reader-writers are to be professionally installed by authorized, qualified and service-trained installation personnel only.

Section 4 and 5 of the user manual describes the hardware and software installation of the antenna respectively.

The antenna software set-up at section 4.2.6 refers to **Reader Manager Guide (40-10-006-DOC)** for detailed instructions using the Wizard tool in *Reader Setup (Section 6.8)* to properly set-up the antenna.

Section 15.203 of the FCC Rules and Regulations states that the requirement of a unique connector is not required if the intentional radiator is professionally installed. We feel that we satisfy the requirements of a professional installation.

Sincerely Yours,

A handwritten signature in black ink that reads "Graham Murdoch". The signature is written in a cursive, flowing style.

Chief Engineer



MARS-24E

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-24E** 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-24E** 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-24E** is particularly well suited to

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

The **MARS-24E** 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)



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@magtech.com.au

Magellan Technology Europe Ltd.
Units 7 & 8
Parker Court, Dyson Way
Staffordshire Technology Park,
Beaconsfield
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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