

GENERAL INFORMATION

1.1. Product description

DATASHEET



Medio L40 HF RFID Reader



BREAKTHROUGH PERFORMANCE

Based on the industry leading TAGSYS Medio L400 electronics, Medio L40 uses advances in Digital Signal Processing (DSP) and RF Front End technology to achieve breakthrough performance in read range and read speed.

HIGH DETECTION ENVIRONMENTS

The Medio L40 Reader provides high detection level performance in a compact and easy to integrate unit.

Featuring RFIDSP technology developed by TAGSYS, including real-time signal processing algorithm for extracting RFID tag information in noisy background environments, Medio L40 is the ideal reader component to drive your track and trace applications.

A flat profile casing makes Medio L40 very easy to integrate in various environments. Medio L40 is compatible with TAGSYS' L400 Reader platform and can be deployed with the same full software suite, guaranteeing a high level of flexibility and straight forward implementation path.

Available with 4 RF channels, Medio L40 reader can manage complex multiple antenna systems or control several single reading points at a time.

TAGSYS provides complete, reliable, high performance RFID infrastructure systems for item-level tracking in a variety of industries.

Our unique RFID expertise, combined with a true understanding of RFID business processes, makes us the ideal RFID partner to ease and ensure the success of your project.

More information on TAGSYS can be found at www.tagsysrfid.com



MEDIO L40 READER

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PRODUCT SPECIFICATIONS

ELECTRICAL

OPERATING FREQUENCY:

13.56 MHz

PROTOCOLS SUPPORTED:

TAGSYS C210, C220, C270 (NXP ICODE 1), C370 (NXP SLI)
ISO 15693 supporting AFI and read multiple block command

COMMUNICATION INTERFACE:

Ethernet, USB, RS232

RF CHANNELS:

4 (multiplexing)

ANTENNA CONNECTIONS:

SMA

RF OUTPUT POWER:

Variable (up to 5W max)

GENERAL PURPOSE INPUT/OUTPUT:

2 Input / Output

INPUT POWER SUPPLY:

24 VDC, 1A (Power supply not included)



MECHANICAL

DIMENSIONS:

240 x 130 x 35 mm (9.5 x 5.1 x 1.4 in)

OPERATING TEMPERATURE:

0°C to 40°C (32°F to 104°F)

CASING:

Bulk Aluminum

SOFTWARE

Configuration Tool: TAGSYS Explorer
STxNG SDK (Win32, .Net, Java)

CERTIFICATIONS

ETSI EN 300 330 (EM Emission)
ETSI EN 301 489 (EM Immunity)
ETSI EN 50364 (Human Exposure)
EN 60950 (Electrical Safety)
FCC ID pending

1.2. Related Submittal(s) / Grant(s)

All host equipments used in the test configuration are FCC granted, when relevant.

1.3. Tested System Details

The system was configured for testing in a typical fashion (as a customer would normally use it).

Different configuration of antennas with RFID reader MEDIO L40 are presented and tested in this test report:

- MEDIO L40 + 1 x AERO LB (Not tested, see results of worst case, 4 x AERO LB)
- MEDIO L40 + 4 x AERO LB
- MEDIO L40 + 1 x AERO LC (Not tested, see results of worst case, 4 x AERO LC)
- MEDIO L40 + 4 x AERO LC
- MEDIO L40 + 1 x MAT (Not tested, see results of worst case, 4 x MAT)
- MEDIO L40 + 4 x MAT
- MEDIO L40 + 1 x LSA3
- MEDIO L40 + 4 x LSA4

Reader may be used with 1 until 4 antennas (see different configurations), but not emitted together; so only worst configuration tested.

Maximum Power Output: 5W.

○ Equipment under test (EUT):

Antenna:

- | | |
|-----------|------------------|
| ○ AERO LB | Sn: L1048001C0-R |
| ○ AERO LB | Sn: L1048002C0-R |
| ○ AERO LB | Sn: L1048003C0-R |
| ○ AERO LB | Sn: L1048007C0-R |
| ○ AERO LC | Sn: L1029148C1-R |
| ○ AERO LC | Sn: L1023007C1-R |
| ○ AERO LC | Sn: L1023022C1-R |
| ○ AERO LC | Sn: L1023028C1-R |
| ○ MAT | Sn: L1036004A0 |
| ○ MAT | Sn: L1040028A0 |
| ○ MAT | Sn: L1040032A0 |
| ○ MAT | Sn: L1040039A0 |
| ○ LSA3 | Sn: L1038956F1-R |
| ○ LSA4 | Sn: M103S019-B0 |

Internal max frequencies: 300MHz

Power supply:

- AC/DC adapter Switchbox, FDF0453-A 100-240VAC, 1.2A, 50-60Hz, 18-24VDC, 2.50-1.88A, sn: none.
 - AC/DC adapter VPELECTRONIC, A2-50S18R-V 100-240VAC, 1.5A, 50-60Hz, 24VDC, 2.08A, sn: none.
 - AC/DC adapter MEANWELL, GS40A24-P1J 100-240VAC, 1.0A, 50-60Hz, 24VDC, 1.67A, sn: none.
- Measurement performed with three power supplies, worst case presented followings tests in this report.

○ **Input/output:**

- 1 x Power supply 24VDC
- 1 x Synchro
- 1 x LAN
- 1 x USB
- 1 x RS-232
- 1 x GPIO
- 1 x Extension
- 4 x RF output SMA

○ **Cables:**

- 1 x Power supply 2 wires unshielded, length: 1m until adapter.
- 1 x Synchro, 2 wires unshielded, length: 1m
- 1 x LAN, shielded cable, length: 5m connected to laptop by switch.
- 1 x USB, shielded cable, length: 2m
- 1 x RS-232, LAN cable shielded with adaptor, length: 3m
- 1 x GPIO, 8 wires unshielded, length: 1m
- 1 x Extension, 10 wires unshielded, length: 1m
- 4 x RF output SMA, BNC cable with 6 ferrites reader side shielded, length: 3m
- 1 x RF output LSA3 antenna, BNC cable with 6 ferrites reader side shielded, length: 6m
- 1 x RF output LSA4 antenna, BNC cable with 6 ferrites reader side shielded, length: 3m

● **Auxiliaries equipment used during test:**

- 1 x Laptop DELL Vostro 1500 with its power supply
- 1 x LAN switch with its power supply
- 1 x TAGSYS - RFID tag (ISO 15693)

The EUT exercise program used during radiated and conducted testing was exercised the reader in a manner similar to a typical use.

The test program permits the continuous reading of a RFID tag.

Software: TAGSYS Explorer v1.4.018880

Power output: 5W

Multiplexer: YES (Each RF channel ON independently, never 4 together)

No equipment modification has been necessary during testing.

1.4. Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4-2009, FCC Part 15 Subpart C.

Radiated testing was performed at an antenna to EUT distance of 10 meters. During testing, all equipment's and cables were moved relative to each other in order to identify the worst case set-up.

1.5. Test facility

Tests have been performed from March 21st to 29th, 2011.

This test facility has been fully described in a report and accepted by FCC as compliant with the radiated and AC line conducted test site criteria in ANSI C63.4-2009 in a letter dated March 25th, 2008 (registration number 94821).

This test facility has also been accredited by COFRAC (French accreditation authority for European Union test lab accreditation organization) according to NF EN ISO/IEC 17025, accreditation number 1-1633 as compliant with test site criteria and competence in 47 CFR Part 15/ANSI C63.4 and EN55022/CISPR22 norms for 89/336/EEC European EMC Directive application. All pertinent data for this test facility remains unchanged.