PRODUCT DATASHEET

# MDR-4330AT Desktop Reader

Product number:
WPR000009 (W/O AC ADAPTER, W/O External Antenna Port)
WPR000010 (W/AC ADAPTER, W/O External Antenna Port)
WPR000011 (W/O AC ADAPTER, W/External Antenna Port)
WPR000012 (W/AC ADAPTER, W/External Antenna Port)

The MDR-4330AT is a desktop reader that produces a 3D reading surface capable of reading various types of deeply stacked PJM RFID tags with 100% data accuracy.


Orthopedic implant tracking | Blood transfusion & Samples | Transportation & Warehousing | Manufacturing | Sample tube/ Specimens

## Applications

The MDR-4330AT is suited to any application where tightly packed tagged items or items containing liquids need to be written to, or read with 100% data accuracy at high speed, irrespective of their orientation. Example applications include, diamond/precious gem tracking, pathology sample tube tracking and blood donation tracking where stacking, high speed and 100% data accuracy are essential.

## Features

- **150 tags per second**
  Industries highest identification rates of up to 150 tags per second.

- **100% data accuracy***
  PJM's 32-bit CRC mechanism ensures 100% accuracy of the data.

- **Stackability**
  Encode any number of closely stacked items at high speed.

- **Multiple interfaces**
  Supports USB & Ethernet.

- **3D RFID field**
  True 3D reading field means items can be presented in any orientation.

- **Fan assisted cooling system**
  Fan assisted cooling of the reader guarantees that the reading surface temperature remains cool, a feature critical in medical environments where temperature sensitive products such as pharmaceuticals, biological agents or blood products need to be tracked.

- **Handheld antenna option**
  There is the option of adding a tethered hand held antenna to extend the reading capabilities of the MDR-4330AT beyond the reader surface.

*Readability in specific environments may vary. The 100% accuracy refers to the data on the tag, not a guarantee of reading the data in all situations.

| Electrical | |
|---|---|
| Operating frequency | 13.56 MHz |
| ISO/IEC compliance | 18000-3 Mode 2 |
| Command data rate | 424 kbit/s |
| Reply data rate per channel | 106 kbit/s |
| Number of PJM reply channels | 2 |
| Number of axes | 3 |
| Operating range | Marked read/write area |
| Power supply | 12VDC |
| DC power supply connector | 2.5 mm DC centre pin positive |
| Mains input | 100 - 240 VAC @ 50/60 Hz |
| Mains connector | IEC 320/C14 |
| Power consumption | 35W |

| Performance | |
|---|---|
| RFID field produced | 3D |
| Fan cooled | Safe for use with temperature sensitive products |
| Identification rate (tags/sec) | Up to 150 tags/s |
| Identify & read 96-bit data | up to 100 tags/s |
| Identify, write & read back 96 bits of data | up to 50 tags/s |

| Host | |
|---|---|
| Host interface | USB and Ethernet (CAT 5/6) |
| Host computer | Windows 10 or later |

| Environmental | |
|---|---|
| Operation environment | Indoor use |
| Temperature range | 0°C to +45°C |
| Humidity | 10% to 80% (non-condensing) |

| Mechanical | |
|---|---|
| External dimensions (L x W x H) | 440 x 291 x 61 mm |
| Net weight | 5.2 Kg |
| Net volume | 0.008 m³ |
| Shipping dimensions (L x W x H) | 525 x 355 x 155 mm |
| Shipping weight | 6.3 Kg |
| Shipping volume | 0.03 m³ |

| General | |
|---|---|
| Performs read and write operations | Yes |
| No manual calibration needed | Yes |
| Automatic tuning | Yes |
| Readers can be placed in close proximity to one another | Yes |
| RFID field unaffected by liquids | Yes |
| Tags available for use with as little as 0.1 mm separation | Yes |
| RFID tags can be presented in any orientation | Yes |
| Safe to use in medical applications | Yes |
| Option of adding a tethered handheld antenna | Yes |

**Certifications**

Please contact your nearest SATO sales representative regarding certifications for your region/country.

**Option**

External antenna port

**Dimensions (mm)**

Back view


Side view


*1 The communication range provided above is based on actual measurements taken at our facilities using our equipment (stationary type, 1W equipment) and is not a guarantee of actual performance.

① RFID products contain sensitive semiconductor chips that may cause their read performance to vary substantially depending on the environment where they are used.

② Field testing for RFID solutions is required in the customer's actual operating environment prior to implementation.

③ As RFID solutions are built based on field testing, any subsequent changes to tagging positions and other conditions may affect their intended performance