

READER PRODUCTS

Intellitag® 500 Series

UHF OEM Reader Products

Features

- Fixed reader/programmer board set designed for integration into OEM controller or as option to Intermec 2100 UAP
- Provides RFID data collection integrated into local area network when configured as option to Intermec 2100 UAP
- Spread-spectrum frequency-hopping RFID reader/programmer board set coexists with RF data collection network
- Wired or wireless connection through 2100 UAP
- Rugged industrial environment design
- Unlicensed RFID readers and tags using Intellitag 500-series UHF OEM products can be integrated for use in applications that require read ranges up to 7 meters (22.96 ft)



Intellitag 500 reader/programmer board sets are offered for integration into radio frequency identification (RFID) solutions requiring read range, multitag sort, read/write, and memory capacity not provided by older, less flexible proximity technology. The fixed reader/programmer board set is designed as an option to the Intermec 2100 Universal Access Point (UAP), but it may be integrated into other microcontroller-based systems.

Readers can be programmed for read only or read/write operation. A powerful anticollision algorithm allows up to 50 tags per second to be scanned, regardless of the number of tags in the read zone.

Intermec's Amtech Systems Division, with over a decade of success designing, producing, installing, and supporting RFID solutions worldwide, is developing a range of Intellitag 500 RFID inserts, tags, scanners, and programmer subsystems for availability beginning in 1999.

These products are available to Intermec systems integration partners in established transportation and security access RFID applications, as well as growing applications in supply chain management, retail operations, manufacturing, logistics, health care and many more.

Amtech Systems Division

Intellitag® 500 Series UHF OEM Reader Products

COMMUNICATIONS

Frequency

Fixed reader/programmer board set only: 915 MHz unlicensed FCC spread-spectrum frequency-hopping

Intermec 2100 UAP with fixed reader/programmer module: 915 MHz unlicensed FCC spread-spectrum frequency-hopping

Interfaces

Fixed reader/programmer board set: serial interface

2100 UAP:

10BaseT

10Base2

(Optional) 900 MHz, 2.45 GHz Open Air™, IEEE 802.11 Direct Sequence, or IEEE 802.11 Frequency Hopping RFLAN

SOFTWARE FEATURES

Protocols

Fixed reader/programmer board set: Intermec ASD interface specification

Intermec 2100 UAP with fixed reader/programmer module: available software fully supports the ANS NCITS 256-1999 for item management

Data Rate

Read 8 bytes of data from tag in less than 12 ms

Write a single byte of data to a tag in less than 25 ms

Multitag Access

User-specified groups within a population of tags can be selected, read from, and/or written to using multitag access commands.

POWER REQUIREMENTS

Fixed Reader/Programmer Board Set Only

8 VDC

2100 UAP

100-240 VAC auto-ranging

ENVIRONMENTAL

Operating Temperature

0°C to +50°C (+32°F to +122°F)

Storage Temperature

-20°C to +70°C (+4°F to +158°F)

OPTIONS

General-Purpose Input/Output Circuits (reader/programmer)

Interfaces for input and output circuits to monitor sensors and control other devices

READ/WRITE PERFORMANCE

Read/write performance varies with RFID inserts, tags, and antenna configurations.

Sample dual antenna configuration is illustrated below.

Read/Write Ranges

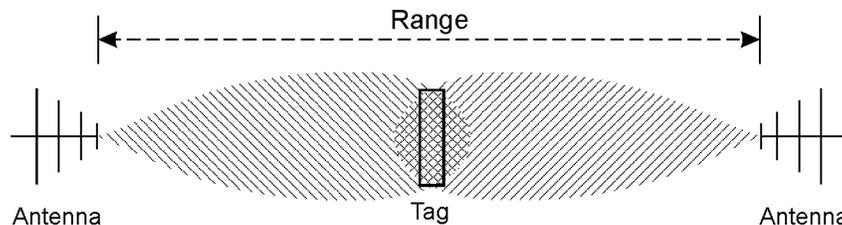
Write ranges are approximately 70% of the effective read ranges of the RFID insert and tag.

Read Range Examples

Ranges are listed for RFID insert and tag using frequency-hopping FCC unlicensed operation reader and dual antennas.

6 Meters (19.68 ft): 915 MHz 16 x 100 x .4 mm (.63 x 3.94 x .016 in) RFID insert

7 Meters (22.96 ft): 915 MHz 33 x 105 x 3 mm (1.30 x 4.13 x .12 in) tag



A Portal with Dual Antennas

AA-0001

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