



ALR-9650

SMART ANTENNA RFID READER

Alien® ALR-9650 combines reader and circular polarized antenna into a single, simple-to-use, inexpensive and low-profile solution. A second antenna port enables 2-antenna applications.



- Simple, low-profile solution for single antenna applications
- Integrated, high-performance circular antenna — only 9" x 9"
- POE eliminates cost of AC power drop
- EPC Gen 2 Dense Reader Interoperable
- Second antenna port enables 2-antenna applications
- Manageable and upgradable

| Benefit | Enabled By: | What does this mean to me? |
|--------------------------------------|--|---|
| Ease of Use | <ul style="list-style-type: none"> • Integrated antenna • Alien Reader Protocol • Smart reader/autonomous mode | <ul style="list-style-type: none"> • Easy to set up and deploy • No additional costly controllers • Less maintenance and overhead |
| Low set-up and low-running cost | <ul style="list-style-type: none"> • Alien Reader Control Architecture & Ruby • Power-over-Ethernet (PoE) • Remote firmware management | <ul style="list-style-type: none"> • Minimizes network infrastructure • Can be set up in areas with no power • Small footprint for tidy implementation |
| Deployable in commercial environment | <ul style="list-style-type: none"> • Small footprint • Integrated antenna • Few cables required (e.g. no power cable) • Blends into commercial environment | <ul style="list-style-type: none"> • Space efficient • Usable in highly visible locations • No additional housing required |

Simple, Low Profile, Gen 2 RFID Solution

With its integrated antenna, Power-Over Ethernet (POE) and out-of-the-box software compatibility, the ALR-9650 Gen 2 RFID Reader is a simple, low profile solution that enables new users to start reading tags and developing solutions immediately.



Easy to Integrate

The ALR-9650 communicates via the popular Alien Reader Protocol, with key RFID platform support including Microsoft® BizTalk RFID, OatSystems, Oracle®, Xterprise and others.

A well-documented SDK featuring .NET, Java and Ruby libraries enables easy development of custom interfaces to control the reader if desired. The user friendly Alien RFID Gateway software enables the user to begin solution development immediately.

Low System Cost

The cost of installing AC power can sometimes rival the cost of the reader. The ALR-9650's POE capability allows power to be delivered over properly-equipped local area networks, eliminating expensive AC wiring installation. A POE power injector is provided to supply power if POE is not available. The combination of this capability with the elimination of the external antenna significantly reduces the cost and complexity of installing an RFID read point.

Small Footprint

The ALR-9650 takes up little space; at only 9 inches square it uses less than half the real-estate of a typical reader and antenna system. Combined with the elimination of messy cables for antennas and power, the ALR-9650 easily fits into a variety of tight spaces and enables neat and tidy placement when it is visible to consumers or the general public.



ALR-9650 Smart Antenna RFID Reader

Complete, Easy-to-manage, Integrated-Antenna RFID Solution

| Model Number | ALR-9650 |
|--------------------------------|--|
| Supported RFID Tag Protocols | EPC Gen 2; ISO 18000-6c |
| Reader Protocol | Alien Reader Protocol, firmware upgradable |
| LAN Protocols | TCP/IP, NTP, DNS, DHCP, SNMP |
| Dense Reader Management | Dense Reader Mode, Auto event triggering and event management |
| Frequency | 902.75 MHz – 927.25 MHz |
| Channels | 50 |
| Channel Spacing | 500 KHz |
| RF Power | Max; 4 watts EIRP with internal antenna |
| Power | 24 VDC supplied via an AC/DC power converter or POE (IEEE 802.3af). Unit ships with a Power Sourcing Equipment (PSE) module |
| Communications | LAN TCPI/IP (RJ-45), RS-232 (DB-9 F) |
| Antennas | One internal, one external port with RTNC connector |
| General Purpose Inputs/Outputs | 2 inputs, 2 outputs, TTL compatible |
| Dimensions | (L) 9.13" x (W) 9.0" x (D) 2.0" |
| Weight | 1.0 kg (2.2 lb) max |
| Operating Temperature | -20°C to +55°C (-4°F to +131°F) |
| LED Indicators | Power, LAN Link, LAN Active, RF On, Read, Fault |
| Software SDK | Java, .NET, Ruby APIs |
| Vibration | MIL STD 810 514.5C-3 Composite wheeled vehicle profile |
| Shock | 40 G's Acceleration, 11 ms duration, sawtooth waveform |
| Compliance Certification | Emissions: FCC Part 15 Safety: cTUVus tested to: CAN/CSA–C22.2 No.60950-1-03, and UL 60950-1:2003 R7.06 specifications IEC 60950-1 and EN60950-1 |
| Warranty | 12 months / 2 Years* |



Industry-Leading Reliability

Enjoy the best in technology with confidence. Alien's world-class readers now come standard with a two-year warranty. Contact your local Alien representative to inquire about specifics.





ALR-9650 Smart Antenna RFID Reader

Complete, Easy-to-manage, Integrated-Antenna RFID Solution

Models by Country

| Model Number | Countries | Frequency | Transmit Channels | Channel Spacing | RF Power | Compliance Certification |
|--------------|--------------------------------|-------------------|-------------------|-----------------|----------|---|
| ALR-9650 | USA, Canada, Mexico | 902 - 928 MHz | 50 | 500 KHz | 4W EIRP | Emissions: FCC Part 15 Safety: cTUVus tested to: CAN/ CSA-C22.2 No.60950-1-07+AI:2011 |
| ALR-9650-CHN | China, Singapore | 920 - 925 MHz | 16 | 250 KHz | 2W EIRP | Emissions: CMII Safety: IEC 60950-1:2005 2nd edition & CCC |
| ALR-9650-KR2 | South Korea | 916.7 - 920.9 MHz | 6 | 600KHz | 4W EIRP | KC |
| ALR-9650-RSA | South Africa | 915.4 - 919 MHz | 17 | 200 KHz | 4W EIRP | NRCS, ICASA |
| ALR-9650-TAI | Taiwan | 922 - 928 MHz | 12 | 500KHz | 1W ERP | NCC |
| ALR-9650-WR1 | Australia, Hong Kong, Thailand | 920 - 925 MHz | 8 | 500 KHz | 4W EIRP | ACMA |

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HANDLING PRECAUTIONS Observe standard handling practices to minimize ESD.

DISCLAIMER Application recommendations are guidelines only - actual results may vary and should be confirmed. This is a general purpose product not designed or intended for any specific application.

This product is covered by one or more of the following U.S. patents: 7716208, 7716160, 688206, 7671720, 7659822, 7619531, 7615479, 7598867, 7580378, 7576656, 7562083, 7561221, 7559486, 7559131, 7554451, 7411503, 7385284, 7377445, 7364084, 7353598, 7342490, 7324061, 7321159, 7301458, 7295114, 7288432, 7265675, 7262686, 7215249, 7214569, 7199527, 7193504, 7173528, 7172910, 7172789, 7141176, 7113250, 7101502, 7080444, 7070851, 7068224, 7046328, 6998644, 6988667, 6985361, 6980184, 6970219, 6952157. Other patents pending.

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