Astra
Enterprise UHF RFID Reader

Astra is an easy to install, unobtrusive, integrated reader/antenna designed for office and commercial environments. Driven by ThingMagic's powerful Mercury5e UHF RFID reader module, Astra's Power over Ethernet (PoE) and WiFi options allow for flexible, low cost, single cable installations. With full support for ThingMagic's enterprise-class MercuryOS software, Astra blends in well with corporate IT infrastructures and office lay outs.

### Ordering Information

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Order Code</th>
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<tbody>
<tr>
<td>Astra Reader with AC power &amp; Wi-Fi - (North America)</td>
<td>AS-NA-WIFI</td>
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<tr>
<td>Astra Reader POE - (North America)</td>
<td>AS-NA-POE</td>
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<tr>
<td>Astra Reader with AC power &amp; Wi-Fi - (Europe)</td>
<td>AS-EU-WIFI</td>
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### Tag / Transponder Protocols

**RFID Air-Interface Protocol**: EPCglobal Gen2 (ISO 18000-6C) with Anti-Collision, DRM, and advanced anti-jamming

**RF Interface**: Integrated 6dbi, monostatic, circularly polarized antenna, plus 1 RP TNC connector to support optional external antenna

**RF Power Output**: Separate read and write levels, configurable from 5 dBm to 30 dBm (1 W), +/- 1.0 dBm accuracy*

**Frequency**: Hop table with up to 62 entries, configurable in 500kHz steps, accommodating the following ranges: FCC 902-928 MHz, ETSI 865.6-867.6 MHz, MIC 910-914 MHz

### Data/Control Interface

**Connectors**: 10/100 Base-T Ethernet interface, Serial RS232 port, 12-pin screw terminal connector

**Wireless**: 802.11 b/g (optional) WEP 40-bit and 104-bit keys; WPA & WPA2 with TKIP and AES algorithms with preshared keys or EAP-TLS

**Indicators and GPIOs**: 1 LED indicator; Opto-isolated GPIOs; 4 Inputs & 4 Outputs

**Physical**

- **Dimensions**: 26 cm L x 26 cm W x 7.6 cm H (10.2 in L x 10.2 in W x 3.0 in H)

### Power

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
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<tr>
<td>Power Over Ethernet</td>
<td>Power over Ethernet 802.3af in both modes A and B (Supports 100m cable)</td>
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<tr>
<td>External DC Power (optional)</td>
<td>10-30 VDC supply voltage. Maximum DC power: 15 W</td>
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</table>

### Environment

- **Operating Temp**: -20C to +60C
- **Storage Temp**: -40C to +85C
- **Humidity**: Relative humidity 0-90% non-condensing

### Architecture

- **Processor**: Intel XPF420 Network Processor
- **DRAM Memory**: 64MB
- **Flash Memory**: 32MB
- **Tag Buffer**: 65,000 tags

### Performance

- **Max Tag Read Rate**: Over 190 tags/second
- **Max Tag Read Distance**: Over 30 feet (9 m) with integrated 6 dBd antenna (36 dBm EIRP)
- **Max Receive Sensitivity**: -65 dBm at full transmit power with typical antenna**

### MercuryOS features

- **Networking**: Cisco-certified DHCP & DNS-based configuration and firmware management, TCP/IP networking stack
- **Security**: SSL/SSH-based security
- **Web based applications**: Configuration and Monitoring from a web browser; HTTP/HTTPS
- **Protocol**: Reader Query Language (RQL) and MercuryOS C API
- **Communication**: Supports thread safe local applications, and remote applications on Windows and Linux (x86 and ARM)

### Regulatory & Safety

- **Regulatory**: FCC 47 CFR Ch. 1 Part 15; Industrie Canada RSS-210; ETSI EN 302 208 V1.1.1 and V1.2.1 (Planned); ETSI EN 300 220 V2.1.1 (Planned)
- **Other**: ROHS Compliant, UL Listed

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*Maximum power may have to be reduced to meet regulatory limits, which specify the combined effect of the module, antenna, cable, and enclosure shielding of the integrated product.

** Receive sensitivity will improve as transmit power is reduced.

Specifications subject to change without notice.
Develop

Create RFID-enabled solutions
using industry-standard tools

Deploy

Enable rapid deployment and reliable
operation of RFID solutions within a wide
variety of new and existing environments

Optimize

Maximize productivity, improve ROI,
and lower operating costs