



### HSR<sup>®</sup> FEATURES

- ✓ Fully integrated UHF RFID system with built in antenna
- ✓ Battery powered with optional solar panel for off-grid deployments
- ✓ Communication over Bluetooth or Cellular service
- ✓ Local mesh network capabilities
- ✓ Additional RFID antenna port
- ✓ Water Resistant – built for the elements
- ✓ OTA firmware upgrade capability
- ✓ On-site and remote diagnostic capabilities

# SPECIFICATIONS

## PHYSICAL SPECIFICATIONS

Dimensions	17.5" x 6.5" x 2.25"
Weight	9.2 lb.
Case Material	Poly-acetal plastic
Mounting	VESA 100mm pattern on back plate with m5 studs
Physical Interfaces	IP67 Charging connector port RP-TNC Antenna Expansion Port Power Button Bluetooth Button RGB Indicator LEDs

## COMMUNICATIONS

Bluetooth	<ul style="list-style-type: none"> <li>Bluetooth Spec v4.2,</li> <li>BLE</li> </ul>
Cellular	<ul style="list-style-type: none"> <li>4G</li> <li>Currently Supported Networks                             <ul style="list-style-type: none"> <li>AT&amp;T</li> <li>TMobile</li> <li>US Cellular</li> </ul> </li> </ul>
XBee Mesh	<ul style="list-style-type: none"> <li>2.4GHz mesh</li> <li>Parent / child configuration</li> </ul>
WLAN (Future)	802.11 b/g/n

## ACCESSORIES

Standard	<ul style="list-style-type: none"> <li>VESA 1-3" Diameter Pole Clamp Mount</li> <li>Charger</li> </ul>
Optional	<ul style="list-style-type: none"> <li>30W Solar Panel + Pole Mount</li> <li>Secondary Antenna + Cable</li> <li>Additional VESA 1-3" Diameter Pole Clamp Mount</li> </ul>

## UHF RFID PERFORMANCE SPECIFICATIONS

Transmission Power	Up to 30 dBm (1W)
Internal Antenna Gain	<ul style="list-style-type: none"> <li>6.8 dBiC (Typical), 7.2 dBiC (Max)</li> <li>5.1 dBiL (At center band)</li> </ul>
Internal Antenna Polarization	Circular (RHCP)
Radiation Pattern Cross Section	Elliptical
Internal Antenna Beamwidth	<ul style="list-style-type: none"> <li>40° (Azimuth)</li> <li>90° (Elevation)</li> </ul>
Internal Antenna Operating Frequency	902-928 MHz
Air Interface Protocol	EPCglobal Gen 2 (ISO 18000-6C)
Maximum Tag Read Rate	750 Tags / Second
Consistent Direct Reading Distance	18+ feet <sup>1</sup>
Maximum Direct Read Distance	40 feet <sup>1</sup>
Consistent Width Reading	15 feet in width at 7.5 feet out <sup>1,2</sup>

- Distances are dependent on tag used, surrounding conditions, and reader configuration
- Widths are expandable using additional units or secondary antennas

## POWER

Battery Chemistry	Lithium Ion Array
Power Capacity	20800 mAh
Charging Input Methods	<ul style="list-style-type: none"> <li>12V DC charger (Provided)</li> <li>30W Solar Panel (Optional)</li> </ul>
Estimated Runtimes	<ul style="list-style-type: none"> <li>72 hours in 'Monitoring Mode'</li> <li>28 hours in 'Rapid Counting Mode'</li> </ul>
Charging Modes	<ul style="list-style-type: none"> <li>Up to 2A input</li> <li>Variable charging rates dependent on input, optimized for solar deployments</li> </ul>