High performance cloud-managed 802.11ac wireless
The Cisco Meraki MR72 is a three-radio, cloud-managed 2x2 MIMO 802.11ac access point. Designed for general purpose next-generation deployments in harsh outdoor locations and industrial indoor conditions, the MR72 provides performance, security, and manageability.

The MR72 provides a maximum 1.2 Gbps data rate with concurrent 802.11ac and 802.11n 2x2:2 MIMO radios, and security and spectrum visibility via a third radio dedicated to 24x7 WIDS/WIPS and automated RF optimization. An integrated Bluetooth low energy (BLE) radio delivers Beacon functionality and BLE device scanning.

The combination of cloud management, 802.11ac, full-time RF environment scanning, and an integrated Bluetooth technology delivers the high throughput, reliability, and flexibility required by the most demanding business applications like voice and high-definition streaming video, both today and tomorrow.

MR72 and Meraki cloud management: A powerful combo
The MR72 is managed through the Meraki cloud, with an intuitive browser-based interface that enables rapid deployment without training or certifications. Since the MR72 is self-configuring and managed over the web, it can even be deployed at a remote location without on-site IT staff.

The MR72 is monitored 24x7 via the Meraki cloud, which delivers real-time alerts if the network encounters problems. Remote diagnostics tools enable real-time troubleshooting over the web, meaning multi-site, distributed networks can be managed remotely.

The MR72’s firmware is always kept up to date from the cloud. New features, bug fixes, and enhancements are delivered seamlessly over the web, meaning no manual software updates to download or missing security patches to worry about.

Product Highlights
- Ideal for outdoor and industrial indoor environments
- 2x2:2 802.11ac, 1.2 Gbps aggregate dual-band data rate
- 24x7 real-time WIPS/WIDS and spectrum analytics via dedicated third radio
- Integrated Bluetooth low energy Beacon and scanning radio
- Forms point-to-point links with optional sector antennas
- Self-healing, zero-configuration mesh
- Integrated enterprise security and guest access
- Application-aware traffic shaping
- Self-configuring, plug-and-play deployment
Features

Aggregate data rate of up to 1.2 Gbps
A 5 GHz 2x2:2 802.11ac radio and a 2.4 GHz 2x2:2 802.11n radio offer a maximum combined aggregate dual-band data rate of 1.2 Gbps. Technologies like transmit beamforming and enhanced receive sensitivity allow the MR72 to support a higher client density than typical enterprise-class access points, resulting in fewer required APs for a given deployment. Band steering further enhances overall throughput, by moving 5 GHz-capable clients to the 5 GHz radio, maximizing the capacity in the 2.4 GHz range for older 802.11b/g clients.

Rugged industrial design
The MR72 is designed and tested for salt spray, vibration, extreme thermal conditions, shock and dust and is IP67 rated, making it ideal for extreme environments. Despite its rugged design, MR72 has a low profile and is easy to deploy.

Third radio dedicated to security and RF optimization
The MR72’s sophisticated, dedicated dual-band third radio scans the environment continuously, characterizing RF interference and containing wireless threats like rogue access points. No more need to choose between wireless security, advanced RF analysis, and serving client data: a dedicated third radio operates without any impact to client traffic or throughput.

Bluetooth low energy Beacon and scanning
An integrated Bluetooth low energy radio provides seamless deployment of BLE Beacon functionality and effortless visibility of BLE devices within range of the AP. The MR72 enables the next generation of location-aware engagement right out of the box.

Automatic cloud-based RF optimization
The MR72’s sophisticated, automated RF optimization means that there is no need for the dedicated hardware and RF expertise typically required to tune a wireless network. The real-time full-spectrum RF analysis data collected by the dedicated third radio is continuously fed back to the Meraki cloud. The Meraki cloud then automatically tunes the MR72’s channel selection, transmit power, and client connection settings for optimal performance under the most challenging RF conditions.

Secure wireless environments using 24x7 Air Marshal
No longer choose between a wireless intrusion prevention system (WIPS) and serving client data: thanks to the dedicated third radio, Air Marshal, a highly optimized built-in WIPS, scans continuously for threats and remediates them as commanded, all without disrupting client service. Alarms and optional auto-containment of rogue APs are configured via flexible remediation policies, ensuring optimal security and performance in even the most challenging wireless environments.

Integrated enterprise security and guest access
The MR72 features integrated, easy-to-use security technologies to provide secure connectivity for employees and guests alike. Advanced security features such as AES hardware-based encryption and WPA2-Enterprise authentication with 802.1X and Active Directory integration provide wire-like security while still being easy to configure. One-click guest isolation provides secure, Internet-only access for visitors. Our policy firewall (Identity Policy Manager) enables group or device-based, granular access policy control.

Application-aware traffic shaping
The MR72 includes an integrated layer 7 packet inspection, classification, and control engine, enabling you to set QoS policies based on traffic type. Also included is integrated support for Wireless Multi Media (WMM), 802.1p, and DSCP. Prioritize your mission critical applications, while setting limits on recreational traffic, e.g., peer-to-peer and video streaming.

High performance mesh
The MR72’s advanced mesh technologies, like multi-channel routing protocols and multiple gateway support, make it possible to cover hard-to-wire areas and improve network resilience. In the event of a switch or cable failure, the MR72 will automatically revert to mesh mode.

Self-configuring, self-optimizing, self-healing
When plugged in, the MR72 automatically connects to the Meraki cloud, downloads its configuration, and joins the appropriate network. The MR72 then self-optimizes, determining the ideal channel, transmit power, and client connection parameters. As necessary, it will also self-heal, responding automatically to switch failures and other errors.

Recommended Use Cases

Outdoor coverage for high client-density corporate campuses, educational institutions, metro Wi-Fi, and parks
- Provide high-speed access to a large number of clients
- Point-to-multipoint mesh

Indoor coverage for industrial areas (e.g., warehouses, manufacturing facilities)
- Reliable coverage for scanner guns, security cameras, and POS devices
- High speed-access for iPads, tablets and laptops

Zero-touch point-to-point links
- Build a long-distance bridge between two networks
- Extend hotspot networks via mesh while simultaneously serving clients

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### Specifications

#### Radios

- One 2.4 GHz 802.11b/g/n, one 5 GHz 802.11a/n/ac, one dedicated for dual-band WIPS & spectrum analysis, and one dedicated to Bluetooth low energy (2.4 GHz)
- Concurrent operations of all radios
- Max data rate 1.2 Gbit/s

 Operating bands:

<table>
<thead>
<tr>
<th>FCC (US)</th>
<th>CE (Europe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.412-2.484 GHz</td>
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</tr>
<tr>
<td>5.150-5.250 GHz (UNII-1)</td>
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</tr>
<tr>
<td>5.725 -5.825 GHz (UNII-3)</td>
<td>5.250-5.350 GHz (UNII-2)</td>
</tr>
<tr>
<td></td>
<td>5.470-5.600, 5.660-5.725 GHz (UNII-2e)</td>
</tr>
</tbody>
</table>

#### 802.11a and 802.11n Capabilities

- 2 x 2 multiple input, multiple output (MIMO) with two spatial streams
- Maximal ratio combining (MRC)
- Beamforming
- 20 and 40 MHz channels (802.11n), 20, 40, and 80 MHz channels (802.11ac)
- Packet aggregation

#### Power

- Power over Ethernet: 37 - 57 V (802.3af compatible)
- Power consumption: 13.87 W max (802.3af)

#### Mounting

- Mounts to walls and vertical poles.
- Mounting hardware included

#### Physical Security

- Security screw included
- Kensington lock hard point
- Anti-tamper cable bay
- Concealed mount plate

#### Environment

- Operating temperature: -40 °F to 140 °F (-40 °C to 60 °C)
- IP67 environmental rating

#### Physical Dimensions

- 10.1” x 6.22” x 3.3” (256 mm x 158 mm x 83 mm) including mounting bracket
- Weight: 3.1 lbs. (1.4 kg)

#### Interfaces

- 1 x 100/1000Base-T Ethernet (RJ45)
- Four external N-type female antenna connectors

#### Quality of Service

- Advanced Power Save (U-APSD)
- DSCP
- 802.1p

#### Regulatory

- RoHS

#### Warranty

- 1 year hardware warranty with advanced replacement included

#### Ordering Information

- MR72-HW:  Meraki MR72 Cloud Managed 802.11ac AP
- MA-INJ-4-XX: Meraki 802.3at Power over Ethernet Injector (XX = US/EU/UK/AU)
- MA-ANT-20: Meraki Dual-Band Omni Antennas
- MA-ANT-21: Meraki 5 GHz Sector Antenna
- MA-ANT-23: Meraki 2.4 GHz Sector Antenna
- MA-ANT-25: Meraki Dual-Band Patch Antenna

Note: Meraki Enterprise license required.
## RF Performance Table

<table>
<thead>
<tr>
<th>Operating Band</th>
<th>Operating Mode</th>
<th>Data Rate</th>
<th>TX Power</th>
<th>RX Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.4 GHz</td>
<td>802.11b</td>
<td>11 Mb/s</td>
<td>19 dBm</td>
<td>-84</td>
</tr>
<tr>
<td>2.4 GHz</td>
<td>802.11g</td>
<td>54 Mb/s</td>
<td>17 dBm</td>
<td>-70</td>
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<tr>
<td>2.4 GHz</td>
<td>802.11n (HT20)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MCS0/8/16 HT20</td>
<td></td>
<td>18 dBm</td>
<td>-85</td>
</tr>
<tr>
<td></td>
<td>MCS7/15/23 HT20</td>
<td></td>
<td>15 dBm</td>
<td>-67</td>
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<tr>
<td>2.4 GHz</td>
<td>802.11n (HT40)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MCS0/8/16 HT40</td>
<td></td>
<td>18 dBm</td>
<td>-83</td>
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<td></td>
<td>MCS7/15/23 HT40</td>
<td></td>
<td>15 dBm</td>
<td>-63</td>
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<tr>
<td>5 GHz</td>
<td>802.11a</td>
<td>6 Mb/s</td>
<td>20 dBm</td>
<td>-92</td>
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<tr>
<td></td>
<td>54 Mb/s</td>
<td></td>
<td>18 dBm</td>
<td>-73</td>
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<td>5 GHz</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>MCS0/8/16 HT20</td>
<td></td>
<td>20 dBm</td>
<td>-90</td>
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<td>-70</td>
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<tr>
<td></td>
<td>MCS0/8/16 HT40</td>
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<td>20 dBm</td>
<td>-87</td>
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<td></td>
<td>MCS7/15/23 HT40</td>
<td></td>
<td>17 dBm</td>
<td>-68</td>
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<tr>
<td>5 GHz</td>
<td>802.11ac (HT80)</td>
<td>VHT-MCS50/8/16 HT80</td>
<td>20 dBm</td>
<td>-84</td>
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<tr>
<td></td>
<td>VHT-MCS9/15/23 HT80</td>
<td></td>
<td>15 dBm</td>
<td>-58</td>
</tr>
</tbody>
</table>

* Maximum hardware capability shown above. Transmit power is configurable in increments of 1 dB and is automatically limited to comply with local regulatory settings.