

Cisco IEC6400 Edge Compute Appliance

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The Cisco® IEC6400 Edge Compute Appliance allows a Cisco Ultra-Reliable Wireless Backhaul (Cisco URWB) network to scale to hundreds of Cisco Catalyst™ Industrial Wireless (IW) devices, supporting up to 40 Gbps in overall capacity.

Product overview

[Cisco Ultra-Reliable Wireless Backhaul \(Cisco URWB\)](#) is a wireless technology that enables you to connect moving assets or extend your network where running fiber isn't feasible or affordable. It delivers high availability, low latency, and zero packet loss with seamless handoffs. Cisco URWB operates in unlicensed spectrum, deploys like Wi-Fi, and gives you full control of your network.

The Cisco IEC6400 Edge Compute Appliance combines the best from Cisco URWB technology with Cisco's leading computing platforms. Leveraging the capabilities of the Cisco UCS® C220 M6 Rack Server, this appliance allows you to extend the benefits of Cisco URWB to large-scale, high-capacity-demanding wireless networks. It works as an aggregation point for all the MPLS-over-the-wireless communications in networks with up to hundreds of IW devices requiring multi-Gbps aggregated throughput.



Figure 1.
IEC6400 Edge Computing Appliance

Features and benefits

Table 1. Features and benefits

Feature	Benefit
Reliable, fiberlike wireless anywhere	Ultra-reliable, low-latency connectivity for your most demanding applications
Seamless roaming	Seamless handoff with zero packet loss, even when connecting high-speed vehicles
Multipath Operations	Boosts network reliability by duplicating high-priority packets over redundant wireless links
Scalability	Scales up your network, connecting hundreds of devices and supporting up to 40-Gbps aggregated throughput
Redundancy	A secondary appliance can be installed as a backup unit within a system, providing redundancy and automatic fault tolerance
Deploy easily in unlicensed spectrum	Installs like Wi-Fi and operates in unlicensed spectrum
Flexibility	Supports multiple architectures: point to point, point to multipoint, mesh, and mobility

The Cisco IEC6400 Edge Compute Appliance is based on the Cisco UCS C220 M6 Rack Server, which delivers record-breaking performance for space-constrained environments. Learn more about this powerful rack server at <https://www.cisco.com/c/en/us/products/servers-unified-computing/ucs-c-series-rack-servers/ucs-c220-m6-rack-server-ds.html>.

Extended reachability over multiple clusters

Cisco URWB networks can be designed for Layer 2 use cases (such as when connecting automated guided vehicles [AGVs] or autonomous mobile robots [AMRs] on a factory floor) as well as Layer 3 use cases (such as for train-to-trackside communications in subways or railways), allowing the network to scale in size without compromising reliability and availability.

The IEC6400 appliance is a perfect fit in both Layer2 and Layer3 architectures, whenever a dedicated appliance is required to support advanced mesh end capabilities.

When included in Layer 3 architectures, the appliance helps in connecting different clusters of Cisco URWB networks that are separated into different broadcast domains. It acts as the aggregation point for all the Multiprotocol Label Switching (MPLS) tunnels, connecting all portions of the URWB infrastructure across Layer 3 networks or WANs. In this way, roaming across network clusters that belong to different broadcast domains incurs zero handoff time, thanks to the patented URWB make-before-break technology.

This hierarchical architecture allows the network to scale to any size without compromising on performance, providing the same ultra-low latency, high availability, and high throughput.

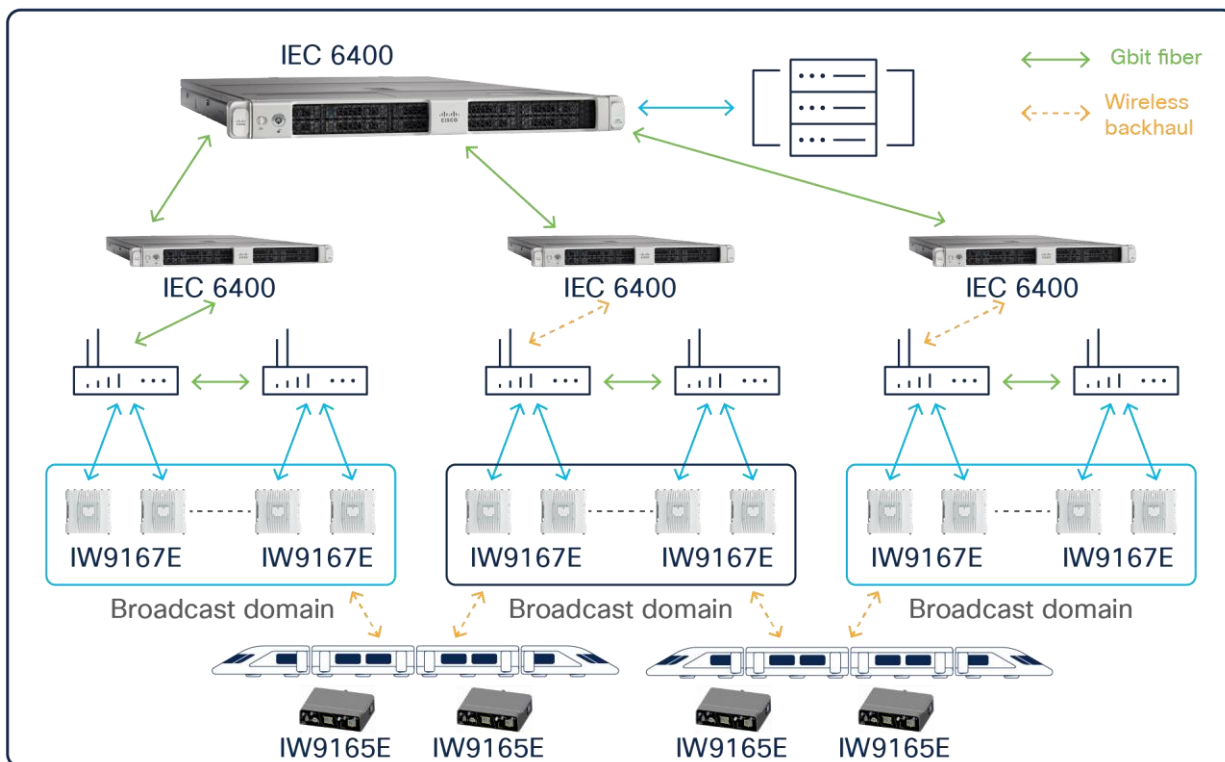


Figure 2.
Layer 3 architecture scheme

Platform compatibility

Table 2. Hardware appliance specifications

Product	Hardware platform
IEC6400 Edge Compute Appliance	Cisco UCS C220 M6 Rack Server Data Sheet

Table 3. Catalyst Industrial Wireless supported devices

Product	Platforms Supported
IW9167E	Cisco Catalyst IW9167E Heavy Duty Access Point
IW9165E	Cisco Catalyst IW9165E Rugged Access Point and Wireless Client
IW9165D	Cisco Catalyst IW9165D Heavy Duty Access Point

Licensing

The Cisco IEC6400 requires a network license to be operational. It must also be attached to a Cisco IoT Operations Dashboard (IOD) subscription.

Table 4. IEC6400 URWB license options

Item	Description	License specification
Network licenses		
IEC6400-URWB-NW-E	IEC6400 URWB Network Essentials License	Up to 5 Gbps aggregated throughput
IEC6400-URWB-NW-A	IEC6400 URWB Network Advantage License	Up to 10 Gbps aggregated throughput
IEC6400-URWB-NW-P	IEC6400 URWB Network Premier License	Up to 40 Gbps aggregated throughput
IOD subscriptions		
IOTOD-IW-E	IoT-OD Essentials for Cisco URWB	Onboarding and provisioning through IOD
IOTOD-IW-A*	IoT-OD Advantage for Cisco URWB	IWMonitor support on top of Essentials specifications

(*) Available at a later date

Product sustainability

Information about Cisco's Environmental, Social, and Governance (ESG) initiatives and performance is provided in Cisco's CSR and sustainability reporting.

Please refer to the data sheet for the Cisco UCS C220 M6 Rack Server for specific product sustainability information.

Table 5. Cisco environmental sustainability information

Sustainability Topic		Reference
General	Information on product-material-content laws and regulations	Materials
	Information on electronic waste laws and regulations, including our products, batteries, and packaging	WEEE Compliance
	Information on product takeback and reuse program	Cisco Takeback and Reuse Program
	Sustainability inquiries	Contact: csr_inquiries@cisco.com
Material	Product packaging weight and materials	Contact: environment@cisco.com

Product specifications

Table 6. Hardware appliance specifications

Item	Specification
Form factor	C220 M6 1RU standard server
Processors	Third-generation Intel® Xeon® Scalable processors (1 or 2)
Memory	16-GB RDIMM SRx4 3200 (8 GB)
Embedded Network Interface Cards (NICs)	Dual 10GBASE-T Intel x550 Ethernet ports
Optional NICs	Cisco UCS VIC 1455 Quad Port 10/25G SFP28 CNA PCIE
Power supplies	Cisco UCS 1050W AC Power Supply for Rack Server
Storage	480-GB 2.5in Enterprise Performance 6GSATA SSD (3X endurance)

Ordering information

Table 7. Hardware ordering information

Part number	Product description
IEC-6400-URWB	Cisco IEC400 Edge Compute Appliance
IWA-PCIE-C25Q-04	Cisco UCS VIC 1455 Quad Port 10/25G SFP28 CNA PCIE (optional)

Table 8. Software ordering information

Item	Description
IEC6400-URWB-NW-E	IEC6400 URWB Network Essentials License
IEC6400-URWB-NW-A	IEC6400 URWB Network Advantage License
IEC6400-URWB-NW-P	IEC6400 URWB Network Premier License
IOTOD-IW-E	IoT-OD Essentials for Cisco URWB (3, 5, 7 years options available)
IOTOD-IW-A*	IoT-OD Advantage for Cisco URWB (3, 5, 7 years options available)

(*) Available at a later date.

Warranty information

Please refer to the [Product Warranty page](#) for warranty information.

Cisco and Partner Services

Realize the full business value of your technology investments faster with intelligent, customized services from Cisco and our partners. Backed by deep networking expertise and a broad ecosystem of partners, Cisco Services enable you to deploy a sound, scalable mobility network that enables rich media collaboration while improving the operational efficiency gained from a converged wired and wireless network infrastructure. Together with our partners, we offer expert plan, build, and run services to accelerate your transition to advanced mobility services while continuously optimizing the performance, reliability, and security of that architecture after it is deployed. For more details, visit [Services for Wireless](#).

Smart Account

Creating a Smart Account by using the Cisco Smart Software Manager (SSM) enables you to order devices and licensing packages and also manage your software licenses from a centralized website. For more information on Smart Accounts, refer to <https://www.cisco.com/go/smartaccounts>.

Cisco Capital

Flexible payment solutions to help you achieve your objectives

Cisco Capital® makes it easier to get the right technology to achieve your objectives, enable business transformation, and stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services, and complementary third-party equipment in easy, predictable payments. [Learn more](#).

Learn more

Get reliable wireless connectivity for any application, anywhere

Need to connect your mission-critical time-sensitive applications wirelessly with more bandwidth, higher reliability, and seamless handoffs? Take advantage of the 6-GHz band expansion and the flexibility to run one of two wireless technologies (Wi-Fi 6 or Cisco URWB) in a state-of-the-art hardware platform with the Cisco Catalyst IEC6400 Heavy Duty Access Point.

Learn more:

- [Cisco Ultra-Reliable Wireless Backhaul page](#)
- [Cisco Catalyst IW9167E Heavy Duty Access Point](#)
- Cisco Catalyst IW9165E Rugged Access Point and Wireless Client
- Cisco Catalyst IW9165D Heavy Duty Access Point
- [Cisco Industrial Wireless](#)

Document history

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Cisco Systems (USA) Pte. Ltd.
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