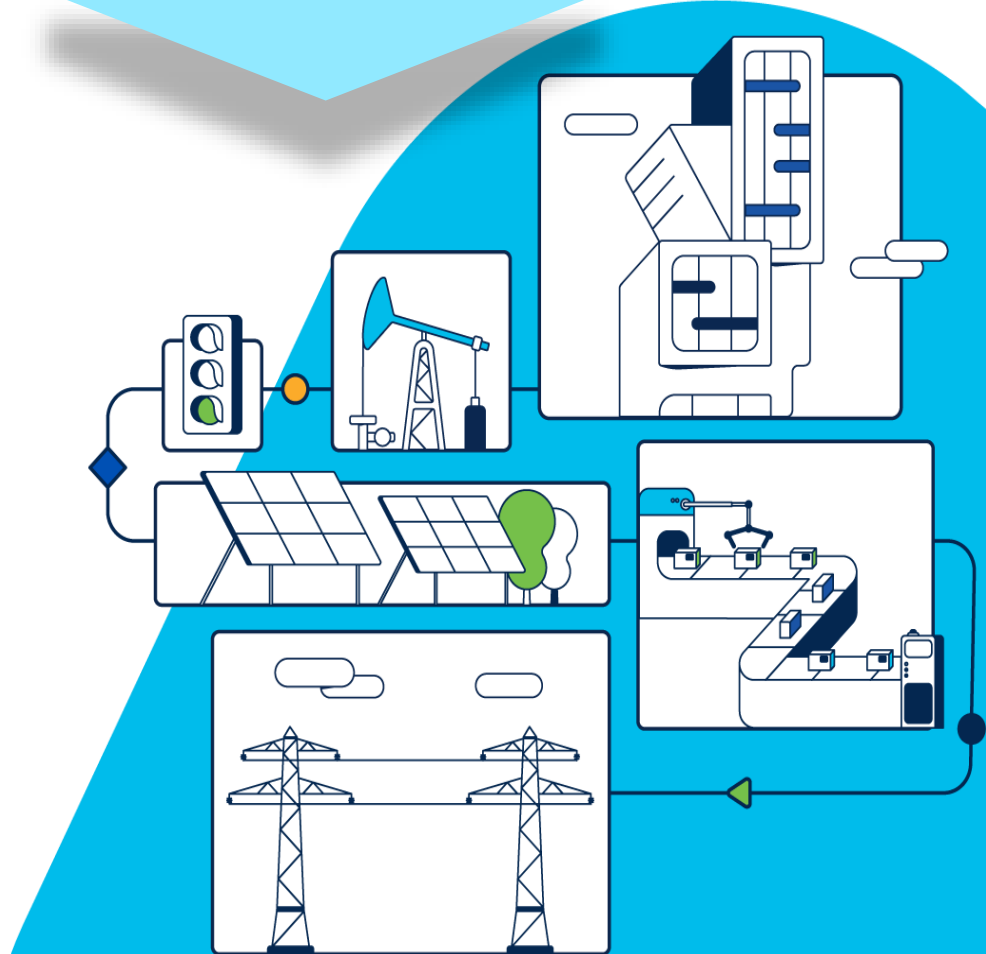




Cisco Virtual Update – OT Solutions

Onur Yalcinkaya, IOT Specialist
Alvaro Ramos Gutierrez, Solutions Engineer

October 2023



AGENDA

- Introduction
- Switching and Routing Update
- Wireless Update
- Management Update
- Q&A



Two Decades of IoT Innovation

For a Future of Possibilities

Happy
20+ Years to
IoT Switching!



The bridge to possible



Cisco is the IoT Market Leader

Industrial Cyber
Security Leader



Industrial
Routing

38.5%

Market Share



#1 Market
Share

Global
Industrial Edge

Industrial
Switching

25% | 32%
Layer 2 | Layer 3

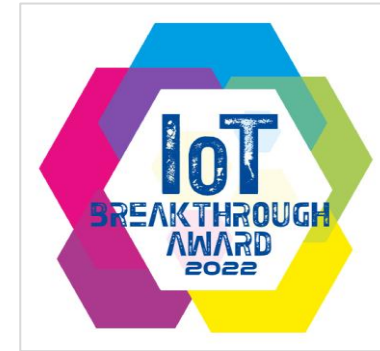
Market Share

Industrial
Wireless

50.5%

Market Share

Market Share Source: Omdia 2021



- Cisco Catalyst IE3200 Rugged Series Switches
- Cisco Catalyst IE3400 Rugged Series Switches
- Cisco Catalyst IR1100 Rugged Series Routers
- Cisco Ultra-Reliable Wireless Backhaul

Purpose Built for Harsh Environments

1

**Size Weight
Form-factor**

2

**Shock and
Vibration**

3

**High MTBF
Resilient Network
Topologies**

4

**Din-Rail
or Rack
Mounts**

5

**Fanless
-40 to 75°C
Self-cooled**

6

**Industry
Certifications**





IoT Networking + Security Portfolio

Industrial Switching

1K, 2K, 3200, 3300, 3400, 3400H, 4K, 5K



Industrial Routing

IR829, IR1101, IR1800, IR8340, IR8100



Embedded Networking

ESS, ESR, ESW



Industrial Wireless

CURWB, IW6300, IW3702, LoRa Gateway, LoRa TPE



LoRa as a Service

Industrial Asset Vision



Industrial Security

Cyber Vision, ISA3000 Firewall



Data Control and Exchange

IoX, vRTU...



Management & Automation

Field Network Director, IoT Operations Dashboard, SD-WAN
Industrial Network Director, DNA Center,
FirePower Manager



Switching and Routing Updates

Technology & Software You Know, and Trust



Catalyst **Enterprise** Switching

Ruggedized hardware with no moving parts for temperature, shock, vibration, & optimized for power/ size

IOS-XE software enhanced with:
PTP, MRP, PRP, HSR and other key industrial features



Catalyst **Industrial** Switching

Industrial
Certifications

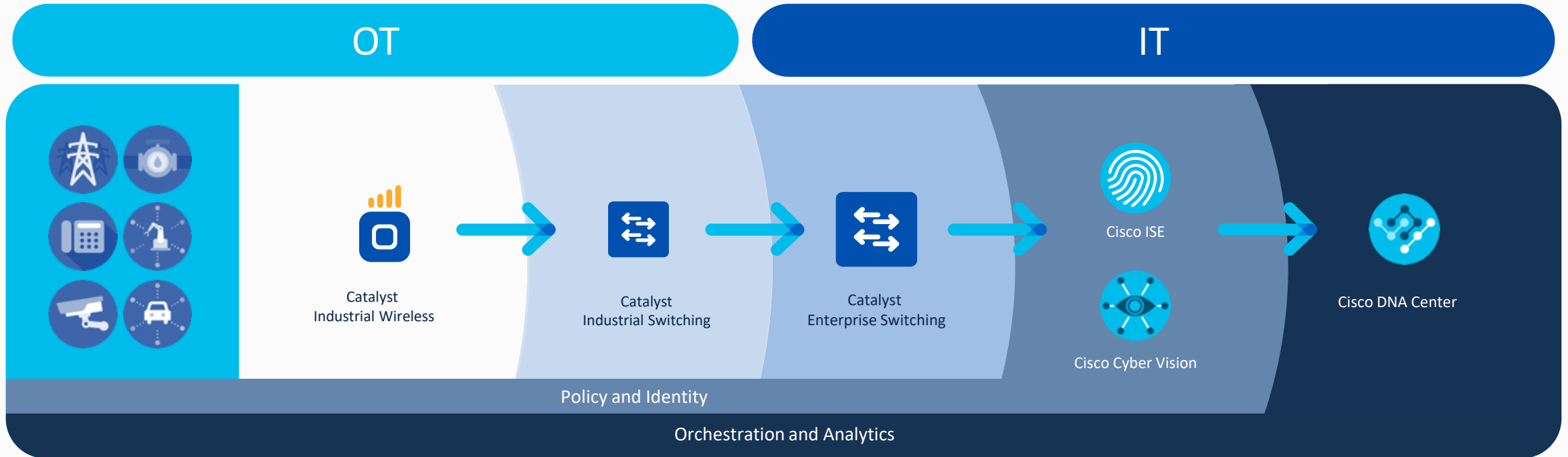


EtherNet/IP™



Only Cisco offers a multi-domain network

Common management and security policy from enterprise to edge



Cisco Catalyst Industrial Ethernet Switching



Advanced Security

Cyber Vision, TrustSec, NetFlow, ACT2, Secure Boot, Run-time Defenses



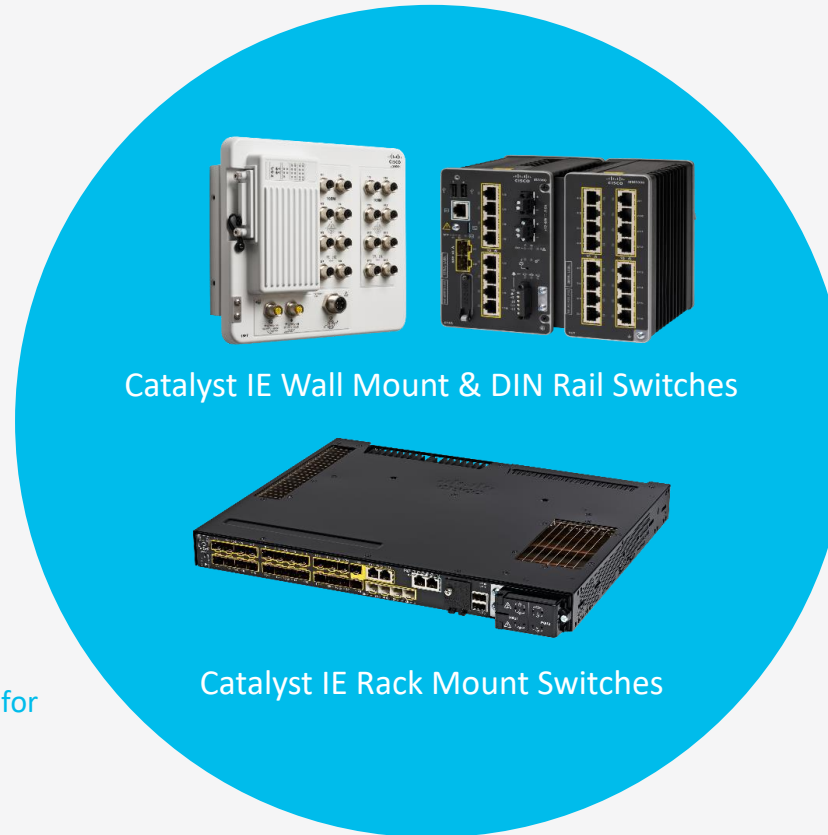
Programmability

NETCONF, RESTCONF, gRPC Interfaces for Network Automation



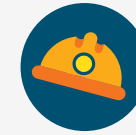
Streaming Telemetry

YANG-model driven push-based telemetry for Network Monitoring



Catalyst IE Wall Mount & DIN Rail Switches

Catalyst IE Rack Mount Switches



Built for OT

SD Card swap drive, Alarm Ports, L2NAT, PTP, MRP,, PRP, HSR, High MTBF



Multigigabit Technology

10G, mGig interfaces, 4PPoE @ 60W/90W for Access Points and Surveillance Cameras



Application Hosting

IOx Edge Compute App hosting Infrastructure

Powered by IOS-XE®

A single OS optimized for Enterprise & Industrial Applications

Cisco Industrial Ethernet Switching Portfolio

DIN Rail



Rackmount



IP67



Embedded



Bring secure connectivity to your industrial use cases:



Manufacturing



Utilities



Transportation



Parking Lots



Mining



Oil & Gas



Ports



Warehouses



Defense

Part of the Cisco Catalyst IE3x00 Product Family

The market leading DIN-rail mounted industrial switch portfolio

NEWEST
addition



Catalyst IE3100

Designed for machine builders and space constrained deployments



Catalyst IE3200

Your entry to power over ethernet industrial networking



Catalyst IE3300

Modular switch with PoE/PoE+, 4PPoE, asset visibility, and edge compute for app hosting



Catalyst IE3400

Modular switch with PoE/PoE+, asset visibility, and edge compute for app hosting, and extended security

Layer 2 Industrial Switch

Layer 3 Industrial Switch



IOS-XE Operating Software

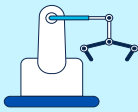


Cisco DNA Center Management



Advanced Visibility and Security

IE-3100 Series - Product Highlights



Small Form-Factor



Gigabit Speeds



Multiple Port options



IOS-XE Operating System



Suited for
Harsh Environments

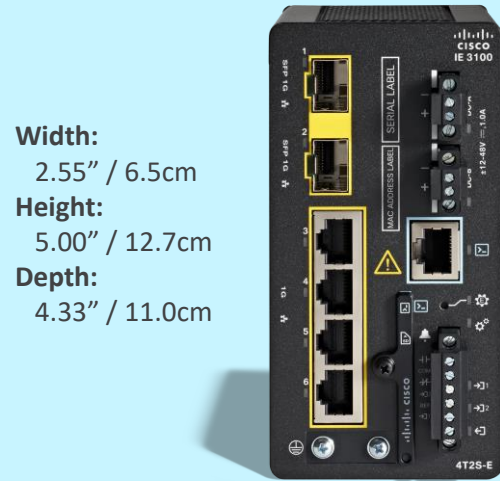


DNA-Center Management

Rugged Switch for Machine builders and space constrained environments

Introduction

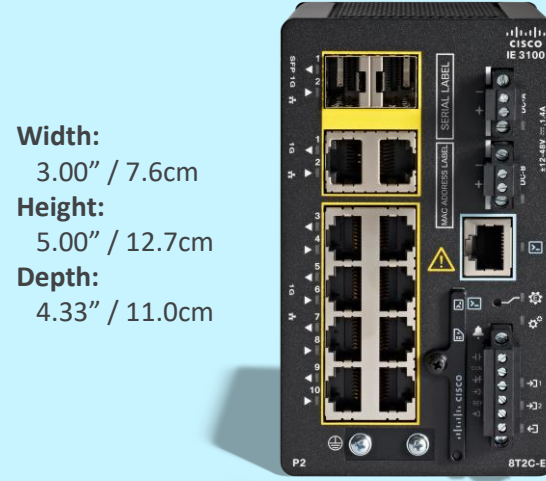
Compact size with faster speeds



Width:
2.55" / 6.5cm
Height:
5.00" / 12.7cm
Depth:
4.33" / 11.0cm

19% Volume Reduction

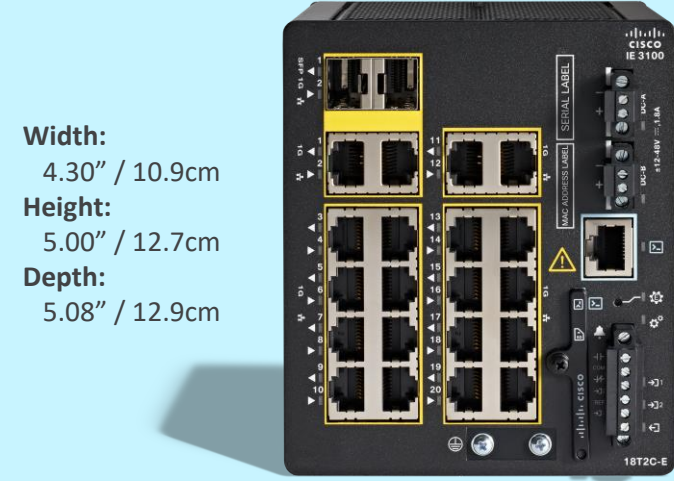
14% Width Reduction



Width:
3.00" / 7.6cm
Height:
5.00" / 12.7cm
Depth:
4.33" / 11.0cm

21% Volume Reduction

17% Width Reduction



Width:
4.30" / 10.9cm
Height:
5.00" / 12.7cm
Depth:
5.08" / 12.9cm

19% Volume Reduction

14% Width Reduction

6 Ports with IE-3100 Only

10/12/20 Ports options with IE-3100 & IE-3105

Cisco Catalyst IE3100/3105 Rugged Series - Comparison

		IE-3100-4T2S-E	IE-3100-8T2C-E	IE-3100-8T4S-E	IE-3100-18T2C-E	IE-3105-8T2C-E	IE-3105-18T2C-E
Ethernet Interfaces	Total Ports	6 Ports	10 Ports	12 Ports	20 Ports	10 Ports	20 Ports
	Downlink Ports	4 GE	8 GE	8 GE	18 GE	8 GE	18 GE
	Uplink ports	2 GE SFP	2 GE Combo	4 GE SFP	2 GE Combo	2 GE Combo	2 GE Combo
Common Features	Layer 2 Port Security	✓	✓	✓	✓	✓	✓
	802.1x NAC	✓	✓	✓	✓	✓	✓
	TrustSec SXP	✓	✓	✓	✓	✓	✓
	Downloadable ACLs	✓	✓	✓	✓	✓	✓
	MRP / PTP / REP	✓	✓	✓	✓	✓	✓
Advanced Features	L2 NAT					✓	✓
	SDA Extended Node	✓*	✓*	✓*	✓*	✓*	✓*
	IOS-XE Network Essentials License						

*Roadmap Feature

Licensing on IE3100

PID	Number of Ports	Base License	Add-on License
IE-3100-4T2S-E	6	Network Essentials	IE3100-DNA-E-L
IE-3100-8T2C-E	10	Network Essentials	IE3100-DNA-E-L
IE-3100-8T4S-E	12	Network Essentials	IE3100-DNA-E-L
IE-3100-18T2C-E	20	Network Essentials	IE3100-DNA-E-M
IE-3105-8T2C-E	10	Network Essentials	IE3100-DNA-E-L
IE-3105-18T2C-E	20	Network Essentials	IE3100-DNA-E-M

- By default, IE3100 ships with Network Essentials license from the factory
- Network Essentials is the only license level supported on IE3100 platforms
- DNA Licenses are not mandatory during the initial purchase can be purchased separately
- Usage of DNA-License requires smart account to be created
- Two DNA License sizes "-L" for SKUs up to 12 ports and "-M" Size for devices with more than 12 ports

Unleashing enterprise features at the industrial edge

Cisco Catalyst IE9300 Rugged Series Switch

More performance

Up to 128 Gbps switching capacity, 8 QoS queues per port with 6MB packet buffers, 5K TCAM entries, native PTP timestamping



8x the density

First industrial switch to support backplane stacking with up to 8 switches acting as one for simplified management



Software Defined Access

First industrial switch to support SD-Access fabric edge, endpoint analytics, group-based policy analytics



Industry-leading OT security

Cyber Vision visibility & security posture for industrial endpoints, Group based policy, MACsec, 802.1x



Granular Visibility

First industrial switch to support application visibility w/ NBAR2



Built for Operations

Ruggedized, PTP, PRP, HSR, MRP, DLR, industrial protocols, and compliance with regulatory standards



Powered by
UADP ASIC



Cisco Catalyst IE9300
Rugged Series Switch

Enterprise scale, visibility, security, but made for the industrial network

Cisco Catalyst IE9300 Portfolio

Stackable, high performance, ruggedized industrial rackmount switches

7

E9300 Models



IE-9310-26S2C

26x 1GE SFP ports
2x 1GE combo ports



IE-9320-26S2C

26x 1GE SFP ports
2x 1GE combo ports
PRP and HSR Support
Stackable



IE-9320-24T4X

24x 1GE ports
4x 10G SFP ports
Stackable



IE-9320-22S2C4X

22x 1GE SFP, 4x 10G SFP
2x 1GE combo ports
PRP and HSR Support
Timing input
Conformal coating
Stackable



IE-9320-24P4S

24x 1GE with PoE/PoE+
Up to 385W PoE budget
4x 1GE SFP ports
Stackable



IE-9320-16P8U4X

8x mGig with 90W 4-pair PoE
16x 1GE with PoE/PoE+ ports
Up to 720W PoE budget
4x 10G SFP ports
Stackable



IE-9320-24P4X

24x 1GE with PoE/PoE+
4x 10G SFP ports
Up to 720W PoE budget
Stackable

The most comprehensive industrial rackmount portfolio in the market

4 times the density and easier to manage

Stack up to 4* Catalyst IE9300s for high port density and bandwidth



Up to 4*^ switches can be stacked using front panel stack ports



All IE-9320 Series models support stacking. Mixing of copper & fiber models is allowed



Same Cisco IOS XE and license is required on all switches of the stack



Switch Stack can be managed via DNAC

StackWise® 160



Expand switching capacity, port density, and redundancy within a single control plane

^ 4 Member stacking support to be available from November'23

*HW can support up to 8-member stack – based on business case

A complete portfolio

Secured and optimized for *every* use case

Demanding, mission critical deployments

ATMs, low voltage substations,
roadside traffic cabinets , renewables



Remote monitoring,
streetlights, intersections, advanced metering



Fleet, first-responders, pipelines



Mission-critical, Factory, high voltage substations



Cellular Pluggable Interface Modules for Industrial Routers

Cellular Interface Modules



P-LTE-GB
Cat4

↓ 150 Mbps
↑ 50 Mbps



P-LTE-US
Cat4

↓ 150 Mbps
↑ 50 Mbps



P-LTE-VZ
Cat4

↓ 150 Mbps
↑ 50 Mbps



P-LTE-MNA
Cat4

↓ 150 Mbps
↑ 50 Mbps



P-LTE-IN
Cat4

↓ 150 Mbps
↑ 50 Mbps



P-LTE-JN
Cat4

↓ 150 Mbps
↑ 50 Mbps



P-LTEA-EA
P-LTEA-LA
Cat6

↓ 300 Mbps
↑ 50 Mbps



P-LTEAP18-GL
Cat18

↓ 1.2 Gbps
↑ 150 Mbps



P-5GS6-GL
5G Sub-6GHz

↓ 3.5 Gbps
↑ 500 Mbps



IR1101



IR1821, IR1831, IR1833, IR1835



IR8100



IR8300

5G Cellular Pluggable Module for Industrial Routers

Cellular Interface Modules



IOS-XE
17.8.1

- ✓ Dual micro-SIM cards
- ✓ 4x4 MIMO support
- ✓ GNSS
- ✓ Non-standalone mode
- ✓ Standalone mode (future firmware + IOS-XE)
- ✓ 3GPP Releases 15



IR1101



IR1821, IR1831, IR1833, IR1835



IR8100

With IRM carrier module



IR8300



P-LTE-450MHz Cellular Pluggable Module (Cat4)

- Smaller form factor and Cisco Pluggable technology provide additional protection investment and flexibility

- 1) LTE Antenna SMA MAIN Connector
- 2) GPS SMA Connector
- 3) LTE Micro USB Console Debug
- 4) LTE Antenna SMA DIV Connector
- 5) SIM slot #0



P-LTE-450
Cat4

↓ 37.5 Mbps
↑ 12.5 Mbps

IOS-XE
17.10.1



Industrial Wireless Update

There are a LOT of wireless technologies





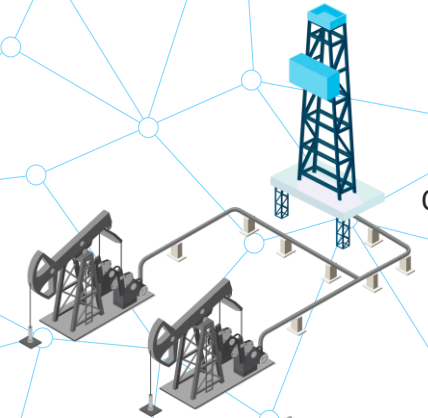
Manufacturing



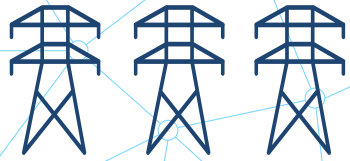
Warehouse



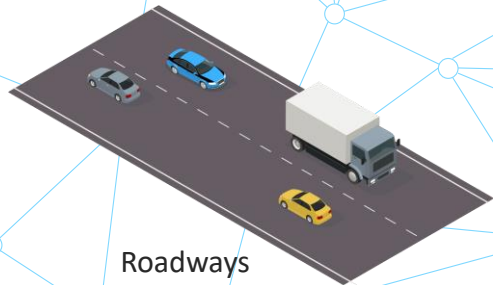
Gas Station / Kiosk



Oil & Gas



Utilities



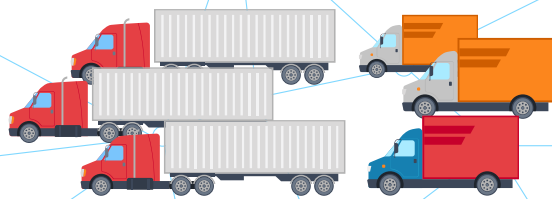
Roadways



Parking Lot



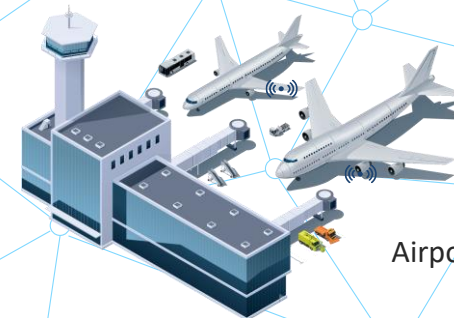
Distribution Center



Fleet



Seaport

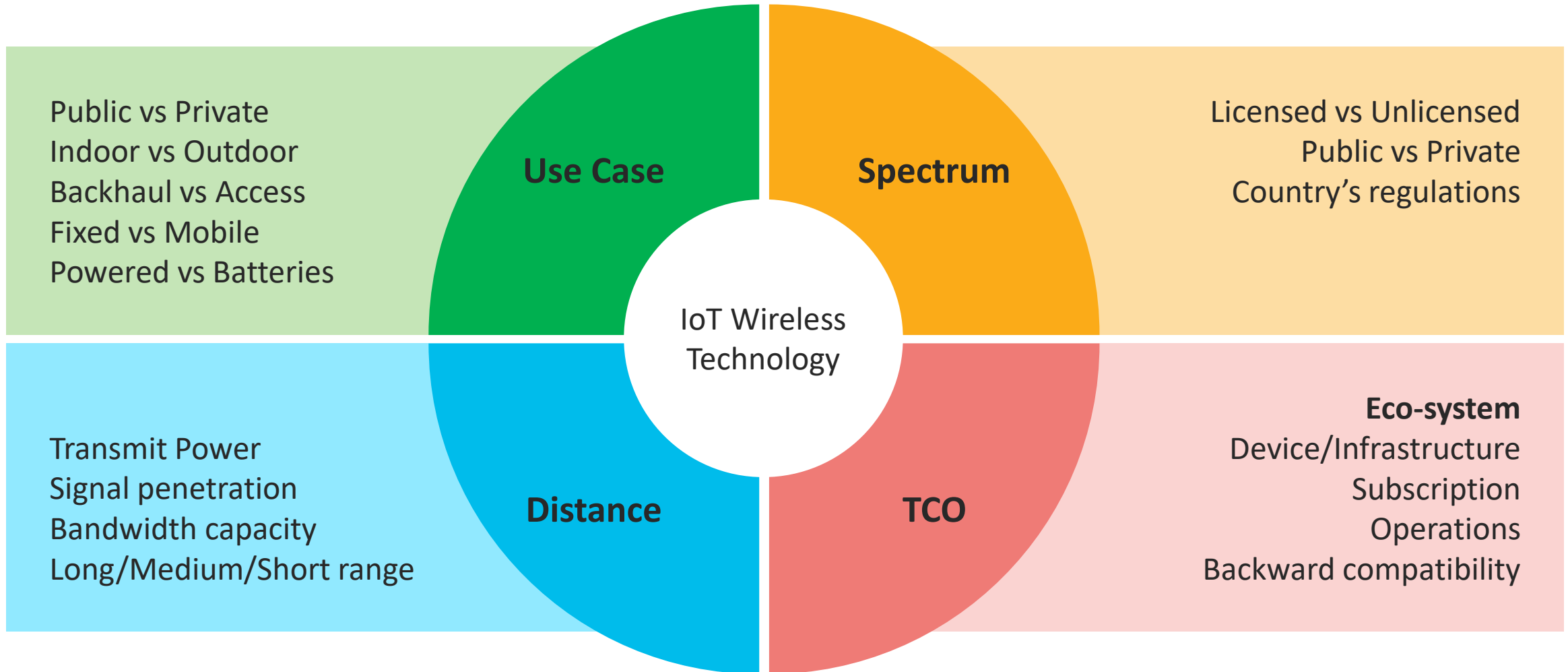


Airport

Wireless Technologies are key pillars of the Internet of Things but...

one size doesn't fit all.

Industrial IOT Wireless Selection Criteria



No single connectivity option can meet all needs

Cellular 3G, 4G, 5G

- Medium-to-high bandwidth, easy to deploy, long range
- High OpEX, monthly cost (\$40-100/SIM/Month)
- Dependent on mobile SP coverage in the area

LoRaWAN / WiSUN

- Long range, great for sensors with small data payloads (<1 Mbps)
- Low power, low bandwidth

802.11 Wi-Fi

- High bandwidth, Unlicensed spectrum, broadly supported CPEs
- Delays with roaming handoff, prone to WiFi interference (dominant)

Fiber or wired Ethernet

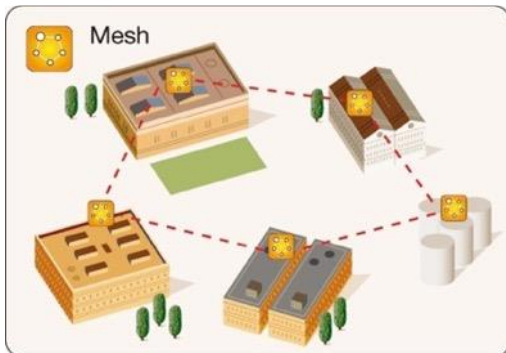
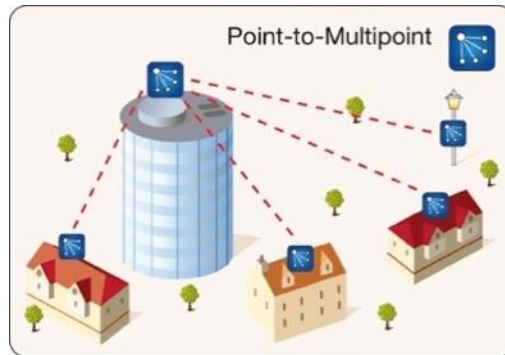
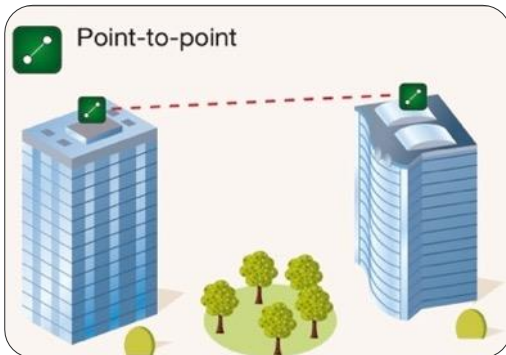
- Very high bandwidth, low latency
- Costly to deploy and construct, inflexible with design

Cisco Ultra-Reliable Wireless Backhaul Solution

- Proprietary Air-Interface, medium-long range
- High bandwidth
- Flexible deployment, re-deployable worldwide (unlicensed)
- 0ms roaming (Fluidity), wireless High-Availability (<500ms failover via TITAN)
- Low latency (compared to other wireless architectures)
- TDMA or CSMA based radio access mechanism for max configurability

Ultra-Reliable Wireless Backhaul Defined

Wireless Fiber-Like Connectivity
Extending highly reliable network connections where wires can't go.



Long Range and High Bandwidth Connectivity



Fast and Accurate Roaming
(0ms handoff, up to 225 Mph)



Support for real-time sensitive traffic. Zero Loss-Low Latency.



Flexible licensing model

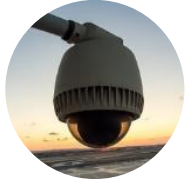


Support multiple backhaul topologies – PtP, PtMP, Mesh, and Mobility



Secure MPLS based proprietary protocol with QoS support

Reliable wireless connectivity solutions examples



Physical security
Video/VoIP for emergency stations and security cameras



Campus and education
CCTV, monitoring, security alerts, Wi-Fi backhaul



Digital divide
Bridge the gap with unconnected areas



Warehousing and logistics
Wireless comms for AGV and AS/RS systems



Theme parks
Dark rides, Wi-Fi



Manufacturing
Enhanced AMR and AGV connectivity for factory floors



Airports
Vehicle control and dispatch, de-icing, CCTV, VoIP



Power and water utilities
Sensor telemetry, remote monitoring



Rail and mass transit
CBTC, onboard Wi-Fi, CCTV, VoIP, inter-car, femtocells



Ports and terminals
TOS and automation to RTG, STS, AGV, and tractors



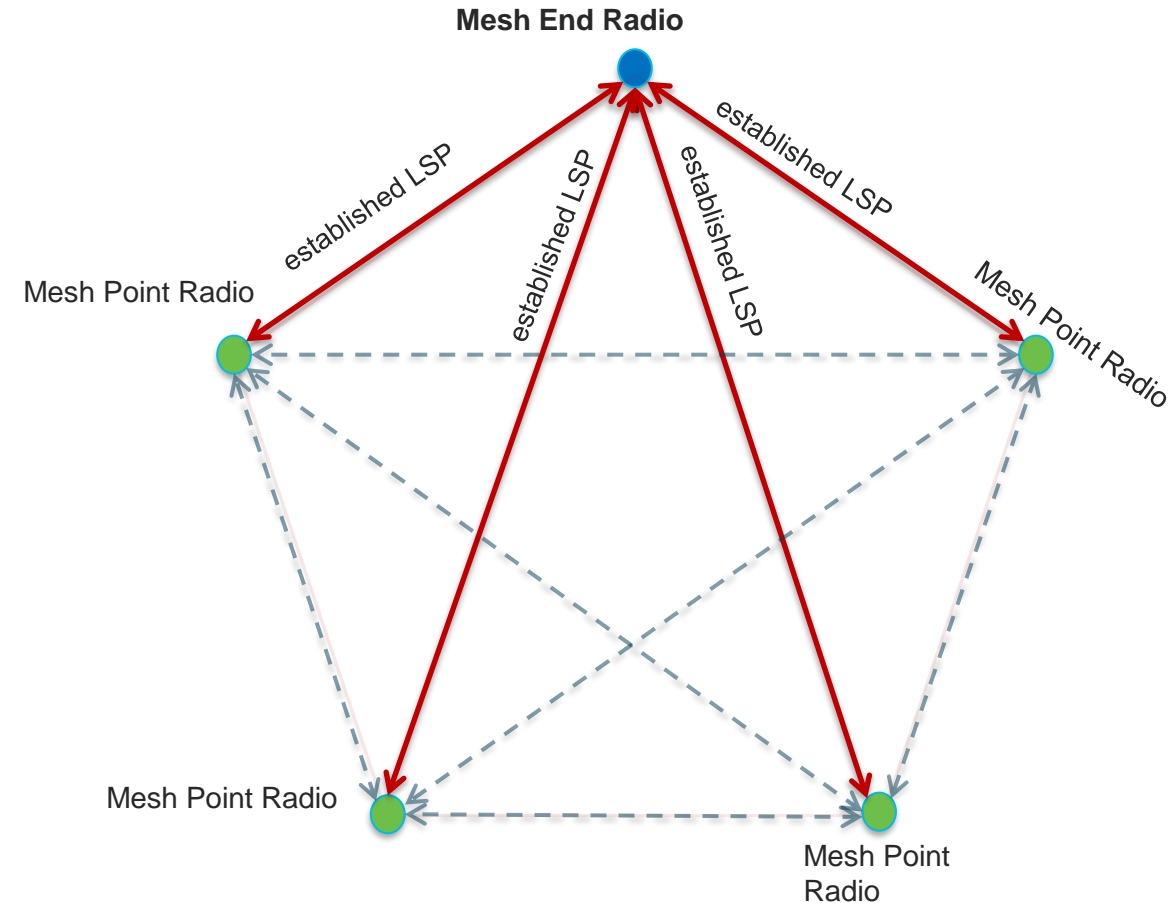
Mining
TOS and automation to RTG, STS, AGV, and tractors



Oil and gas
Vehicle connectivity, pipeline telemetry, CCTV

Cisco Ultra-Reliable Wireless Backhaul uses a customized wireless-based MPLS transmission protocol PRODIGY™, to discover and create LSPs between radio Mesh-Ends and Mesh-Points.

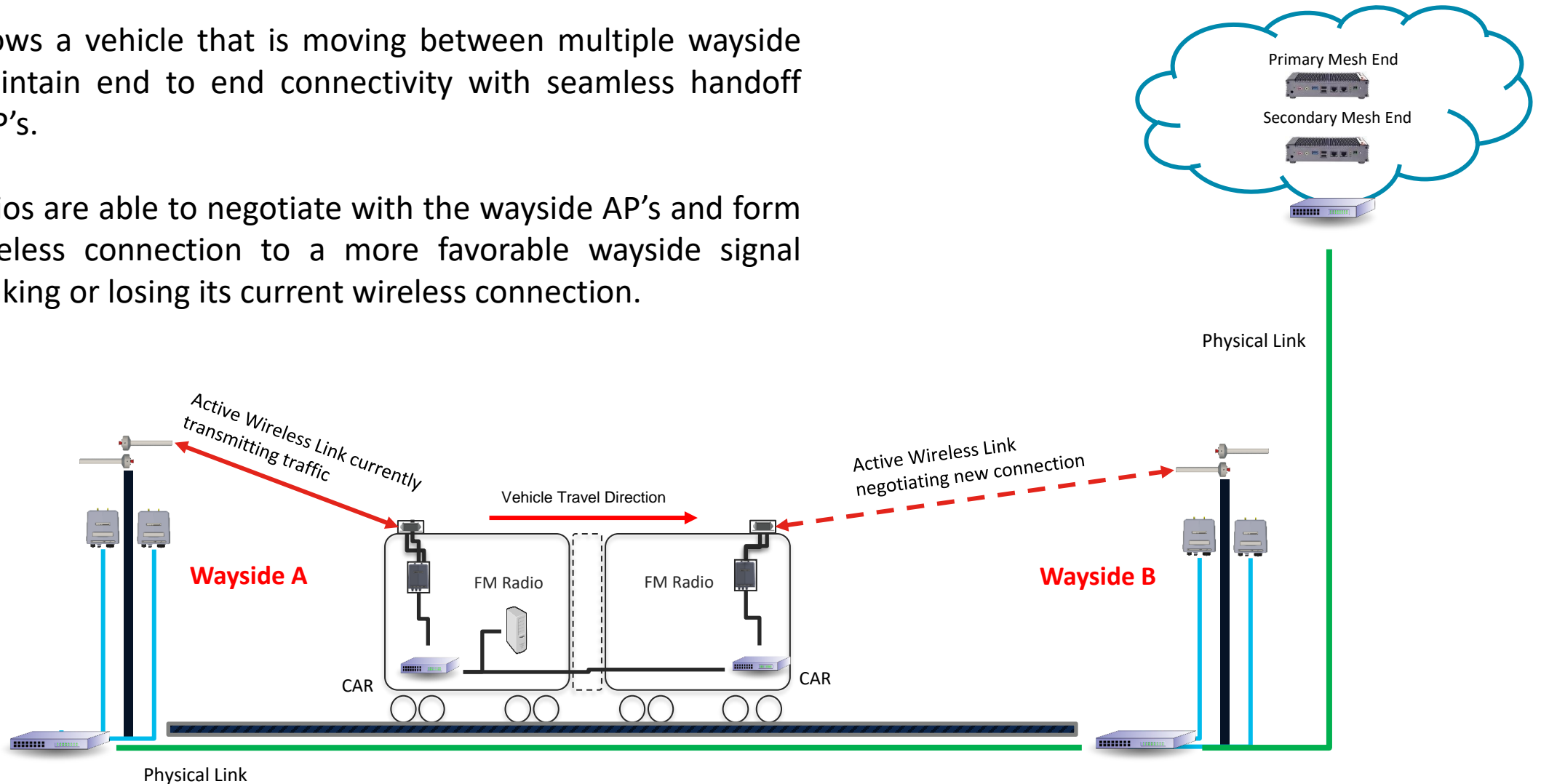
Label-Switched Path
(LSP, i.e. MPLS dataflow route)



FLUIDITY

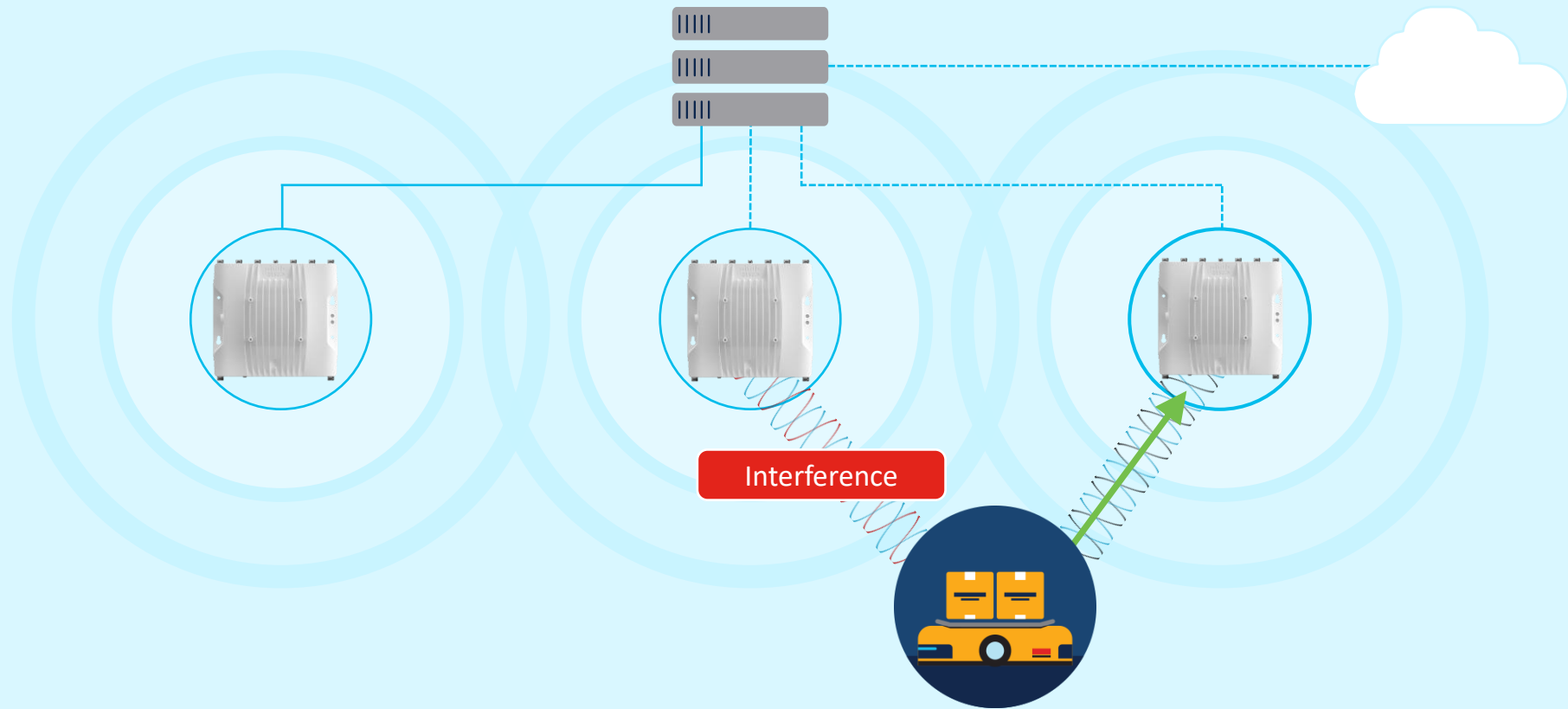
Fluidity allows a vehicle that is moving between multiple wayside AP's to maintain end to end connectivity with seamless handoff between AP's.

Vehicle radios are able to negotiate with the wayside AP's and form a new wireless connection to a more favorable wayside signal before breaking or losing its current wireless connection.



Taking wireless reliability to a whole other level

Cisco URWB's new patented technology Multipath Operations



Traffic reaches destination successfully despite interference

Cisco Industrial Wireless Portfolio

Industrial and outdoor Wi-Fi and Ultra-Reliable Wireless Backhaul



IW6300
Hazloc Wi-Fi



Ultra-Reliable Wireless
Backhaul



IW9167E
Cisco URWB &
Wi-Fi 6/6E-ready* AP



IW9167I
Wi-Fi 6/6E-ready* AP



Cisco DNA Center
(Wi-Fi)



ESW6300
Embedded Wi-Fi



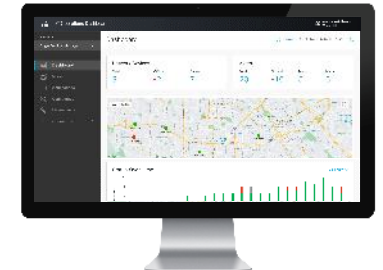
IW9165D
Cisco URWB



IW9165E
Cisco URWB &
Wi-Fi 6/6E-ready* client



IEC6400 Cisco Edge Compute
Appliance for
Large Cisco URWB deployments



IoT Operations Dashboard
(Cisco URWB)

*Wi-Fi 6E subject to regulatory agencies' regulations and approvals.

Next generation of outdoor and industrial wireless portfolio

Purpose-built dedicated wireless client



Catalyst® IW9165E Rugged Wireless Client

Cisco URWB

WGB

Wireless backhaul that's easy to deploy



Catalyst IW9165D Heavy Duty Access Point

Cisco URWB

Premier outdoor and industrial access point



Catalyst IW9167E Heavy Duty Access Point

Cisco URWB

Wi-Fi 6/6E-ready*

WGB



Catalyst IW9167I Heavy Duty Access Point

Wi-Fi 6/6E-ready*

Connect more devices. Wirelessly. Reliably. Even on the move.

*Wi-Fi 6E subject to regulatory agencies' regulations and approvals.

Next gen industrial wireless portfolio

Cisco Catalyst 6E* Industrial Wireless portfolio



	IW9165E	IW9165D	IW9167E	IW9167I
Application	Wireless client for mobile assets	Wireless backhaul for fixed and mobile assets	Wireless backhaul for fixed and mobile assets	Outdoor and industrial Wi-Fi access point
Radio	(2) 2x2 802.11ax radios 5GHz, 5/6GHz	(2) 2x2 802.11ax radios 5GHz, 5/6GHz	(3) 4x4 802.11ax radios 2.4GHz, 5GHz, 5/6GHz	(3) 4x4 802.11ax radios 2.4GHz, 5GHz, 6GHz
Antenna	(4) RP-SMA (f)	Internal 15dBi directional plus (2) N-Type (f)	(8) N-Type (f)	Internal Omnidirectional 5-6 dBi
Wireless mode	WGB or Cisco URWB	Cisco URWB	Wi-Fi AP, WGB, Cisco URWB	Wi-Fi AP
Ethernet	1 x 2.5Gbps + 1 x 1Gbps RJ45 Optional M12 adapter	1 x 2.5Gbps + 1 x 1Gbps RJ45 Optional M12 adapters	1 x 5Gbps RJ45 + 1 x SFP+ Optional M12 adapters	(1) 5Gbps RJ45 (1) SFP+ Optional M12 adapters
Expandability	BLE, GNSS, GPIO	BLE, GNSS	BLE, GNSS	
Certifications	IP30, EN50155 -20C to +50C	IP67 -50C to +75C	IP67, EN50155 -50C to +75C	IP67 -40°C to +65°C
Dimensions	15.2 x 12.4 x 4.3 cm	18.3 x 18.0 x 9.1 cm	28.7 x 26.7 x 7.1 cm	28.7 x 26.7 x 7.1 cm

*Wi-Fi 6E subject to regulatory agencies' regulations and approvals.

Catalyst IW9167E Overview

Catalyst® IW9167E Access Point



Tri-Radio Architecture in Heavy-Duty Design

- Wi-Fi 6/6E *, 802.11AX, MU-MIMO, OFDMA
- External antenna – 8 x Type N
- Tri-Radio architecture
 - 2.4-GHz, 4x4:4SS, up to 20MHz
 - 5-GHz radio, 4x4:4SS, up to 80 MHz
 - 5/6-GHz radio, 4x4:4SS, up to 160 MHz
- Dedicated scanning radio for spectrum intelligence
- 2.4-GHz IoT radio
- Built-in GNSS with TNC connector



Wireless backhaul (Cisco URWB)

OR

Wi-Fi 6E access point



* 6E ready

Catalyst IW9165E Rugged access point and wireless client

The 6 GHz-ready wireless client that connects mobile industrial assets



Prototype device pictured. Production device will vary.



Autonomous robots and vehicles for manufacturing, ports, logistics



Rail and light-rail rolling stock

EN50155 certified for rail operations

- ✓ Connect more machines to your network
Compact form factor for integration in existing assets
- ✓ Get more from your industrial assets
BLE, GNSS, GPIO capabilities for advanced use cases
- ✓ Connect moving vehicles to your systems
Ultra low latency and zero packet loss during handoff
- ✓ High performance and modular wireless
Dual 802.11ax radio with wide choice of antenna
- ✓ Works with your Wi-Fi infrastructure
Supports WGB or URWB. Evolve as your needs change

Ultra-reliable broadband wireless connectivity for moving machines and vehicles

Catalyst IW9165D Heavy Duty Access Point

6 GHz-ready Wireless backhaul that's easy to deploy where fiber is not an option



Building-to-building, smart cities, intersections, roadways, railway, mining



Easily extend your network anywhere

Built-in directional antenna for long range connectivity



Fixed and mobile use cases simultaneously

External antennas enable future usages as needs evolve



Connect moving vehicles to your systems

Ultra low latency and zero packet loss during handoff



Build for harsh outdoors environments

IP67 rated enclosure, -40 to +70C, optional M12 adapters



High performance and modular wireless

Dual 802.11ax radio for PTP, PTMP, and mobile applications

Ultra-reliable broadband wireless connectivity for moving machines and vehicles

IW9167E Heavy Duty vs IW9165E Rugged



Prototype devices pictured. Production device may vary.

MOSCOW METRO



9 million passengers per day; 14 lines and 440km of tracks. 3400 car trains.

MAIN APPLICATION: Onboard Wi-Fi and Femtocells

MALTA FREEPORT



Connecting STS Cranes, RTGs and AGVs. Enabled applications: TOS, Wi-Fi backbone. Ready for cranes OCR.

FORT WINGATE TELE-REMOTE OPERATIONS



Drive the excavator remotely. 0-ms handoff time and less than 10ms latency to all land clearing vehicles.

VDOT TRAFFIC LIGHTS MONITORING



Over 1000 radios, 350 intersections, 130 independent data networks. Replacing the existing cabled solution. Approx. savings \$600,000 in the initial roll-out and \$20,000 per month on a recurring basis.

CHERNOBYL VIDEO MONITORING



CHERNOBYL REMEDIATION: The dome of the structure is 108 metres high, 162 metres long and has an external span of 270 metres. 27 IP cameras for general view and monitoring

VOLVO OCEAN RACE



12 in-shore regattas. 15+ racing boats

MAIN APPLICATION: Live Video Broadcasting and Social Media

Indy Autonomous Challenge

Reliable wireless for college competition



Challenge

- Needed reliable wireless connectivity with fast-handoffs to autonomously run a Dallara AV-21 Indy race car at the Indy Motor Speedway

Solution

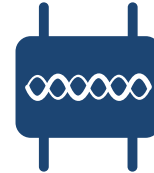
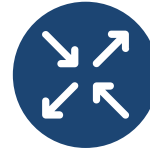
- Cisco Ultra-Reliable Wireless Backhaul
- Cisco Catalyst Industrial Ethernet Switches

Outcomes

- Seamless handoffs at high speeds between towers eliminate dangerous network delays, keeping the vehicle on track.

Management Update

What type(s) of network devices need managing?



	Industrial Switches		Industrial Routers	Industrial Wireless	
	IE	Rockwell Stratix		AP mode	URWB mode
DNAC	✓	✓	✓	✓	
SD-WAN			✓		
IoTOD			✓		✓
FND			✓		

Where does the management backend need to be?
 Who is going to operate/host it?
 How am I going to pay for it?

	Where?		Who?			\$	
	My trusted network	Public Cloud (Internet-facing)	Internal	Cisco	Partner	Opex	Capex
DNAC	✓		✓		✓	✓	✓
SD-WAN	✓	✓	✓	✓	✓	✓	✓
IoTOD		✓		✓		✓	
FND	✓		✓		✓	✓	✓

Meeting the needs of OT beyond connectivity

What do you think so far?



Networkers

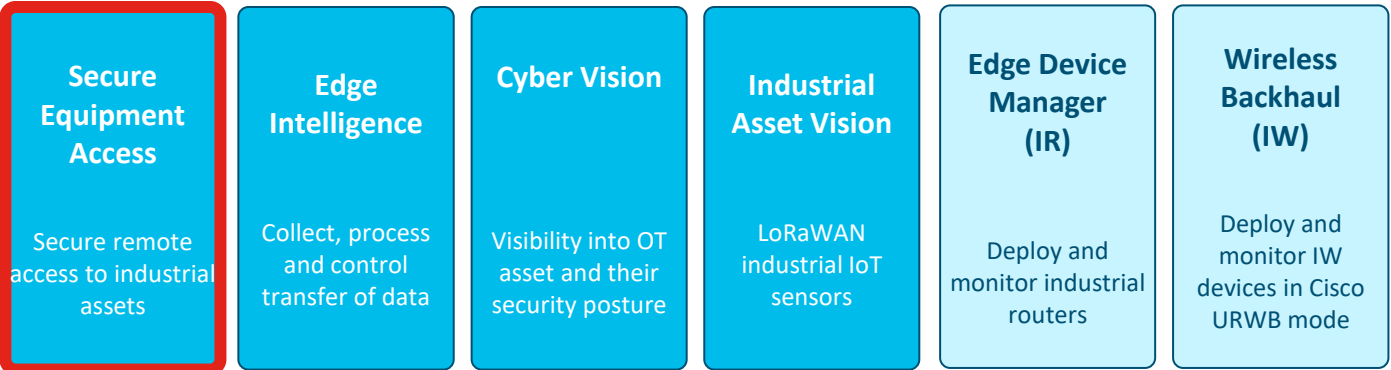
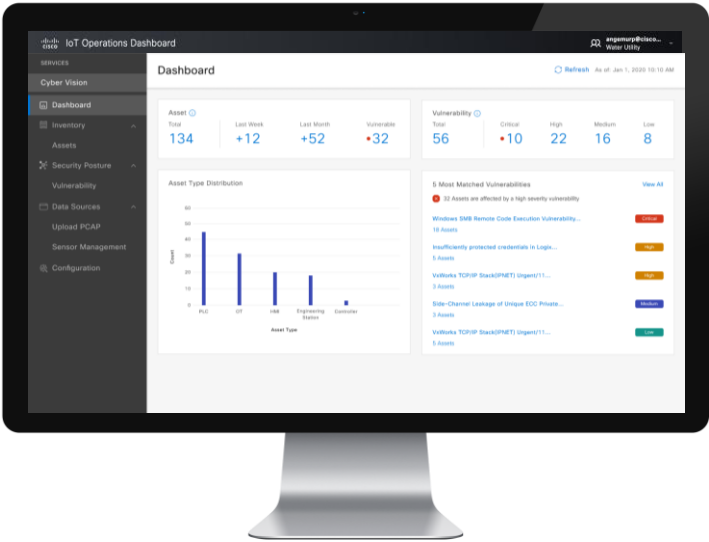
Great! But I have other needs...
Remote Access, OT Asset Visibility, Data Extraction...
What do you have for me?



OT / LOB

Cisco IoT Operations Dashboard

Cloud-delivered services for industrial networks



Services to meet the needs of OT

Basic device management



Industrial Routing



Industrial Switching



Wireless Backhaul

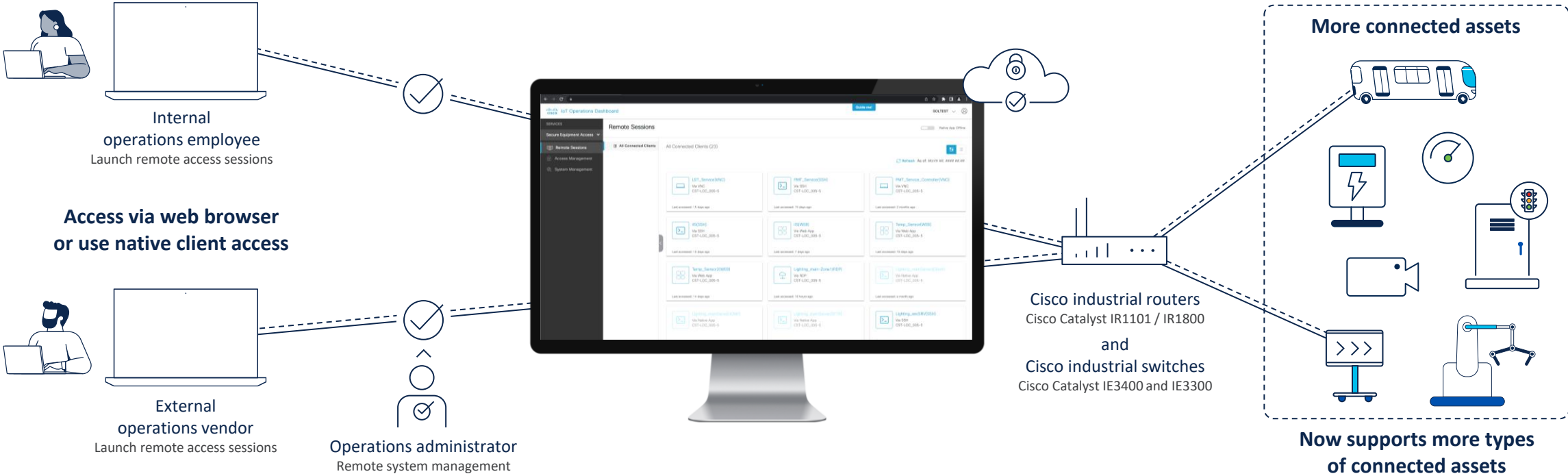


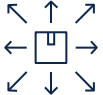
LoRaWAN

Secure remote access for all connected assets


Reduce truck rolls, speed issue resolution, and keep employees safe

Cisco IoT Operations Dashboard
with Secure Equipment Access and Secure Equipment Access Plus






Flexible
Connect to more assets from browser or native client

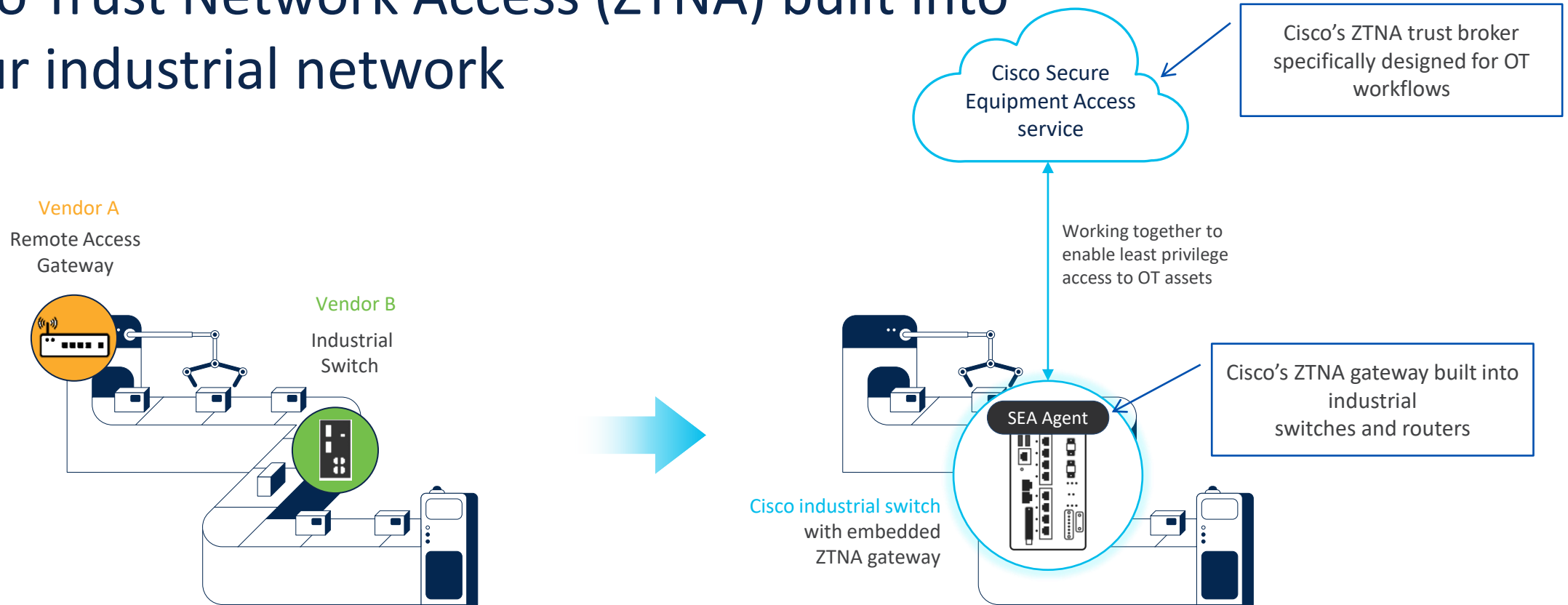


For anyone
Policy-based secure access for employees or external workers



Secure access
Built-in security policies

Zero Trust Network Access (ZTNA) built into your industrial network



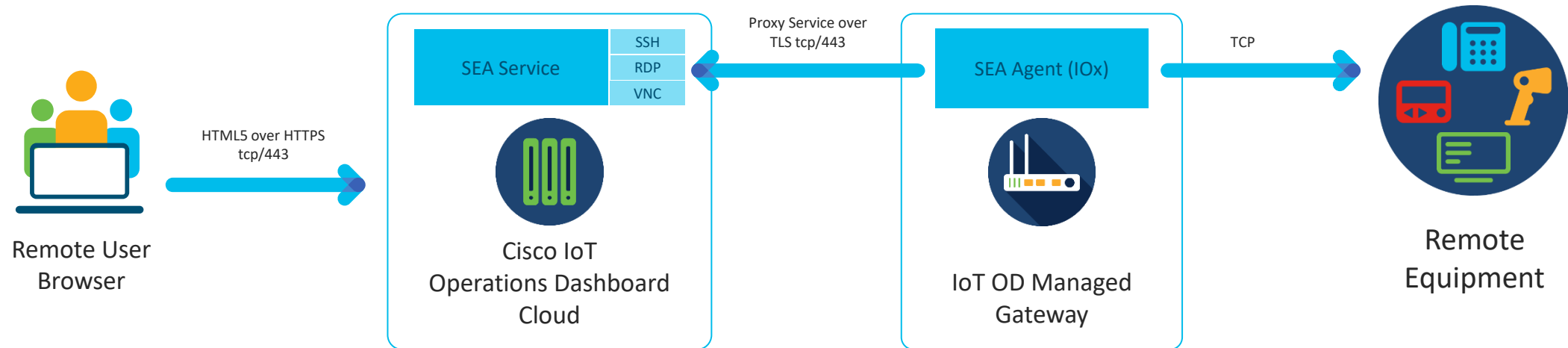
Eliminating complexity by converging functionalities as software features on Cisco's industrial network

SEA goals and use case

- Provide access to equipment behind an IoT OD connected device (IR or IE)
- Devices can be managed by another management application, but only consume services provided by Cisco IoT OD
- SEA Securely proxy all remote access traffic through the gateway, removing the need for a VPN, or access-lists.
- Clear role demarcation between remote access users, OT admins and IT admins.

SEA Flow

- No installation required: equipment access through browser
- Proxy: SEA Agent on Gateway is a proxy over TLS/443
- Isolation: remote user is never directly connected to remote network



Please reach out to us if you have questions

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