



Cisco Tech Club Days



Novinky IoT portfolia v roce 2023

Switching, Routing, Wireless, Mngmt, Security

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Agenda

- 1 Portfolio Overview
- 2 IoT Switching IE 3K1& IE 9300
- 3 IoT Routers IR1101, IR1800, IR8300
- 4 IoT Wireless, IAV
- 5 IoT OD, Cyber vision 4.3
Secure Equipment Access

Portfolio Overview



Comprehensive Industrial IoT Networking Portfolio

Industrial Switching

IE1000, IE3100, IE3200, IE3300, IE3400, IE4K, IE5K, IE9300



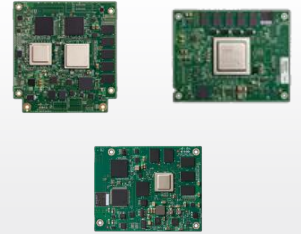
Industrial Routing

IR1101, IR1800, IR8100, IR8300



Embedded Networking

ESS3300, ESS9300, ESR6300



Industrial Wireless

IW9167EH, IW9165E, IW9165D, IW6300H, Cisco Ultra-Reliable Wireless Backhaul, IXM Gateway, IR510, ESW6300



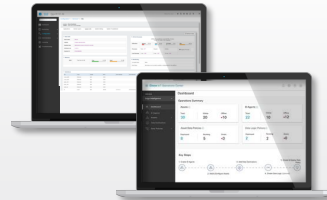
Industrial Cybersecurity

Cisco Cyber Vision



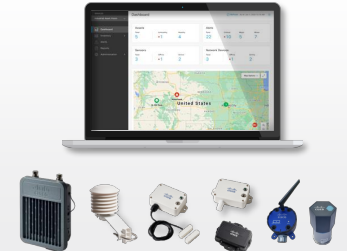
Data Control and Exchange

Edge Intelligence, IOx



Industrial Sensor Solution

Industrial Asset Vision



Management & Automation

Cisco DNA Center, IoT Operations Dashboard, Field Network Director, SDWAN



IoT Switching

IoT 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

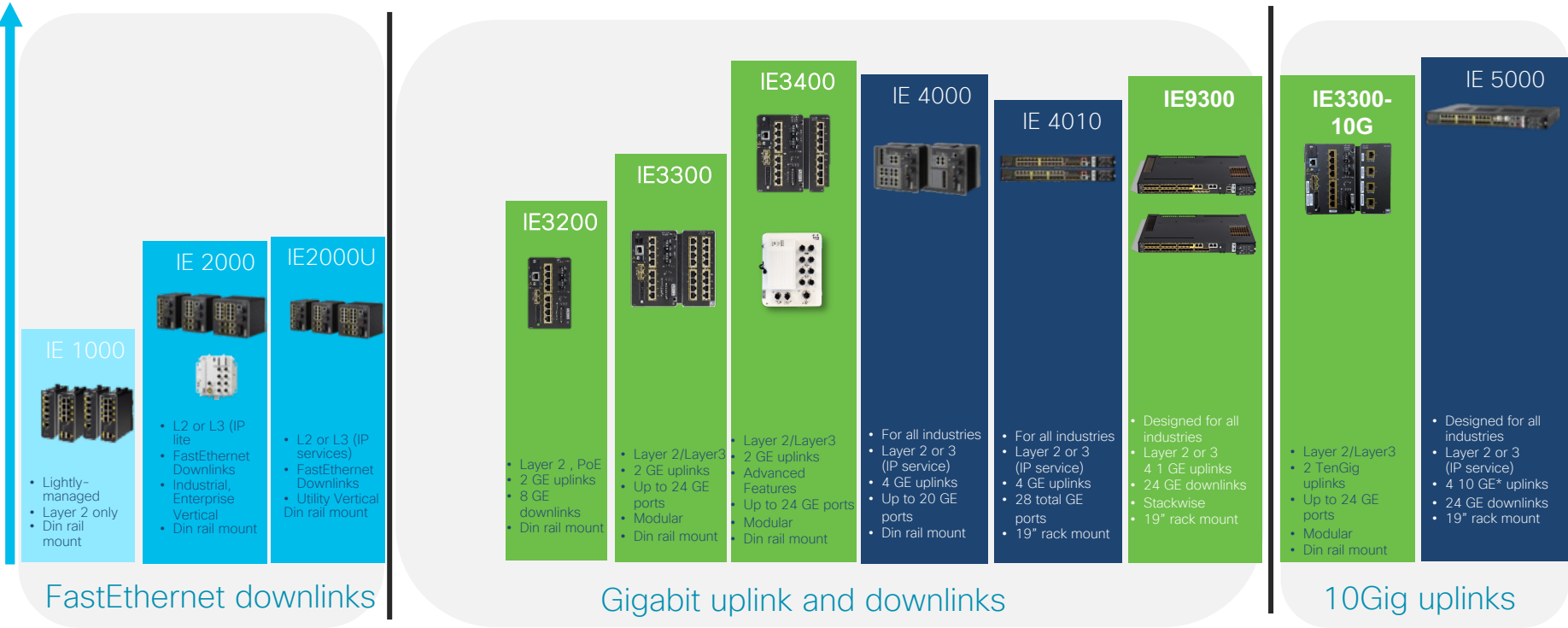
IoT Industrial Switching portfolio

IOS-XE

IOS - IOS

Non IOS

Feature ↑



FastEthernet downlinks

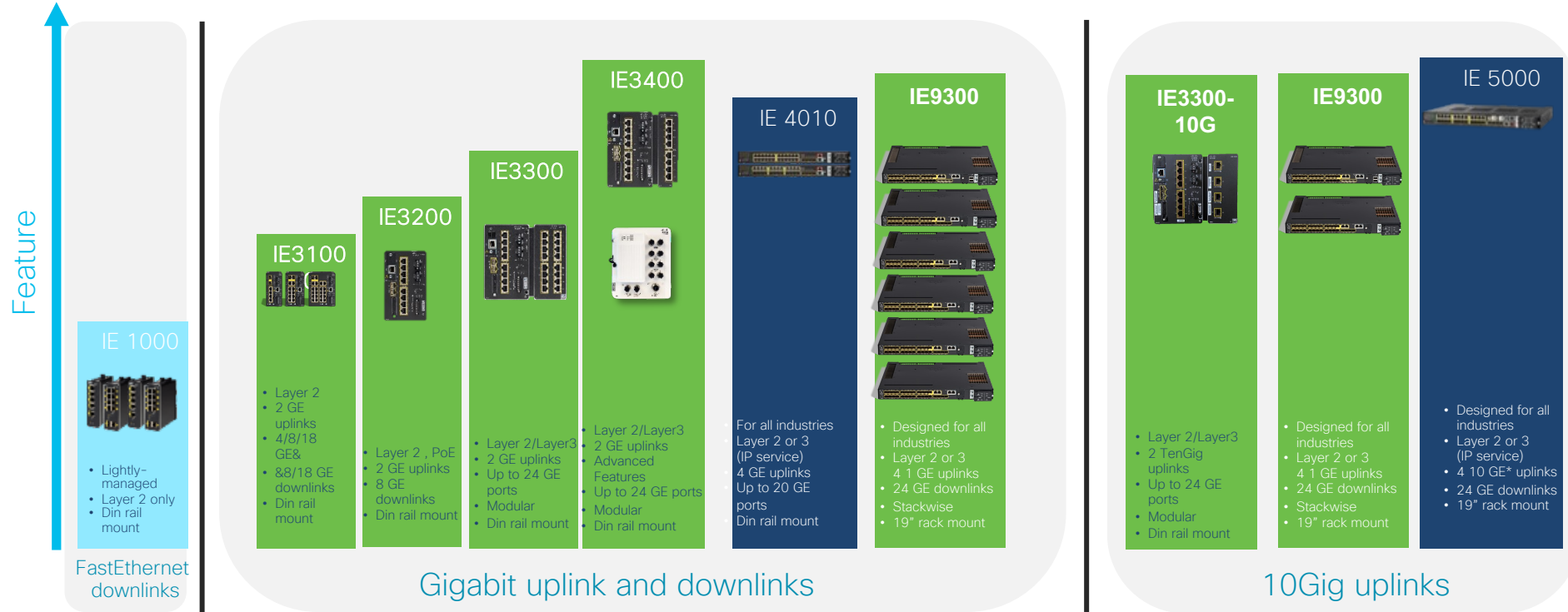
Gigabit uplink and downlinks

10Gig uplinks

IE3400H has FE Model too

IoT Industrial Switching portfolio

IOS-XE
IOS - IOS
Non IOS



IE3400H has FE Model too

Cisco Catalyst IE3x00 switches family

Cisco Catalyst IE3x00 Product Family

The market leading DIN-rail mounted industrial switch portfolio



New

Catalyst IE3100

Designed for machine builders and limited space deployments

- GE speeds
- PTP, REP, MRP*, L2NAT*
- SDA Extended Node**

#Roadmap
* IE3105 only

Fixed Layer 2 industrial switch



Catalyst IE3200

Your entry to power over ethernet industrial networking

- GE speeds
- PTP, REP, MRP
- SDA Extended Node
- PoE+
- MACsec 128-bit



Catalyst IE3300

Modular switch with advanced PoE, asset visibility, and edge compute for app hosting

- GE, mGE, 10GE speeds
- PTP, REP, MRP, L2NAT
- SDA Extended Node
- PoE+, 4PPoE
- MACsec 256-bit
- NetFlow
- Cyber Vision and App Hosting

Modular Layer 3 industrial switch



Catalyst IE3400

Modular switch with advanced PoE, asset visibility, app hosting, and extended security

- GE speeds
- PTP, REP, MRP, L2NAT, DLR, PRP, HSR
- SDA Policy Extended Node
- PoE+
- MACsec 256-bit
- NetFlow
- Cyber Vision and App Hosting
- TrustSec Segmentation



IOS-XE Operating Software



Cisco DNA Center Management



Advanced Visibility and Security

IE 3100

Cisco Catalyst IE 3x00 switches family

Cisco Catalyst IE3100 Rugged Series

Secure and faster connectivity for space constrained use cases



- GigE Speeds
- Dual power inputs
- 802.1x authentication
- SD Card swap drive
- Alarm ports
- L2 NAT*

- PTP time sync
- MRP redundancy*
- Cisco IOS-XE operating system
- Cisco DNA Center management
- Layer 2 port security, downloadable access control lists
- SD-Access extended node*#

Small form factor

Gigabit Ethernet

L2 Switching

Best-in-class security

Catalyst IE3100 Rugged Series

Cisco Catalyst IE3100 Rugged Series SKUs



	IE-3100-4T2S-E	IE-3100-8T2C-E	IE-3100-18T2C-E	IE-3105-8T2C-E	IE-3105-18T2C-E
Total Ports	6 Ports	10 Ports	20 Ports	10 Ports	20 Ports
Downlink Ports	4 GE	8 GE	18 GE	8 GE	18 GE
Uplinks Ports	2 GE SFP	2 GE Combo	2 GE Combo	2 GE Combo	2 GE Combo
Layer 2 Port Security	✓	✓	✓	✓	✓
802.1x NAC	✓	✓	✓	✓	✓
TrustSec SXP	✓	✓	✓	✓	✓
Downloadable ACLs	✓	✓	✓	✓	✓
MRP / PTP / REP	✓	✓	✓	✓	✓
L2 NAT				✓	✓
TSN				✓*	✓*
SDA Extended Node				✓*	✓*



IOS-XE Operating Software



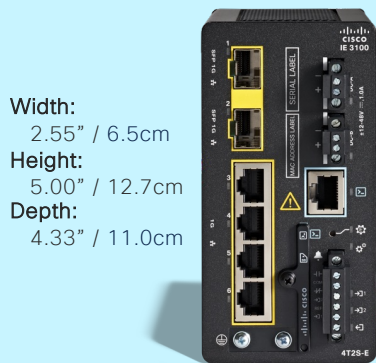
Cisco DNA Center Management



Network Essentials License

Compact size with faster speeds

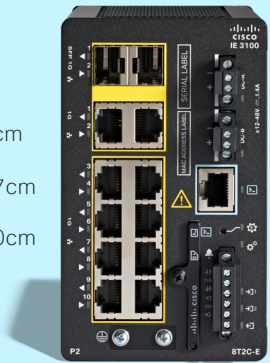
Size comparison with IE2000 Layer-2 Fast Ethernet switches



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

19% Volume Reduction

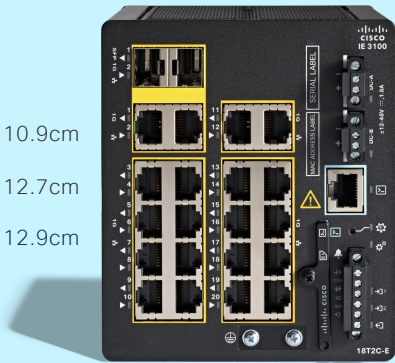
14% Width Reduction



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

Small Form Factor

Gigabit Ethernet

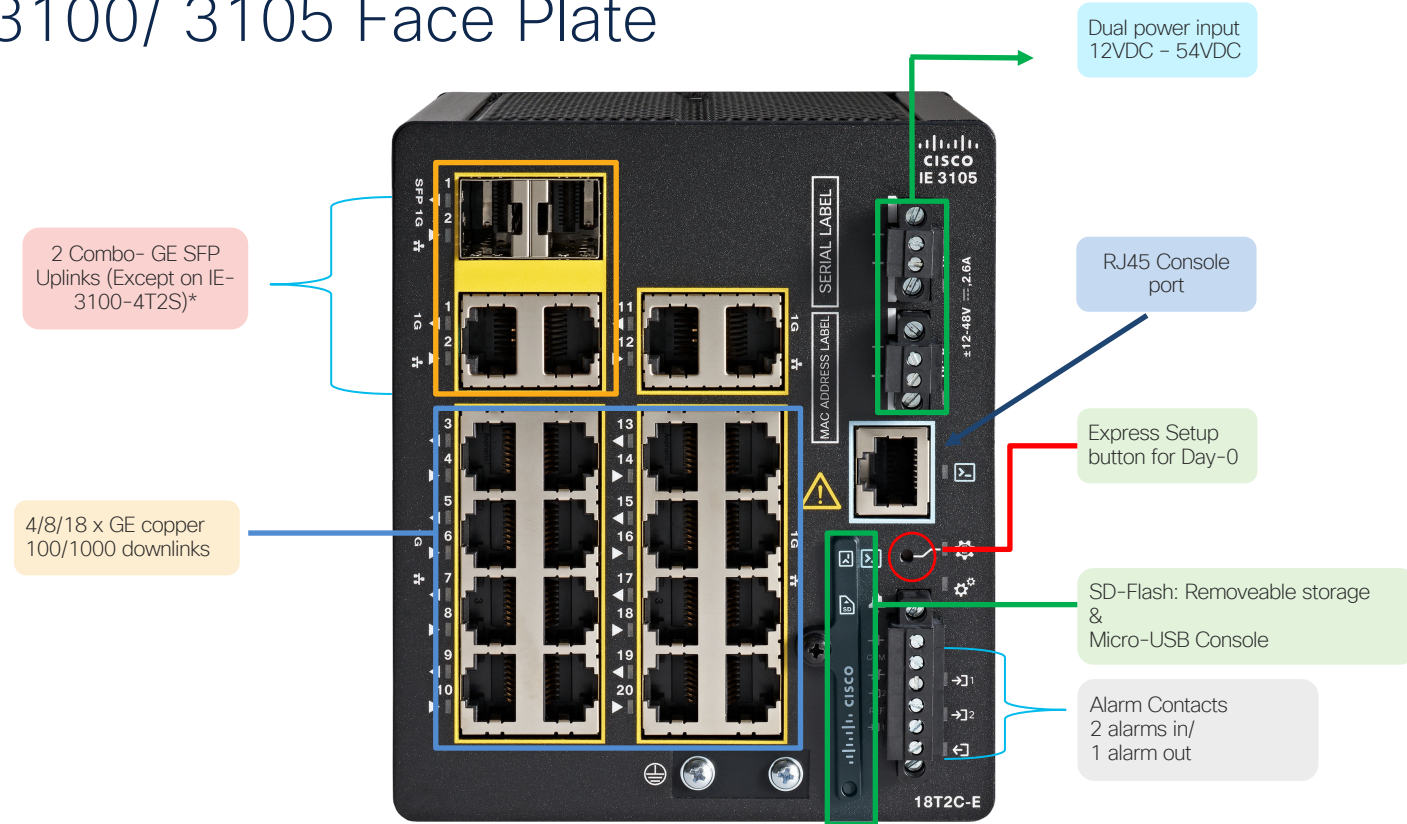
L2 Switching

Best-in-class security

* IE3100-4T2S has 2 Non-combo SFP ports

Hardware

IE-3100/ 3105 Face Plate



Dual-Power Input

- Dual DC Power Inputs with Active – Standby redundancy
- Input range from 9.6 – 60VDC
- Input with the higher voltage supplies all the required power to the switch
- Dual inputs can be both negative or both positive
- Mixing of positive and negative supplies are not allowed
- 3.51mm Terminal block same as IE-2000
- **PoE is not supported**

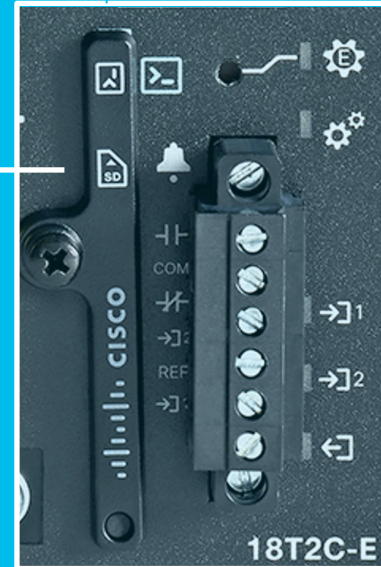
Dual-Power Input



SD-Card Storage

- SDFlash as secondary storage enables zero-touch replacement
- SDFlash contains the bootable IOS image, and all start up configuration files
- SDFlash Capacity : 4GB
- Supports SDSC, SDHC, and SDXC in “High Speed” mode
- SKU ID: **SD-IE-4GB** (does not ship by default with the device, needs to be ordered)

SD-Card Removable Storage



IE3100 Software Features

Common platform features		Industrial automation features	Utility features
SPAN/RSPAN/FSPAN	Static routing (inter-VLAN)	IEEE 1588 PTP default profile	IEEE 1588 PTP power profile (P2P C37.238 2011)
Port Security, Storm Control	DHCP Server, DHCP client	Ethernet/IP (CIP)	
LLDP, LLDP-MED, CDP	VTP, DTP	Configurable alarm input/output (2 in /1 out)	
LACP Fast Rate	Switch integrated security features (device tracking for first hop security)	MRP*	
Auto smart port (phone, camera, AP)	UDLD	PROFINET	
MQC QoS	RMON	MODBUS	
Digital optical monitoring (DOM)	IGMP querier/IGMP snooping		
802.1x	Express setup (use web interface)		
STP, RSTP, MSTP, PVST	Embedded Event Manager (EEM)		
Resilient Ethernet Protocol (REP)	Web Device Manager		
OBFL	Private VLAN		
PNP Agent	Dynamic Address learning		
Dynamic ARP Inspection (DAI)	Config rollback and replace		
SXP			

*Roadmap Feature

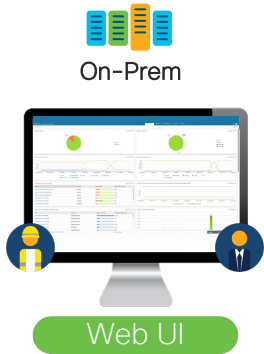
IE3105 Software Features

Common platform features		Industrial automation features	Utility features
SPAN/RSPAN/FSPAN	Static routing (inter-VLAN)	IEEE 1588 PTP default profile	IEEE 1588 PTP power profile (P2P C37.238 2011)
Port Security, Storm Control	DHCP Server, DHCP client	Ethernet/IP (CIP)	
LLDP, LLDP-MED, CDP	VTP, DTP	Configurable alarm input/output (2 in /1 out)	
LACP Fast Rate	Switch integrated security features (device tracking for first hop security)	MRP*	
Auto smart port (phone, camera, AP)	UDLD	PROFINET	
MQC QoS	RMON	MODBUS	
Digital optical monitoring (DOM)	IGMP querier/IGMP snooping	L2NAT	
802.1x	Express setup (use web interface)		
STP, RSTP, MSTP, PVST	Embedded Event Manager (EEM)		
Resilient Ethernet Protocol (REP)	Web Device Manager		
OBFL	Private VLAN		
PNP Agent	Dynamic Address learning		
Dynamic ARP Inspection (DAI)	Config rollback and replace		
SXP	Packet Capture		
SDA Extended Node			

L2NAT

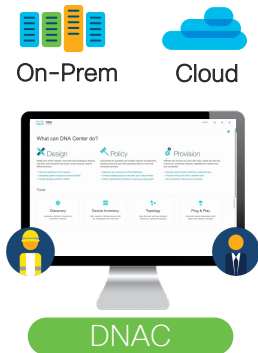
- Layer 2 NAT is a service that allows the assignment of a unique public IP address to an existing private IP address (end device), so that the end device can communicate on both the private and public subnets.
- Layer 2 NAT uses a table to translate IPv4 addresses both public-to-private, and private-to-public at line rate
- This implementation also supports multiple VLANs through the NAT boundary for enhanced network segmentation
- Layer 2 NAT functionality for IE-3105 is in-line with IE-2k.

IE3100 Management Tools



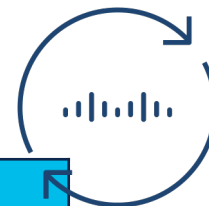
IE3100 Series switches can be managed by both on-box and NMS methods

- IE3100 switches come built in with user-friendly WebUI
- Allows for easy configuration and monitoring even by non specialist
- Reduces the cost of deployment



- IE3100 switches can also be managed by DNA Center, the NMS
- Allows for one common management tool for both Enterprise and OT
- Features like Device discovery, Topology, Inventory and Software Image Management are supported
- IE3100 switches do not support SDA Fabric Extended Node
 - IE3105 Support for SDA Extended Node is roadmap

Feature wise Comparison with IE2000



Feature	IE-2000	IE-3100	IE-3105
REP, MRP	Yes	Yes	Yes
REP over Port-Channel	No	Yes	Yes
DLR	No	No	No
PRP	IE-2000U Only	No	No
L2NAT	Limited SKU's	No	Yes
Licensing	Lan-base, Lan-lite, Enhanced	Network Essentials	Network Essentials
Dynamic routing	Yes	No	No
Trustsec-SXP	Yes	Yes	Yes
PTP	Limited SKU's	Yes	Yes
DNA-C	Yes	Yes	Yes

IE 9300

The new Catalyst IE9300 Rugged Series portfolio

All-fiber and all-copper, high performance, ruggedized industrial rackmount switches

Shipping



IE-9310-26S2C
26x 1GE SFP ports
2x 1GE combo ports

FPGA



IE-9320-26S2C
26x 1GE SFP ports
2x 1GE combo ports
Stackable

5 New Models



IE-9320-24T4X
24x 1GE ports
4x 10G SFP ports
Stackable

FPGA



IE-9320-22S2C4X
22x 1GE SFP, 4x 10G SFP
2x 1GE combo ports
Timing input
Conformal coating
Stackable



IE-9320-24P4S
24x 1GE with PoE/PoE+
Up to 385W PoE budget
4x 1GE SFP ports
Stackable



IE-9320-24P4X
24x 1GE with PoE/PoE+
4x 10G SFP ports
Up to 720W PoE budget
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



PWR-RGD-AC-DC-400
720W of PoE power with 2 PSUs

The most comprehensive industrial rackmount portfolio in the market

IE9300 Power Supply Options

The IE9300 supports existing PSU models used by IE4010 and IE5000

Product Number	Wattage	Rated nominal input operating range	Input voltage operating range
PWR-RGD-LOW-DC-H	150W	DC 24-60V/10A	DC 18-75V
PWR-RGD-AC-DC-H	150W	AC 100-240V 2A 50-60Hz or DC 100-250V 2.0A	AC 85-264V / DC 88-300V
PWR-RGD-AC-DC-250	250W	AC 100-240V 3.3A 50-60Hz or DC 100-250V 3.3A	AC 85-264V / DC 88-300V
PWR-RGD-AC-DC-400*	400W	AC 100-240V 3.3A 50-60Hz or DC 100-250V 3.3A	AC 85-264V / DC 88-300V

* 2nd half CY2023

Available power budget for PoE/PoE+ with different power supplies

Product Number	150W	150W(dual)	250W	250W +150W	250W(dual)	400W*	400W(dual)
IE-9320-24P4S-E/A	70W	190W	170W	280W	370W	320W	385W
IE-9320-24P4X-E/A	70W	190W	170W	280W	370W	320W	720W
IE-9320-16P8U4X-E/A	70W	190W	170W	280W	370W	320W	720W

* 150W and 250W power supplies cannot be used with 400W in load sharing configuration

Compliance Specifications*

Electromagnetic emissions	Electromagnetic immunity	Industry Standards	Humidity, Shock/Vibration, Corrosion
FCC 47 CFR Part 15 Class A EN 55032 Class A VCCI Class A AS/NZS CISPR 32 Class A CISPR 11 Class A CISPR 32 Class A ICES 003 Class A CNS13438 Class A EN 300 386 EN 61000-3-2 Harmonic Current Emissions EN 61000-3-3 Voltage Fluctuations and Flicker KS32	EN55024/EN5035 CISPR 24/CISPR35 AS/NZS CISPR 24 KS35 EN 61000-4-2 Electrostatic Discharge EN 61000-4-3 Radiated RF EN 61000-4-4 Electromagnetic Fast Transients EN 61000-4-5 Surge EN 61000-4-6 Conducted RF EN 61000-4-8 Power Frequency Magnetic Field EN 61000-4-10 Oscillatory Magnetic Field EN 61000-4-11 AC Voltage Dips EN 61000-4-29 DC Voltage Dips	EN 61000-6-2 Industrial EN 61000-6-4 Industrial EN 61000-6-1 Light Industrial EN 61326 Industrial Control EN 61131-2 Programmable Controllers IEEE 1613:2009(class2) Electric Power Stations Communications Networking IEC 61850-3 Electric Substations Communications Networking ODVA Industrial EtherNet/IP ABB Industrial IT Certificate IP30 (per EN60529)	Humidity Relative humidity of 5% to 95% non-condensing IEC 60068-2-3 IEC 60068-2-30 Shock and Vibration IEC 60068-2-6 (Vibration) IEC 60068-2-27 (Shock) IEC 60068-2-31 (Shock) IEC 60068-2-32 (Shock) IEC 60068-2-64 (Vibration) Corrosion IEC 60068-2-52 (salt fog) IEC 60068-2-60 (flowing mixed gas)

Safety standards and Certifications

Information Technology Equipment: UL/CSA 60950-1 EN 60950-1, CB to IEC 60950-1 with all country deviations UL/CUL 62368-1, CB to IEC62368-1 with country deviations NOM to NOM-019-SCFI (through partners and distributor)	Industrial floor (control equipment): CB report and certificate to IEC 61010-2-201 UL/CSA 61010-2-201 CSA C22.2, No.142	Hazardous locations: UL 121201 (Class I, Div 2, groups A-D) CSA 213 (Class I, Div 2, groups A-D) UL/CSA 60079-0, -7 (Class I, Zone 2, Gc/IIC) IEC 60079-0, -7 IECEx test report (Class I, Zone 2, Gc/IIC, ec) EN 60079-0, -7 ATEX certificate (Class I, Zone 2, Gc/IIC, ec)
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*Please refer to product datasheet for complete list of compliance specifications and their current certification status

IE 9300 Scale

L2 Features	
Max MTU	9.6K
# Active VLANs	1024
# VLAN IDs	4096
# Unicast MAC Address	16K
# Virtual Ports	16K
# of Port Channels (L2 or L3)	48
# STP instances (PVST, RPVST+)	128
# MST instances	64
# Q-in-Q SVLANs	128
# Local SPAN	8
# Remote SPAN	8
# UDLD Sessions	150
ERSPAN	2
L3 Features	
# Active SVI	1K
ARP table size	8K
# Direct connected routes (IPv4 /IPv6)	8K
# Indirect connected Routes (IPv4 /IPv6)	4K
# Policy based ACE (PBR)	1024
# VRRP Groups	64
# HSRP Groups	64
# VRFs	16
# OSPFv3 Peers	250
# RIPv2 Peers	250
# GRE tunnels	10

Multicast	
L2 Multicast	1K
L3 Multicast (IPv4/IPv6)	1K
Stacking	
# Stack members	3
Stack Bandwidth (front panel)	80G
Security	
# Authentication Sessions	1200
# IPv4/IPv6 Security ACE (PACL, VACL, RACL)	1408 (1.2K v4 / 600 v6)
# DHCP snooping entries	4K
# IPSG entries	4K
QoS	
Packet Buffer	48 / 6 MB
Egress Queues per port	8
# IPv4/IPv6 QoS ACEs	1k (1k v4 / 512 v6)
Application-level Policers	1k (1k v4 / 512 v6)
Micro Policers	1k (1k v4 / 512 v6)
Ingress NetFlow Entries	16K
Egress NetFlow Entries	16K
SGT/DGT	2K
Input Netflow ACE	128
Output NetFlow ACE	128

IE9300 Software & Licensing

IE9300 Key Supported Features per License

Network Essentials	Layer 2 Switching	802.1q, 802.1w, 802.1ab, 802.1s, 802.3ad, PVRST+, PVST+, RPVST, RSPAN, SPAN, STP, Storm Control, VTP v2/v3, 802.1Q Tunneling, L2TP, QinQ, Selective QinQ, EtherChannel	Quality of Service	802.1p, priority queuing, MQC, class based shaping & marking, egress policing, egress queuing and shaping, auto QoS, DSCP mapping and filtering, Low Latency Queuing
	Multicast	IGMP v1/v2/v3, IGMP Snooping, MLD Snooping	Layer 3 routing (Limited Scale)	Static routing, OSPF, OSPFv3, RIP, PBR
	Management	WebUI, MIB, SNMP, syslog, DHCP server, NETCONF, Embedded Event Manager (EEM), PnP, Express Setup	Industrial Ethernet	Locate Switch, SwapDrive, GOOSE Messaging, SCADA Protocol Classification, PTP Default Profile & Power Profile 2011, Power Profile 2017 , NTP to PTP, BFD, IOx (App hosting) , ModBus TCP
	Security	DHCPv6 Guard, IP Source Guard, IPv6 Destination Guard, IPv6 Neighbor Discovery Multicast Suppress, IPv6 Router Advertisement (RA) Guard, IPv6 Snooping, IPv6 Source/Prefix Guard, IPv6: Neighbor Discovery Duplicate Address Detection, Flexible Netflow, PACL, VACL, NEAT, HTTPS, RADIUS, TACACS+, X.509v3, Secure Shell SSH, DHCP Snooping, 802.1x, CISP, DAI, AAA, SCP, L2NAT, IEEE 802.1AE MACsec-128	Redundancy	Resilient Ethernet Protocol (REP) ring, Fast REP, HSR^{1,2}, PRP², MRP¹
Network Advantage	Layer 3 Routing	HSRP, BGP, EIGRP, IS-IS, MBGP, NSF	Automation	YANG, NETCONF, RESTCONF
	Virtualization	VRF-Lite	Security	Cisco TrustSec – SGACL, SGACL Logging, EAP-TLS, IEEE 802.1AE MACsec-256, L3NAT
			IP Multicast	AutoRP, MSDP, PIMv2, IPv6 Multicast with VRF-Lite support

¹ Support planned / Roadmap

² Supported on IE-9320-26S2C and IE-9320-22S2C4X ONLY

IE9300 DNA Center Licenses

Feature	Description	Cisco DNA Essentials	Cisco DNA Advantage
Cisco DNA Center	Discovery, topology, inventory, software image management	Yes	Yes
Visibility	Overall Health Dashboard, Full Flexible Netflow	Yes	Yes
Day-zero network bring-up automation	Cisco Network Plug-and-Play application	Yes	Yes
SD-Access Extended Node	SD-Access fabric overlay extension	Yes	Yes
LAN Automation	Lan automation helps create error-free underlay network for SDA deployments	No	Yes
SD-Access Policy Extended Node	SD-Access fabric overlay extension and segmentation	No	Yes
SD-Access Fabric Edge Node	A fabric device that connects wired endpoints to the SDA fabric.	No	Yes
Device 360	Device 360, Client 360, and Network Health Insights	No	Yes
Patch/SMU Lifecycle Management	Management of Software Maintenance Upgrades (SMU) or Patches via Cisco DNA Centre	No	Yes
Application Visibility & Control (NBAR2)	Provides application-level classification, monitoring, and traffic control	No	Yes

- Cisco DNA licenses for Industrial Ethernet switches are
 - Subscription based

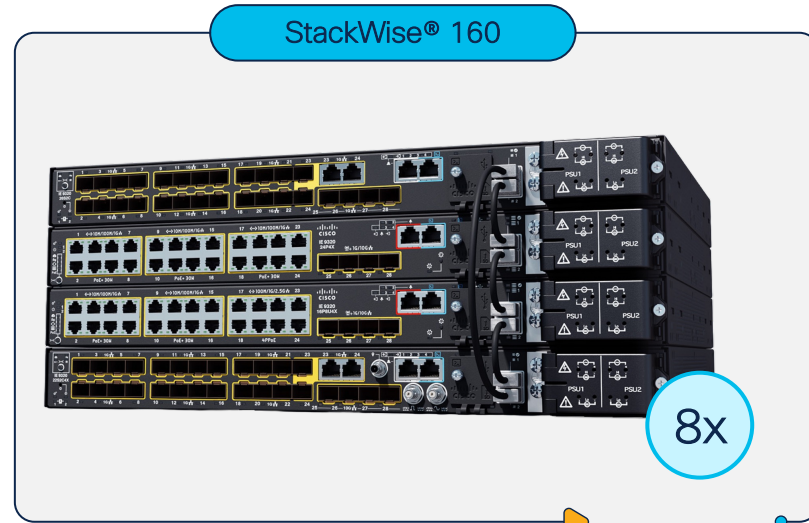
- add-on/optional and not mandatory
- Cisco DNA Advantage License can only be paired with Network Advantage License**

Product ID	Description
IE9300-DNA-E	Cisco DNA Essentials License for IE9300
IE9300-DNA-E-3Y	Cisco DNA Essentials, 3 Year Term License
IE9300-DNA-E-5Y	Cisco DNA Essentials, 5 Year Term License
IE9300-DNA-E-7Y	Cisco DNA Essentials, 7 Year Term License

Product ID	Description
IE9300-DNA-A	Cisco DNA Advantage License for IE9300
IE9300-DNA-A-3Y	Cisco DNA Advantage, 3 Year Term License
IE9300-DNA-A-5Y	Cisco DNA Advantage, 5 Year Term License
IE9300-DNA-A-7Y	Cisco DNA Advantage, 7 Year Term License

IE9320 Stacking

- Hardware is capable to support up to 8 members
- Currently, 3 members stack is supported
- 4 members stack support on roadmap - 17.13.1 (Nov 2023)
- All IE-9320 Series models support stacking. Mixing of copper & fiber models is allowed
- Stacking supported by DNAC release 2.3.6
- A switch stack **cannot contain a mix of different license levels**
- Do not support:
 - *Dying Gasp*
 - *PTP, PRP*
 - *SD Card for zero touch replace. Not needed with stacking*
 - *Profinet, CIP*



Industrial Routing

A complete portfolio

Secured and optimized for *every* use case

Demanding, mission critical deployments

Embedded / versatile deployments

ATMs, low voltage substations,
roadside traffic cabinets

Remote monitoring,
streetlights, intersections

Embedded solutions for Routing, Switching
and Wireless



Fleet, first-responders, pipelines

Factory, high voltage substations

IoT Industrial Modules



LTE Innovations & Pathway to 5G

FY2022



Shipping

**Private LTE/CBRS,
Public Safety with
FirstNet B14
(CAT18 LTE)**

P-5GS6-GL 8

Shipping

**Public Safety with
FirstNet Band 14
(Cat 4 LTE)**

P-LTEAP18-GL 7

Shipping

**Video
surveillance
(Cat 6 LTE)**

P-LTE-MNA 6

Shipping

**SCADA &
Telemetry
(Cat 4 LTE)**

P-LTE-EA 5

P-LTE-LA 4

P-LTE-GB 3

P-LTE-US 2

P-LTE-VZ 1 P-LTE-450*



LTE module shared with Cisco ISR 1100
New - LTE 450 MHz

LoRaWAN PIM

- LoRaWAN Pluggable Interface Module for IR1101
 - Base and extension module
 - P-LPWA-800: regions conforming to EU868, IN865
- Based on Semtech "Corecell" ref design (SX1303)
 - LoRaWAN Class A, B (roadmap), and C support
 - 8 channels
- IOS-XE 17.10 support – LoRa Forwarder as a container application
 - Actility ThingPark LRR
 - "Common Packet Forwarder" (Semtech Basic Station)
- Antennas: LoRaWAN and GNSS



IR 1101

IR1101 - The Next Generation Industrial ISR

First IoT Router with IOS XE High-end security Programmability



Top/Bottom Modules for additional interfaces



Edge computing enabled 100G SATA



IOS-XE unified image 17.2.1r Classic IOS and SDWAN



Modular LTE (public/private) & 5G Ready*



Low average Power consumption of only 10W



Compact form factor for Din-rail installations



Investment protection



Lower TCO



Extended product life time



Enhanced IoT OD support for Expansion modules

- IR1101 Serial Module support (IRM-1100-4A2T)

Model 1: IRM-1100-SP



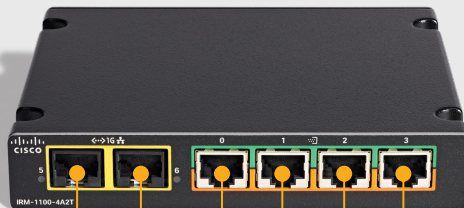
Second SFP
GE WAN

Slot for second
module

Model 2: IRM-1100-4A2T

Now supported in IoT OD
with Form-based (eCVD) config (Jan'23)

NEW!



2x Gigabit
Ethernet LAN

4x Asynchronous Serial
RS232/RS485/RS422

Model 3: IRM-1100-SPMI



IO ports

Second SFP
GE WAN

mSATA slot

Slot for second
module

IoT Wireless

(WiFi, Cisco URWB, LoRaWAN – IAV)

Industrial Wireless (IW) Portfolio

Expanding the 802.11ax and URWB portfolios

Catalyst IW9165E Wireless Client and Access Point

Compact wireless client enabling industrial vehicles to connect to ultra reliable wireless networks, even when on the move.



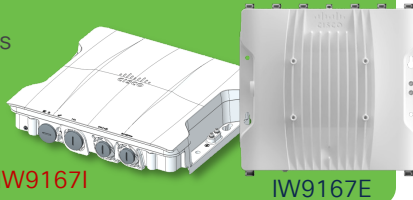
Catalyst IW9165D Access Point

Heavy-duty access point to easily build your wireless backbone and extend your network to fixed and mobile assets.



Catalyst IW9167 Access Points

Outdoor and industrial access point for heavy duty applications with a tri-radio including 6GHz hardware support.



IW9167I

IW9167E

IEC6400 URWB Gateway

High performance computing appliance for large-scale URWB networks.



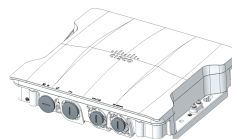
Cisco Catalyst 802.11ax Industrial Wireless Portfolio



IW9165E



IW9165D



IW9167I



IW9167E

Application	Wireless client for mobile assets	Wireless backhaul for fixed and mobile assets	Outdoor and Industrial Heavy-duty Wireless AP	Wireless backhaul for fixed and mobile assets
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, 6GHz	(3) 4x4 802.11ax radios 2.4GHz, 5GHz, 5/6GHz
Antenna	(4) RP-SMA (f)	Internal 15dBi directional plus (2) N-Type (f)	Internal Omnidirectional 5-6 dBi	(8) N-Type (f)
Wireless Mode	WGB or URWB	URWB	WiFi AP	WiFi AP, WGB, or URWB
Ethernet	(1) 2.5Gbps RJ45 (1) 1Gbps RJ45 Optional M12 adapter	(1) 2.5Gbps RJ45 (1) 1Gbps RJ45 Optional M12 adapters	(1) x 5Gbps RJ45 (1) SFP+ Optional M12 adapters	(1) 5Gbps RJ45 (1) SFP+ Optional M12 adapters
Expandability	BLE, GNSS, GPIO	BLE, GNSS	BLE, GNSS	BLE, GNSS
Certifications	IP30, EN50155 -20C to +50C	IP67 -40C to +70C	IP67 -40C to +70C	IP67, EN50155 -50C to +75C

IW3702 End of Sale Announcement

- End of Sale Announcement Date:
February 15, 2023
- End of Sale:
August 16, 2023
- Last Date of Hardware Support:
August 31, 2028
- Replacement: IW9167EH
- Refer to EOL13878



What is Cisco URWB? (former Fluidmesh)



Prodigy 2.0

MPLS-based transmission protocol built to overcome the limits of standard wireless protocols



Fluidity

Proprietary fast-roaming protocol for vehicle-to-ground communication with no roaming loss at high speed (360km/h).

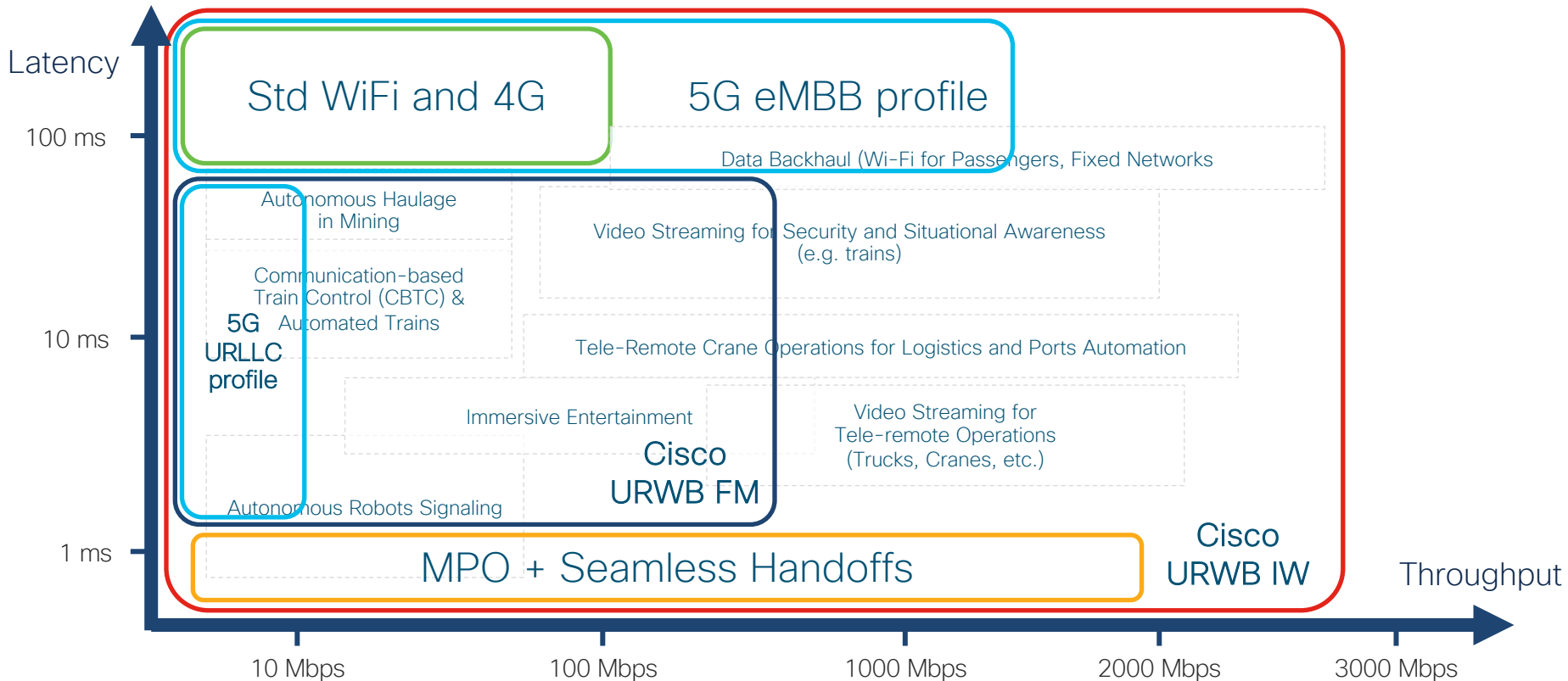


TITAN

Proprietary fast-failover (high availability) mechanism, it provides hardware redundancy and carrier-grade availability.

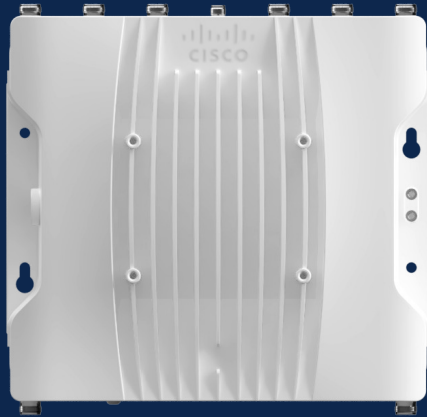
- An overlay technology that emulates a virtual switch over wireless links
- Extends your network to fixed and mobile locations
- Layer 2 switching or Layer 3 (for advanced mobility architectures)
- Supports VLANs and QoS

IoT Applications requirements vs technology



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 (f)
- Tri-data-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/BLE radio



Wireless backhaul (Cisco URWB)

OR

Wi-Fi 6E access point



Different management choices for different needs

Wi-Fi 6E



Pair with Cisco DNA Center for analytics and more efficiency

Manage network end-to-end

Cisco URWB



Local management with device GUI and CLI



IoT OD deploy offline and local management

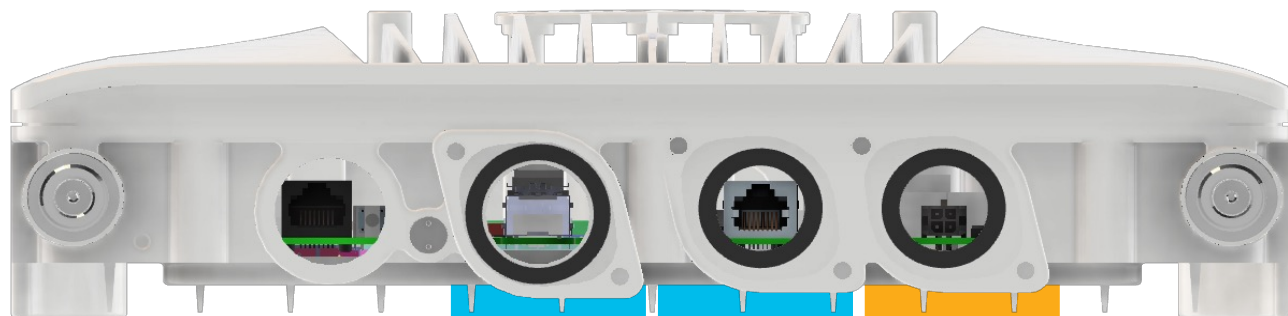


Cloud management via IoT OD

Different options depending on industry needs

Cisco URWB FM devices will continue to use RACER

Optional M12 Adapter



Maintain IP67 Rating



Vibration rated for rail (EN50155)



GLC-TE
+
M12 X-Code
Adapter



M12 X-Code
Adapter



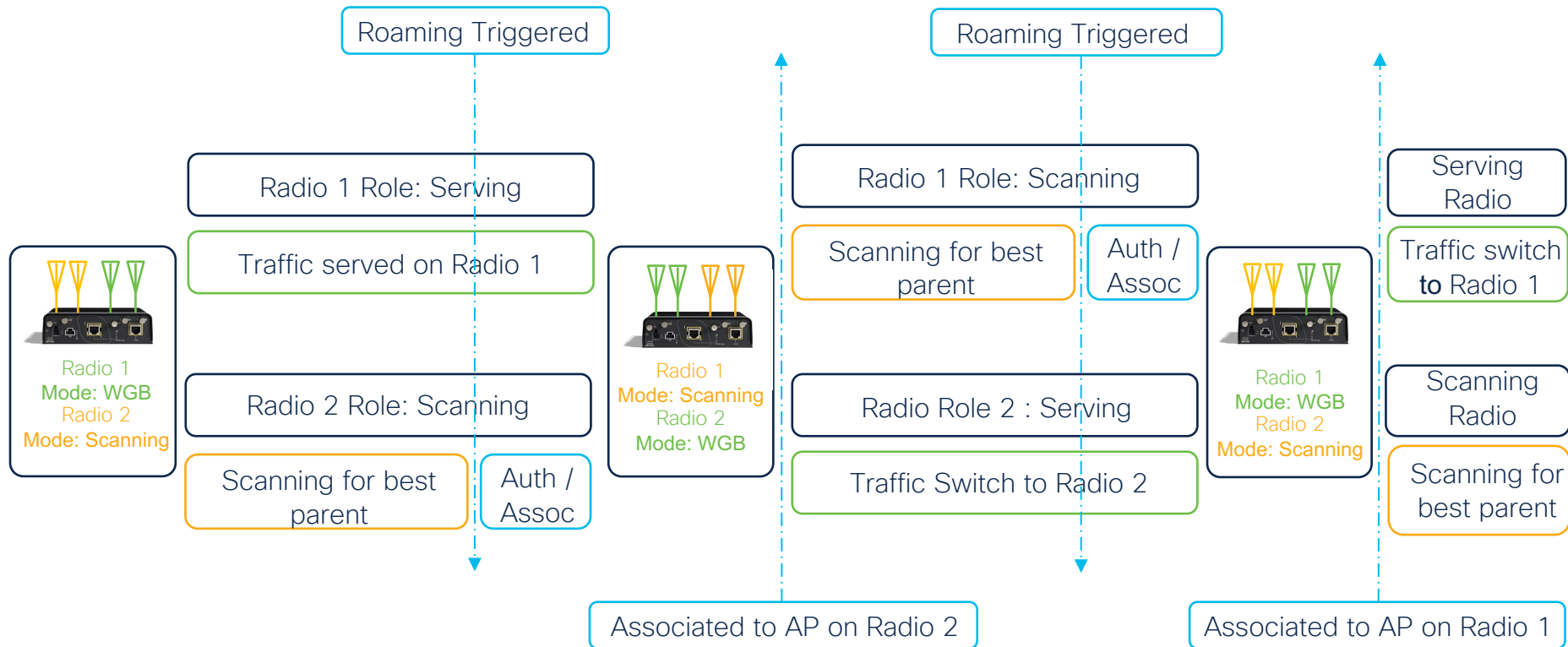
M12 A-Code
Adapter

What's new in Release 17.13

Release 17.13 (CCO: Nov '23)

- IW9165E – WGB, uWGB
- Dual Radio Scanning Enhancements
- IW916x WGB L2NAT
- Enhanced Logging

Dual Radio Scan Handoff



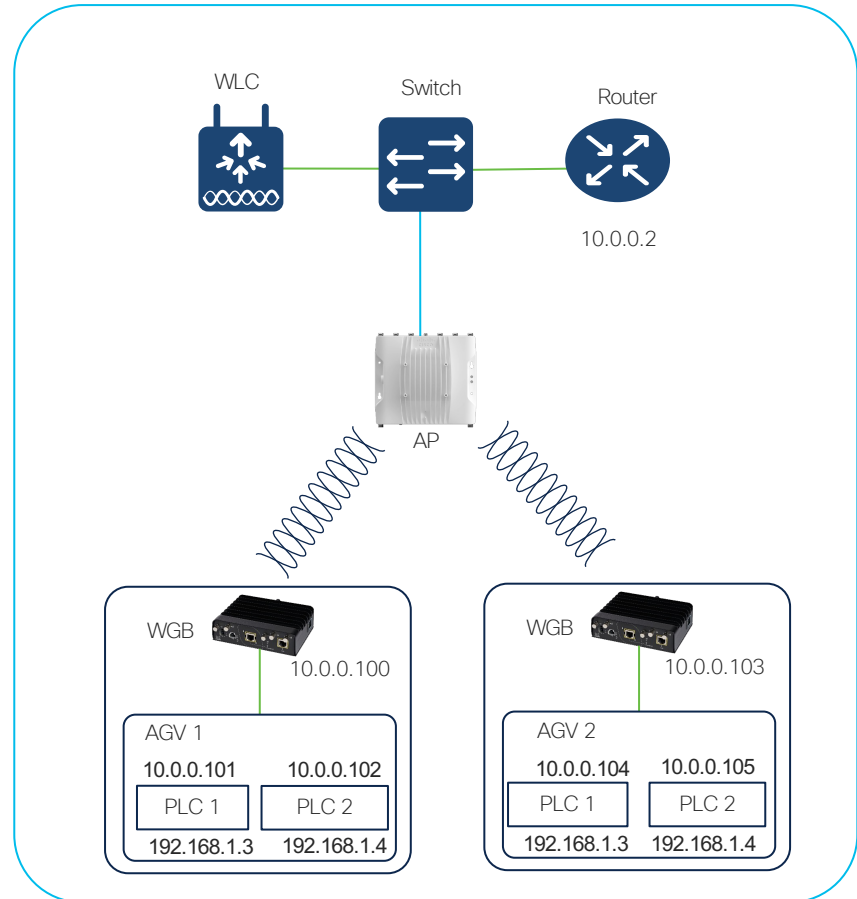
WGB L2NAT

Problem:

- Multiple components with same private IP addresses
- Cannot stop using SW using hardcoded IP Addresses

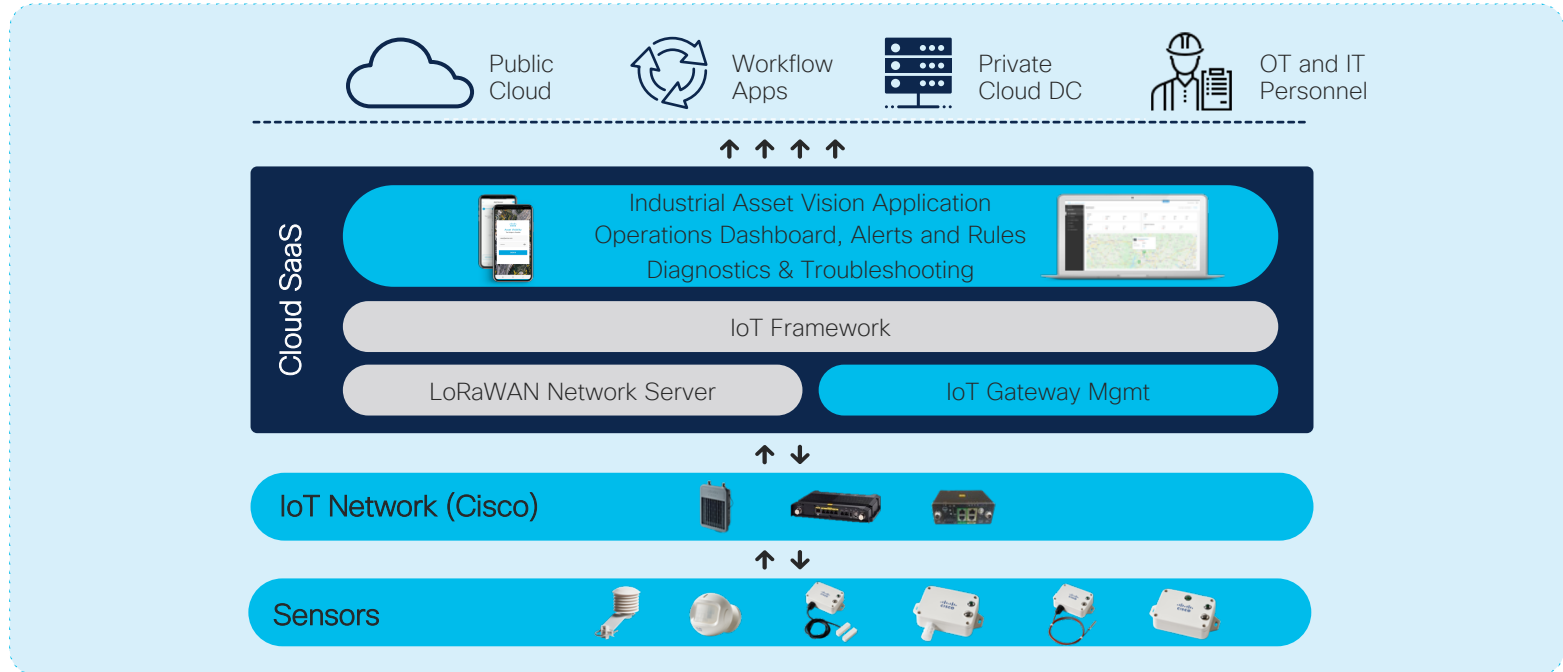
Solution:

- Assign unique Public IP to existing private IP
- **Access wired client customer machines like Robot via public network**



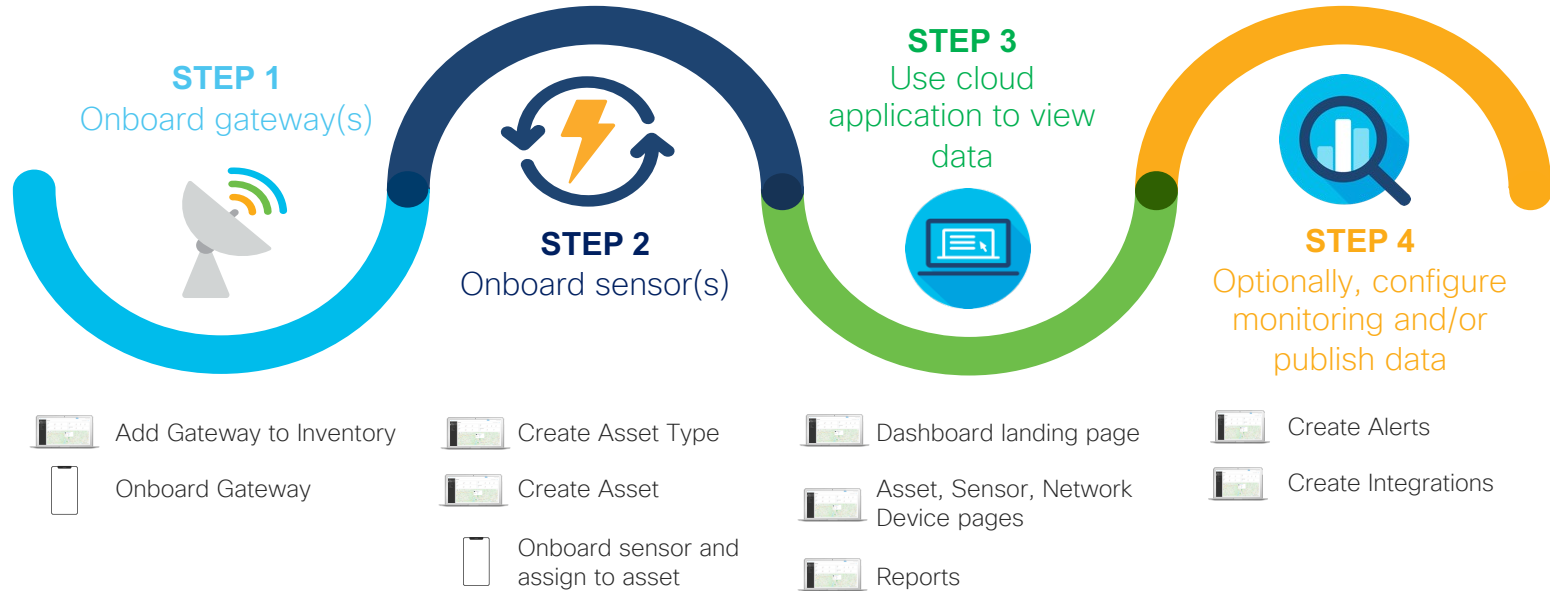
Industrial Asset Vision (IAV)

IAV Technology Stack

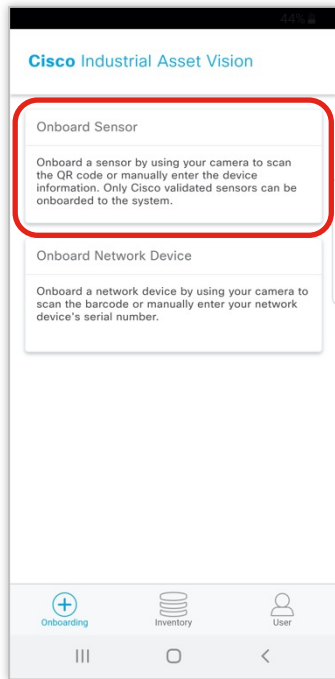


Industrial Asset Vision

Simple initial deployment journey



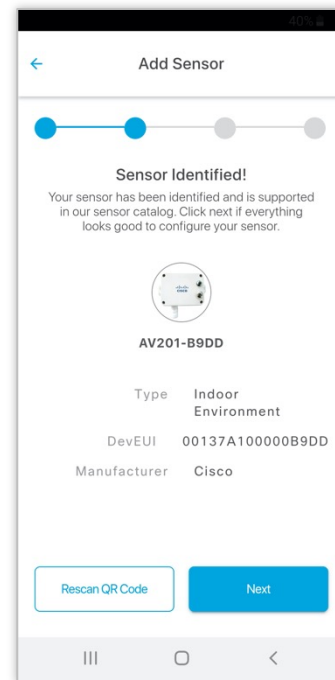
Adding a Sensor Onboard using Mobile App



Select "Onboard Sensor"



Scan QR code on back of sensor.



Confirm that this is the sensor you want to onboard.



Cisco Industrial Asset Vision sensors

A variety of options for telemetry and location tracking

Monitoring Environments



AV206
Light



AV200
Outdoor Temp



AV201
Indoor Temp



AV207
Occupancy



AV204
Door/Window



AV205
Water Leak

Monitoring Assets



AV250
Machine Temp



AV251
Machine Vibration



AV300
Geolocation



AV202
Product Temp



AV203
Refrigeration

Telemetry Sensor Reference Page

Sensor	Report on State change?	Default Reporting Interval	Expected Battery Life
AV200 (Outdoor temp)	-	60 mins	4 years
AV201 (Indoor temp)	-	15 mins	5 years
AV202 (Product temp)	-	15 mins	5 years
AV203 (Refrig temp)	-	15 mins	5 years
AV204 (Door open/close)	Yes	60 mins	5 years (~100 triggers/day)
AV205 (Water leak)	Yes	60 mins	5 years
AV206 (Light)	-	15 mins	5 years
AV207 (Occupancy)	Yes	60 mins	2.5 years (~100 triggers/day)
AV250 (Machine temp)	-	15 mins	4.8 years
AV251 (Machine vibration)	-	60 mins	3 years

GPS sensor reports as follows:

State	Reporting Interval
"In Trip"	15 mins
"Out of Trip"	24 hours

AV251: Vibration Sensor



- Useful for indicating premature equipment failure, excessive vibration, and operation outside of design conditions.
- Water pumps, blower ventilation motors, industrial compressors, conveyor motors, etc.
- Reporting of following (per axis, XYZ)
 - Acceleration (RMS and Peak)
 - Velocity (RMS)
 - Displacement (peak-to-peak)
 - Statistical derivations: Skewness, Kurtosis, Standard Deviation, Crest Factor
- Temperature measurement at base of sensor
- Bandwidth: 10Hz – 1kHz; Amplitude: +/- 16g
- Battery powered (2 AA ER14505)
- Battery life: 2 years (1 update per hour)
- IP66
- Operating temp: -20 – 85C

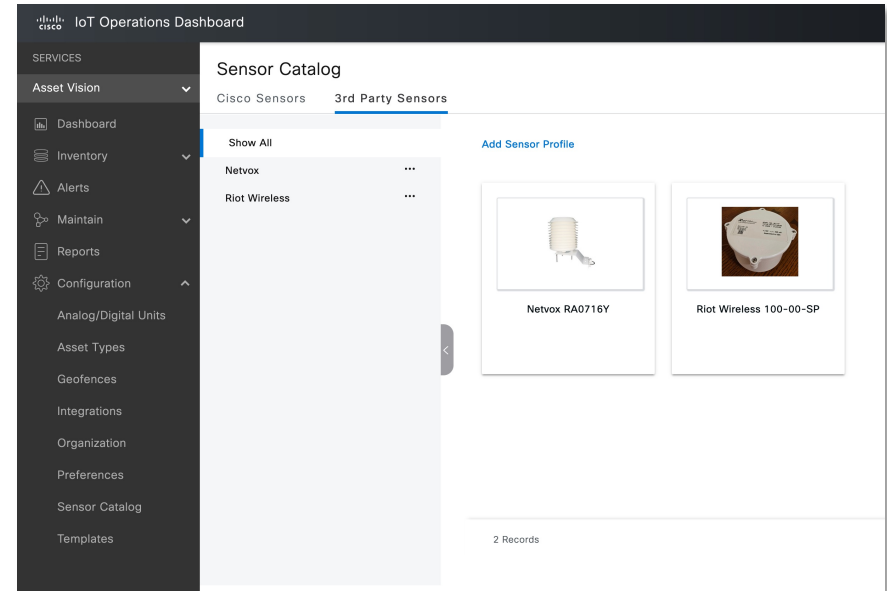
AV400: Industrial Sensor Bridge



- Connects to 3rd party industrial sensors which output a voltage, regulate a current loop, or output a digital signal.
- These 3rd industrial sensors exist for almost anything imaginable... tank level, air quality, proximity detection, pressure, electrical current...
- Four analog inputs
 - (2) for current (4-20mA)
 - (2) for voltage (0-10V, 1-5V, etc.)
- Two digital inputs
 - Discrete measurements (1 or 0)
- Line powered by 9-36Vdc
 - External, 3rd party sensors need to be powered separately
- IP66
- Operating temp: -40 – 75C
- External antenna
- 12.7 mm (1/2") connector for conduit or cable gland (not included)
- Default reporting interval: 15 minutes

Support for 3rd Party Native LoRaWAN Sensors

- Users can now add 3rd party sensors to their tenant's sensor catalog
- Sensor attributes, like DevEUIs/AppKeys, can be entered manually or bulk-imported via CSV file.
- Sensors can then be onboarded by installers using the IAV mobile app.
- There is no payload decoding of 3rd party sensors done today, but raw payload is passed via MQTT integration for external decoding.
 - As such, visualization of data occurs outside of IAV.
 - Ability to embed javascript-based decoder within IAV is currently being developed.
- Sensors should be LoRa Alliance certified to receive TAC support on the IAV side.
- Currently support Class A sensors, LoRaWAN versions 1.0.x, using OTAA method of activation



Management & security
IoT OD, FND, Cyber
Security

Cisco Catalyst Industrial Ethernet switches

Manage with tools familiar to IT

Leverage your existing knowledge and investments



Reduce downtime

Improve network visibility and performance with AI/ML and machine reasoning



Increase efficiency

Automation and workflows simplify, empower, and streamline network management



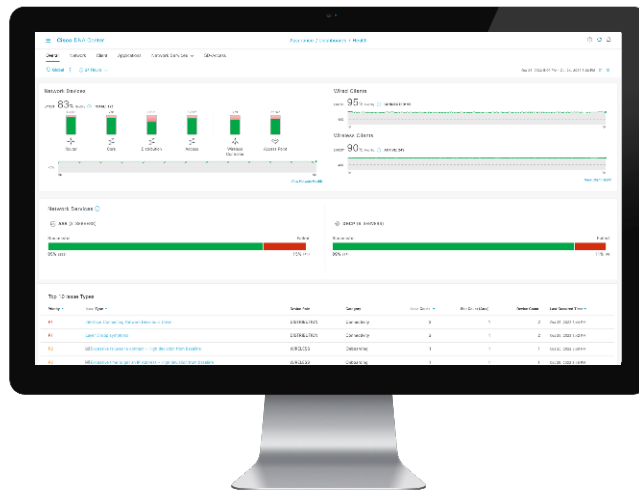
Stay compliant

Track updates, ensure SW images comply, and remain aware of security updates



Cisco Catalyst Industrial Networking
EoS - IND

Catalyst Center
(Cisco DNA Center)



Streamline and secure operations networks with a modern, intelligent, and proven network controller

Management Tools



OT Operated

Controls Engineer
T&D Engineer
Mass Transit Operator



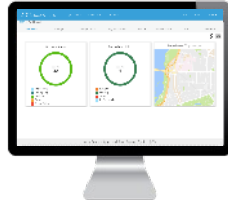
On-Prem



IoT-FND



Cloud



IoT-OD



On-Prem



Cloud



DNAC



On-Prem



Cloud



SD-WAN



IT Operated

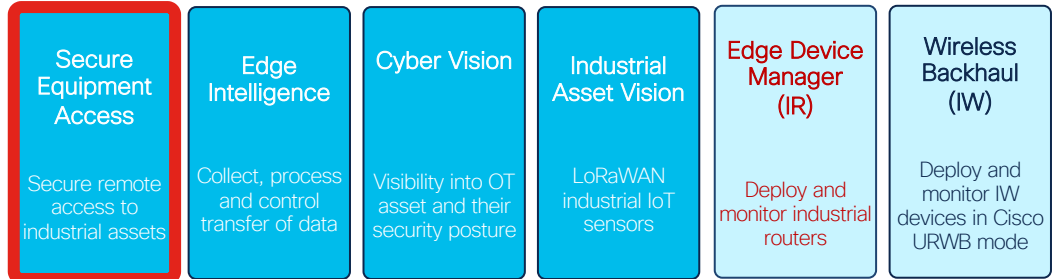
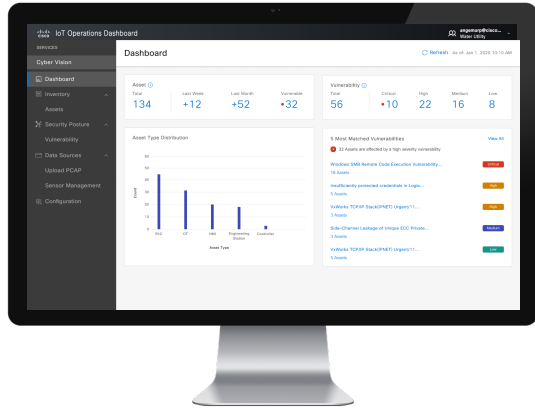
Network Administrator
IT Administrator

Config template	CLI Based	GUI Based	CLI Based	GUI Based
RBAC	Comprehensive	Basic	Basic	Basic
Wi-SUN Mesh	✓	✗	✗	✗
Remote Site (Extended Ent)	✗	✗	✓	✓
Edge Compute	✓	✓	✗	✗
SCADA	✓	✓ Custom template	✓ Custom template	Future roadmap

Common features: ZTD, Gateway Lifecycle Management, GIS Map, Real-Time Asset Tracking/Playback, Geo Location, Geo Fencing Events/Alerts, Multi-tenancy, App Management, Cellular connectivity Metric

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 Equipment Asset (SEA & SEA+)

Existing options are either security backdoors or come with many trade-offs



Ad-Hoc Software

Often installed on operator workstations

Backdoor to IT security policies



Cellular Gateways

Dedicated hardware installed by machine builders

Backdoor to IT security policies



VPN

Always-On, All-or-Nothing access

Need additional controls to deny full network access



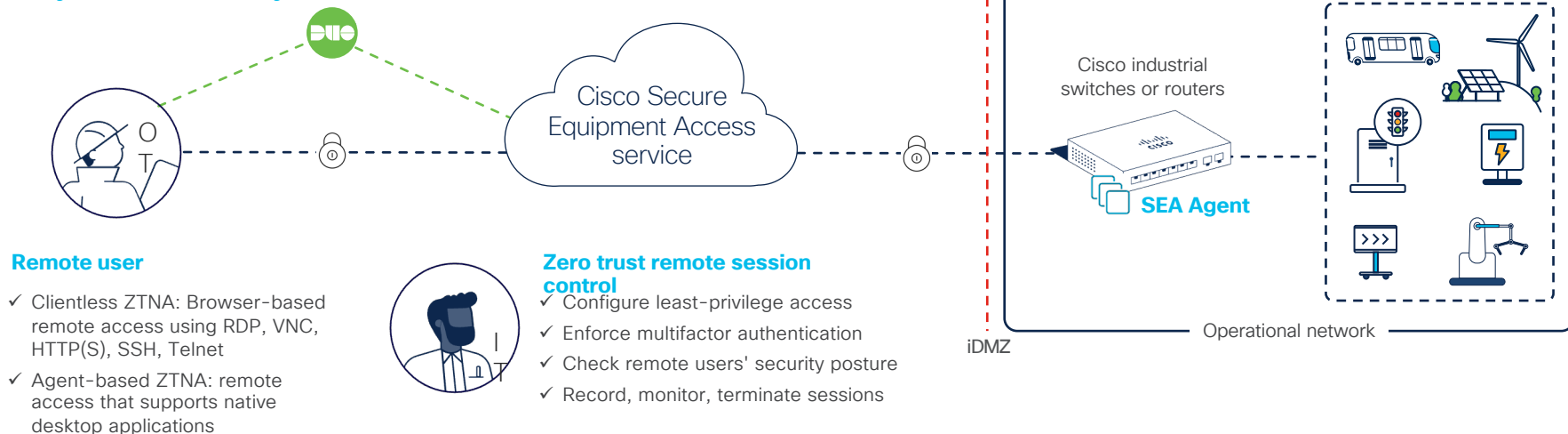
ZTNA deployed in iDMZ


Provides controlled identity and context-aware access

Challenging to deploy in industrial settings

Cisco Secure Equipment Access

Empower OT teams to easily perform remote operations while enforcing strong zero trust cybersecurity controls



 **Cloud simple**
Accelerate time to value

 **Cisco secure**
Built to keep operations safe

 **Designed for OT**
Drive business outcomes

 **Highly scalable**
Cloud + network working together

Platforms that support SEA Agent

SEA Agent is the ZTNA gateway function embedded in network platforms



Industrial Switches



SEA Agent

IE3300, IE3400

Roadmap



SEA Agent

IE3400H

Roadmap



SEA Agent

IE3100

SEA Agent



Roadmap

IE9300

Industrial Routers



SEA Agent

IR1101



SEA Agent

IR1800

SEA Agent



Roadmap

IR8300

SEA Licensing overview

- SEA is a SaaS offer
 - Recurring subscription of 1, 3, 5 or 7 year terms
 - Licenses are available for SEA Essential or Advantage tiers
 - Billed quarterly, monthly, annually or pre-paid term basis
- Metering is based on Asset (endpoint) count
 - One SEA license per configured OT Asset in SEA service
 - Licenses are considered a shared pool in customer smart account.
 - No extra cost for additional SEA Organizations, SEA agent software or SEA Plus capabilities
 - Each SEA license allows up to 1GB/month traffic (data per OT Asset)
- SEA license includes Basic software support

Secure Equipment Access License Tiers

SEA Essentials (SEA-E)

Platform capabilities

- Multi-tenancy
- Multifactor Authentication (MFA)
- Single Sign-On (SSO) for on-prem or cloud IdPs
- RBAC with pre-defined and custom roles

Access methods

- Clientless ZTNA (Web-browser based): HTTP/HTTPS, RDP, VNC, SSH, Telnet
- Agent-based ZTNA: SEA Plus

Resources isolation and just-in-time access control

- Access Control Groups (ACG)
- Scheduled Access in ACG

SEA Advantage (SEA-A)

Includes Essentials features, plus:

Active session monitoring and actions

- Active session monitoring panel
- Session supervision (join)
- Session termination

Information for Session Audit

- Session history panel
- Inline Session recording (AWS S3 storage required)

Improved security posture for SEA Plus

- User's host security posture check via Duo (Duo account required)

Cyber Vision 4.3

Cisco Cyber Vision

Asset Inventory & Security Platform for the Industrial IoT



ICS Visibility

Asset Inventory
Communication Patterns
Device Vulnerability



Operational Insights

Identify configuration changes
Record control system events
relevant to the integrity of the system



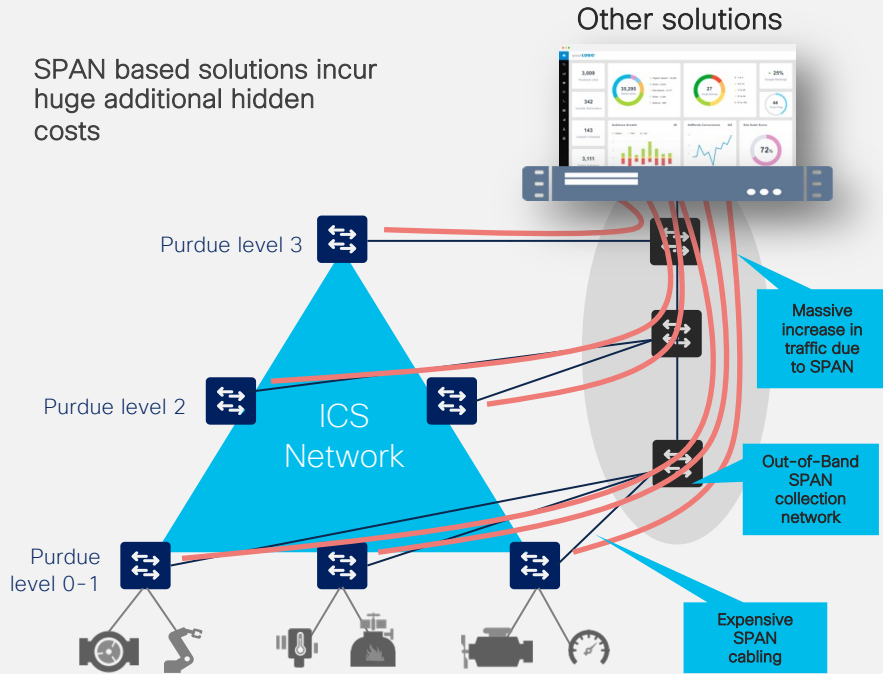
Threat Detection

Behavioral Anomaly Detection
Signature based IDS
Real-time alerting

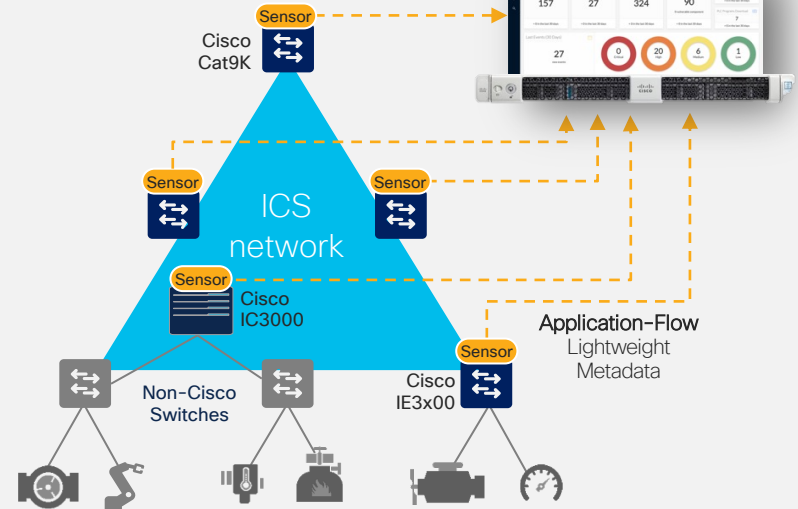
Cisco Cyber Vision helps companies protect
their industrial control systems against cyber risks

Why is a network sensor important?

SPAN based solutions incur huge additional hidden costs



Easy deployment
Low TCO



The role of the Cyber Vision Sensor

Collects Industrial Network Traffic



Captures industrial network flows (passive) and queries devices (active). Stores data locally in case the Center is not accessible

Decodes Industrial Protocols (DPI)



Understands most OT and IT communication protocols to analyze packet payloads and extract meaningful information

Sends Metadata to the Cyber Vision Center



Sends metadata to the Center for storage, analysis and visualization. This only adds 3 to 5% extra traffic to the network

Cisco Cyber Vision portfolio

Cyber Vision Center

Hardware Appliance

UCS based servers with Hardware RAID



CV-CNTR-M5S5

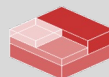
- 16 core CPU
- 64 GB RAM
- 800GB drives

CV-CNTR-M5S3

- 10 core CPU
- 32 GB RAM
- 480GB drives

Software Appliance

Virtual Machines



VMWare ESXi OVA



HyperV VHD

Minimum requirements

- Intel Xeon, 10 cores
- 32GB RAM and 1TB SSD
- 1 or 2 network interfaces



Amazon Web Services



Microsoft Azure

Minimum requirements

- Intel Xeon, 10 cores
- 32GB RAM and 1TB SSD
- 1 or 2 network interfaces

Cyber Vision Sensors



Catalyst IE3300 and IE3400 Switches



Catalyst IE3400HD IP67 Switch



Catalyst IR1101 LTE/5G Gateway



Catalyst IR8300 Multiservice Router



Catalyst IE9300 Rugged* Aggregation Switches



Catalyst 9300/9400 Aggregation Switches

Network-Sensors

Deep Packet Inspection built into network-elements eliminating the need for SPAN



IC3000 Industrial Compute

Hardware-Sensor

DPI via SPAN to support brownfield

All models IE3300 can now run the CV Sensor



Catalyst IE3300 with 1GE uplinks

- IE-3300-8T2S
- IE-3300-8P2S

Catalyst IE3300 with 10G uplinks

- IE-3300-8T2X
- IE-3300-8U2X

Orderable
Now!

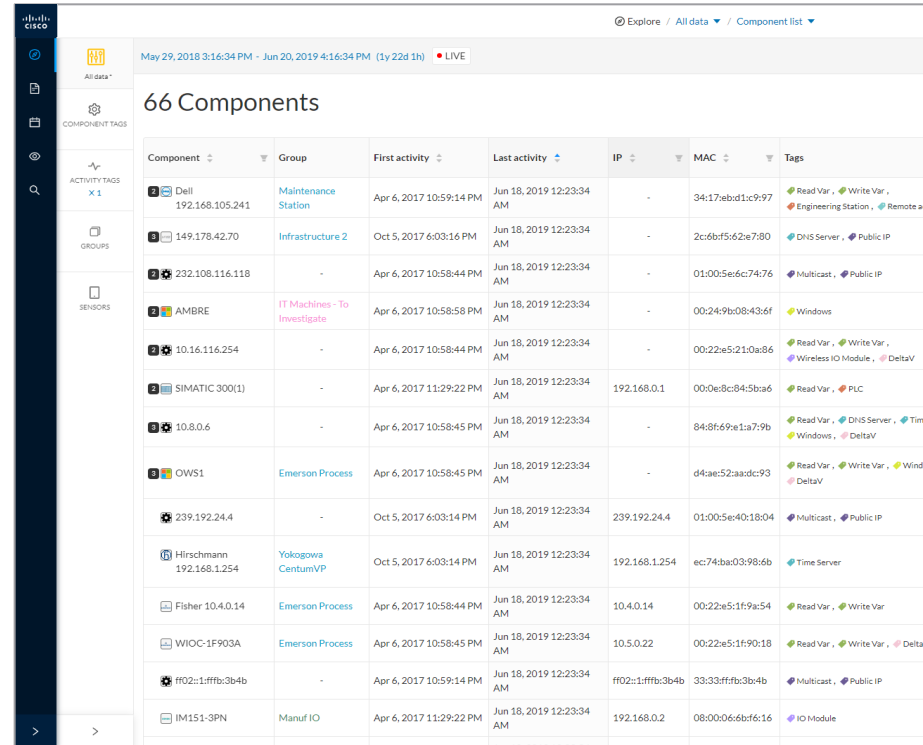
} Starting Hardware V6

} All Hardware Versions

Visibility: Comprehensive **asset inventory**

- Automatically maintain a detailed list of all OT & IT equipment
- Immediate access to software & hardware characteristics
- Track rack-slot components
- Tags make it easy to understand asset functions and properties

Track the industrial assets to protect throughout their life cycles



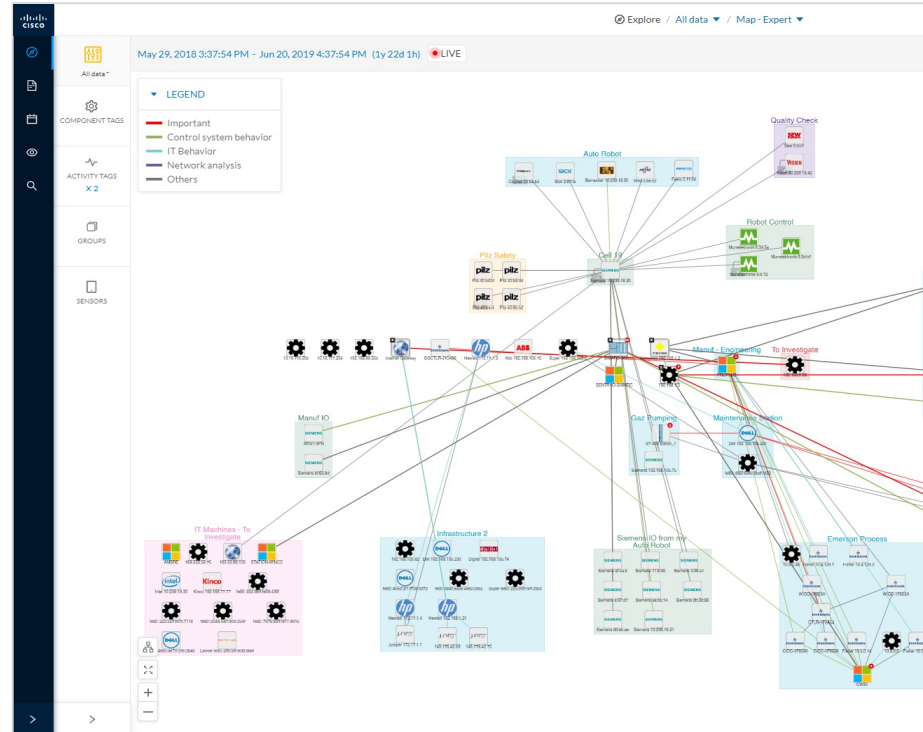
The screenshot displays the Cisco Alltags+ interface for a component list. The table shows the following data:

Component	Group	First activity	Last activity	IP	MAC	Tags
Dell 192.168.105.241	Maintenance Station	Apr 6, 2017 10:59:14 PM	Jun 18, 2019 12:23:34 AM	-	34:17:ebd1c9:97	Read Var., Write Var., Engineering Station, Remote
149.178.42.70	Infrastructure 2	Oct 5, 2017 6:03:16 PM	Jun 18, 2019 12:23:34 AM	-	2c:6b:f5:62e7:80	DNS Server, Public IP
232.108.116.118	-	Apr 6, 2017 10:58:44 PM	Jun 18, 2019 12:23:34 AM	-	01:00:5e:6c:74:76	Multicast, Public IP
AMBRE	IT Machines - To Investigate	Apr 6, 2017 10:58:58 PM	Jun 18, 2019 12:23:34 AM	-	00:24:9b:08:43:6f	Windows
10.16.116.254	-	Apr 6, 2017 10:58:44 PM	Jun 18, 2019 12:23:34 AM	-	00:22:e5:21:0a:86	Read Var., Write Var., Wireless IO Module, DeltaV
SIMATIC 300(1)	-	Apr 6, 2017 11:29:22 PM	Jun 18, 2019 12:23:34 AM	192.168.0.1	00:0e:8c:84:5b:a6	Read Var., PLC
10.8.0.6	-	Apr 6, 2017 10:58:45 PM	Jun 18, 2019 12:23:34 AM	-	84:8b:69e1:1a:79:b	Read Var., DNS Server, Time Server, Windows, DeltaV
OWS1	Emerson Process	Apr 6, 2017 10:58:45 PM	Jun 18, 2019 12:23:34 AM	-	d4ae:52aa:dc:93	Read Var., Write Var., DeltaV
239.192.24.4	-	Oct 5, 2017 6:03:14 PM	Jun 18, 2019 12:23:34 AM	239.192.24.4	01:00:5e:40:18:04	Multicast, Public IP
Hirschmann 192.168.1.254	Yokogawa CentumVP	Oct 5, 2017 6:03:14 PM	Jun 18, 2019 12:23:34 AM	192.168.1.254	ec:74:ba:03:98:6b	Time Server
Fisher 10.4.0.14	Emerson Process	Apr 6, 2017 10:58:44 PM	Jun 18, 2019 12:23:34 AM	10.4.0.14	00:22:e5:1f:9a:54	Read Var., Write Var.
WI0C-1F903A	Emerson Process	Apr 6, 2017 10:58:45 PM	Jun 18, 2019 12:23:34 AM	10.5.0.22	00:22:e5:1f:90:18	Read Var., Write Var., DeltaV
ff02::1:fff:b:3b:4b	-	Apr 6, 2017 10:59:14 PM	Jun 18, 2019 12:23:34 AM	ff02::1:fff:b:3b:4b	33:33:fff:b:3b:4b	Multicast, Public IP
IM151-3PN	Manuf IO	Apr 6, 2017 11:29:22 PM	Jun 18, 2019 12:23:34 AM	192.168.0.2	08:00:06:6b:df:6:16	IO Module

Visibility: Track **application flows**

- Identify all relations between assets including application flows
- Spot unwanted communications & noisy assets
- Tags make it easy to understand the content of each communication flow
- View live information or go back in time

Drive network segmentation and fine-tune configurations



Visibility: Instantaneous **vulnerability** identification

- Automatically spot software & hardware vulnerabilities across all your industrial assets
- Access comprehensive information on vulnerability severities and solutions
- Built-in vulnerability database curated by Cisco Research Teams always up to date

The screenshot displays the Cisco vulnerability management interface. At the top, it shows the date range from Jan 1, 2019, to Apr 29, 2019, and a live status. The main dashboard features a '234 Vulnerabilities' summary with a donut chart showing the distribution of vulnerabilities across different categories. A table lists the top 10 vulnerabilities, including 'Multiple Siemens Products CVE-2017-12741 Denial of Service Vulnerability' and 'Yokogawa CENTUM 'BKLogSvc.exe' Heap Based Buffer Overflow Vulnerability'. A detailed view of a component, SIMATIC 300(1), is shown below, listing 24 flows, 51 events, 13 variables, and 5 vulnerabilities. The detailed view for 'Multiple Siemens Products CVE-2017-12741 Denial of Service Vulnerability' shows a CVSS score of 7.8 and provides a solution: 'Siemens has released updates for several affected products, and recommends that customers update to the new version. Siemens is preparing further updates and recommends specific countermeasures until patches are available.' The interface also includes a 'Vulnerabilities' table with columns for name, CVE ID, published date, CVSS score, and affected components.

Enforce cyber best practices

Operational insights: **Views for OT** teams

- Asset details
- Communication maps
- PLC program changes
- Variable accesses

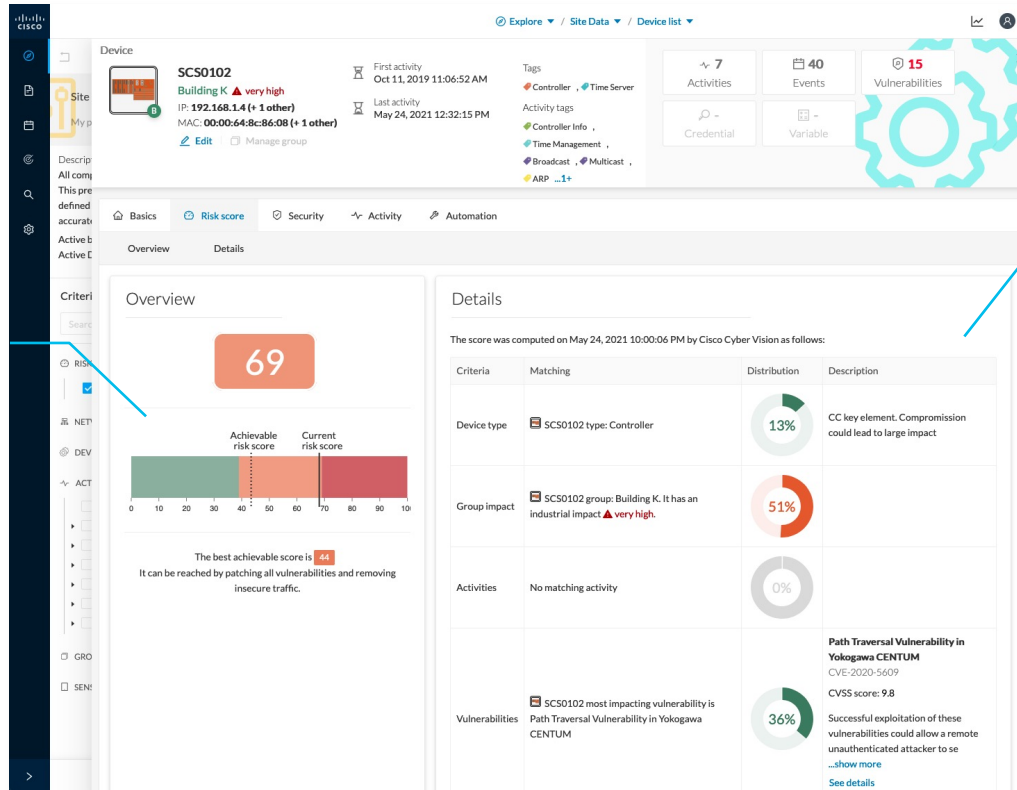
Monitor the integrity of your industrial process

The screenshot displays the Cisco IoT Operational Insights interface for a SIMATIC 300(1) PLC. The interface is divided into several sections:

- Component Details:** Shows the asset name (SIMATIC 300(1)), IP address (192.168.0.1), MAC address (00:0e:8c:b4:5ba6), and activity logs (First activity: Apr 6, 2017 11:29:22 PM; Last activity: May 26, 2019 12:21:13 AM).
- Summary Cards:** Displays 24 Flows, 51 Events, 5 Vulnerabilities, and 13 Variables.
- Navigation:** Includes tabs for Basics, Security, Activity, and Automation.
- Properties:** Lists various attributes such as Vendor-Name (Siemens AG A&D ET), Model-Name (CPU 315-2 PN/DP), and Serial-Number (S C-V1R583472807).
- Variables accesses:** A table showing the last accessed variables and their details.
- Minimap:** A network diagram showing the SIMATIC 300(1) connected to various devices like STATION WINCC, S7-300 PLCs, and SENTRYO-XP-1.

Variable	Types	Accessed by	First access	Last access
> M.2.0	READ	2 components (2 accesses)	Apr 6, 2017 11:29:22 PM	May 26, 2019 12:21:23 AM
▼ M.2.1	READ	2 components (2 accesses)	Apr 6, 2017 11:29:22 PM	May 26, 2019 12:21:23 AM
	READ	Siemens 192.168.0.10	Apr 6, 2017 11:29:22 PM	May 26, 2019 12:21:23 AM
	READ	SENTRYO-XP-1	Apr 6, 2017 11:29:22 PM	May 26, 2019 12:21:23 AM
> M.8.0	READ	2 components (2 accesses)	Apr 6, 2017 11:29:22 PM	May 26, 2019 12:21:23 AM
> M.8.1	READ	2 components (2 accesses)	Apr 6, 2017 11:29:22 PM	May 26, 2019 12:21:23 AM
> M.8.2	READ	2 components (2 accesses)	Apr 6, 2017 11:29:22 PM	May 26, 2019 12:21:23 AM

Understanding a device risk score



Understanding how to lower risk

Understanding what impacts the risk score

What's new in Cyber Vision 4.3?

- **New Security Posture Reports**
- **New Active Discovery Protocols**
- Simplified Sensor Configuration Experience
- Enhanced IC3000 workflows and performance
- Simplified Network Organization Configuration
- Enhanced External Component Handling
- **New Network Sensor – Catalyst 9300X**
- **New Center Appliance – UCS M6**

Security posture reports

- Customers can demonstrate a **handle on risk** with respect to **cyber insurance** and **standard compliance**
- IT teams **justify investment** into Cyber Vision to their management
- Managed Service Providers to deliver **white-label reports** to end customers, using a customizable logo

Cisco

Key Findings

Filter Criteria: -

This report is an automated summary that captures all the vulnerabilities, risky activities, and security events found on the devices in the - by Cisco Cyber Vision on September 24th, 2023 at 8:04 am UTC

Risk score	Devices	Vulnerable Devices	Events(over the last 30 days)
45.0	34	7	323

Security Insights

Severity	Findings
Critical	46 critical and high severity vulnerabilities found on 7 devices
Critical	4 devices have a risk score > 70
High	3 devices found communicating with external networks
High	47 devices have been remotely accessed
High	2 devices found using 11 unsecured protocols
High	2 devices using clear text passwords

Top 5 Vendors seen

Vendor	Number of devices
ABB Oy / Medium Voltage Products	1
Cisco Systems Inc	1
ASIX ELECTRONICS CORP.	1
Quanta Storage Inc.	1

Cisco

Name	CVSS Score	Severity	Number of affected devices
ns Products CVE-2017-Service Vulnerability	7.5	High	4
e Vulnerability in	7.5	High	4
of Service Vulnerabilities ices using the PROFINET onfiguration Protocol	6.5	Medium	4
Protection in the Web ge of Siemens Industrial	6.5	Medium	4
Controllers			
CVE-2019-6568 Denial Of Service Vulnerability in Web-server of Industrial Products - Siemens	7.5	High	3

New Active Discovery protocols

- Enabled per protocol
- Selectively enable one or more... or none
- Full user control over discovery traffic
- 4.3 adds **BACnet**, **Melsoft**, **Modbus**, **OMRON** for manufacturing and DNP3 for utilities
- Use Active when passive cannot provide details on assets.
 - eg: speeds up asset discovery

The screenshot shows a configuration form titled "Deploy Cisco device". It contains several input fields for connecting to a Cisco device. The fields are: IP address (with a placeholder 192.168.2.1), Port (with a placeholder 443), User (with a placeholder admin), Password (with a placeholder *****), Center ID (with a placeholder 172.16.0.30), Capture IP address (with a placeholder 172.16.0.30), Capture subnet mask (with a placeholder 255.255.255.0), and Capture VLAN number (with a placeholder 999).

The screenshot shows a dropdown menu titled "Unicast configuration". The menu is open, showing a list of protocols. The "BACnet" option is highlighted in light blue. Other options in the list include DNP3, EtherNet/IP, Melsoft, Modbus, OMRON, SiemensS7, SiemensS7plus, SNMPv2c, SNMPv3, and WMI.

Závěr

- Nové L2 přepínače IE3100 & 3105
 - Náhrada IE2k
- Výrazné rozšíření rodiny IE9300
- Finalizace IR portfolia
- Integrace Wifi a CURB a nové modely IW
- IAV rozšířené portfolio a otevřenost k 3pt sensorům
- IoT Operational Dashboard
 - Nové moduly (CV cloud, SEA, CURB)
 - Nástroj pro správu SW (loX)
- CyberVision 4.3
 - Nové protokoly a reporty
 - Možnost hostování sondy na IE3300 (1G typy)
- SEA nástroj pro ZTNA přístup



