Cisco technologie pro řešení podnikových WAN sítí

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Agenda

1. Cisco Enterprise Routing Portfolio
2. Cisco ISR 900 Series
3. Cisco ISR 1000 Series
4. Cisco ISR 4000 Series
5. Cisco ASR 1000 Series
6. Cisco ENCS 5000 Series
7. Cisco DNA Licensing model for Routing
8. Cisco Routing platform Innovations

Cisco Enterprise Routing Portfolio

Branch

ISR 900

- Up to 250 Mbps (Crypto)
- Fixed and fanless
- Cisco IOS based
- High performance VPN

ISR 1000

- Up to 480 Mbps (Crypto)
- Cisco SD-WAN
- Integrated wired and wireless access

ISR 4000

- Up to 7 Gbps (Crypto)
- WAN and voice module flexibility
- Cisco SD-WAN
- Compute with UCS E

Aggregation

ASR 1000

- Up to 200 Gbps
- Hardware and software redundancy
- High-performance service with hardware assist

SD-WAN

Virtual and Cloud

Cisco ENCS

- Up to 1 Gbps
- Service chaining virtual functions
- Options for WAN connectivity
- Open for 3rd party services & apps

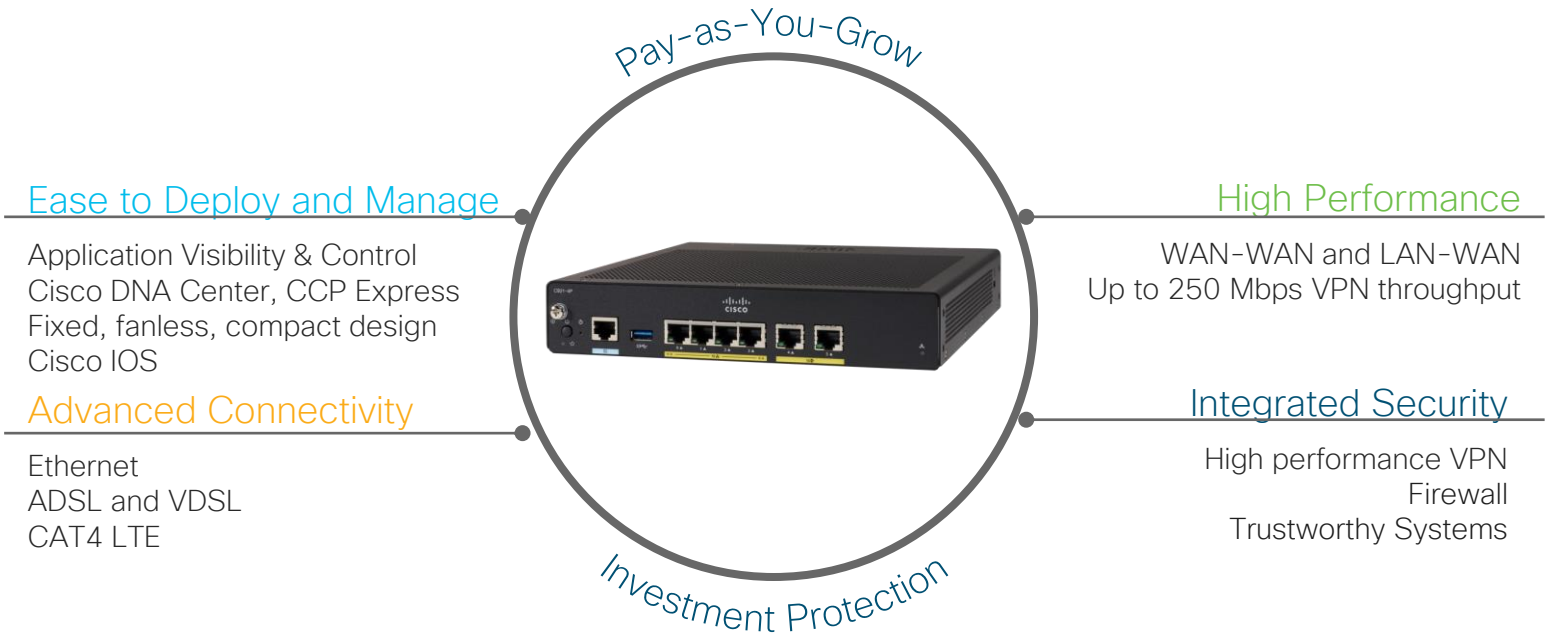
CSR 1000V

- 10 Mbps to 10 Gbps
- DNA virtualization
- Extend enterprise routing, security & management to cloud

Cisco ISR 900 Series

Cisco 900 Series Integrated Services Routers

Enterprise-class connectivity and security for SMB's



ISR 900 Portfolio

	ISR 921	ISR 931	ISR 926	ISR 927
VPN Throughput	150 Mbps	250 Mbps	150 Mbps	150 Mbps
GE WAN	●	●	●	●
VDSL2	-	-	● (ANNEX B/J)	● (ANNEX A/M)
ADSL2/2+	-	-	●	●
CAT4 LTE	●	-	●	●
Managed Switch Ports	4 GE ports	4 GE ports	4 GE ports	4 GE Ports
# IPsec tunnels	50	50	50	50
Flash (fixed)	2 GB	2 GB	2 GB	2 GB
DRAM	1GB	1 GB	1 GB	1 GB
Power Supply	Internal	Internal	External	External
Security (GET VPN, DMVPN, FlexVPN, Firewall)	●	●	●	●

Licensing Packaging Overview

Licensing Package	Features	Use case
IP Base	NAT, DHCP, BGP, QoS	Basic connectivity
IP Base + APP	IP SLA Probes, PfR, AVC	Small Branch over MPLS
IP Base + SEC	IPSec, DMVPN, ZBFW	Remote worker
IP Base + SEC+ APP		Small Branch over Internet

Feature Licensing Packaging Structure

- Default License: IP Base
- Technology Package: APP, SEC

ISR 900 vs ISR 880

Upgrade from ISR 880 to ISR 900

Branch Needs	ISR 800	ISR 900	Features
Increased throughput	Up to 200 Mbps	Up to 1,5 Gbps	Greater throughput, GE LAN and GE WAN
	Up to 50 Mbps	Up to 250 Mbps	Increased VPN throughput
Lower costs & increased business agility	✗	✓	Pay-as-you-grow licensing
Location flexibility	✗	✓	Compact design
	✗	✓	Internal power supply option (SKU based)
Cellular regional support	✗	✓	Additional LTE country bands

Cisco ISR 1000 Series

Cisco 1000 Series Integrated Services Routers

An Entire Branch Rack in a box

WAN and Application Assurance

Cisco SD-WAN
Application visibility and link optimization
Analytics and assurance

Advanced Mobility

Gigabit Ethernet WAN
Gigabit Ethernet LAN Switch
DSL (G.fast),
LTE Advanced Pro (Cat 4/6/18)
802.11ac wave2 WLAN with Mobility Express
Support for the new Catalyst 91xx 802.11ax APs

High Performance

Multi-core hardware architecture
WAN-WAN and LAN-WAN
VPN and security

Comprehensive Security

Branch threat defense
Trustworthy
Ent. FW App aware, IPS, URL-F
AMP & TG
DNS/web- layer security on SD-WAN

Platform

Cisco 1000 Integrated Services Router

Connectivity

Ethernet WAN	LAN Switch	802.11ac WLAN	xDSL	LTE Advanced Pro

Manageability

vManage

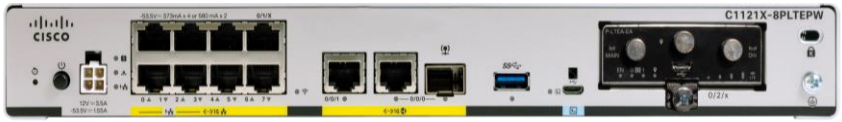
DNA Center

WebUI

ISR 1000 vs ISR 900

Feature	ISR 1000	ISR 900
Software OS	IOS XE	Cisco IOS
SD-WAN support	Yes	No
Centralized management	vManage Cisco DNA Center	Cisco DNA Center
Security stack	SD-WAN Security	Firewall, VPN
Cisco Umbrella	Yes	No
VPN throughput	Up to 480 Mbps	Up to 250 Mbps
DSL	G.FAST, 35b, VADSL, G.SHDSL	VADSL
LTE	CAT18/6/4	CAT4 (Single SIM, no GPS)
Wifi	802.11AC Wave 2, Mobility Express	No
Switch ports	Up to 8	4
PoE/PoE+	Up to 4 POE or 2 POE+	No

Cisco ISR 1000 Series Expansion – ISR 1120 and ISR 1160



- Multi-layered security SD-WAN capable (X-SKUs)
- ISR 1161 is the fastest model in the ISR 1000 Series – 30% faster processor
- Smaller form factor for space-constrained deployments
- Investment Protection with PIM slot [LTE CAT4/6/18 support]

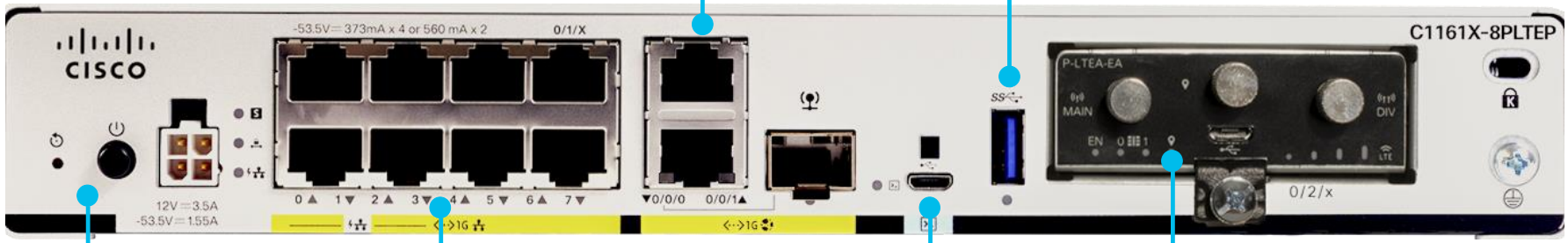
4 Arm SOC Marvel Armada	ISR 1121	ISR 1126	ISR 1127	ISR 1128	ISR 1161 Highest Perf. 1000
10 SKUs : Ethernet (with and without LTE Pluggable)	●				●
8 SKUs : Ethernet + Wi-Fi + LTEP (802.11ac wave-2)	●				
7 SKUs : DSL (with LTEP)		●	●	●	
25 Total SKUs	14	2	4	1	4

C1161X-8PLTEP

SD-WAN Ready

External PSU

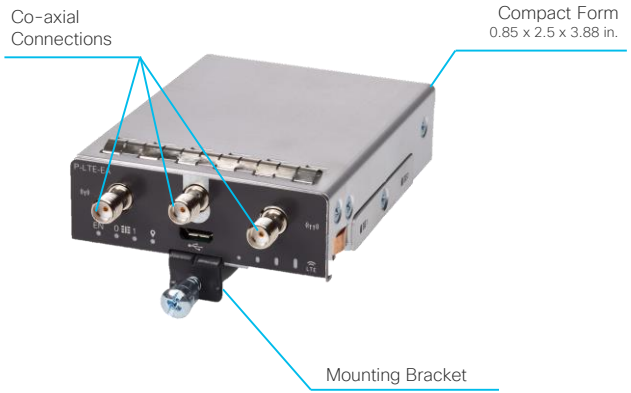
**DRAM/FLASH: 8GB/8GB



** 4GB versions available in C1161 models

Cisco Pluggable LTE Modul

- Pluggable PIM module for selected ISR 1000 series routers
- Industry's first LTE Pluggable Interface Module
- LTE 4 & 6, LTE-Advanced Pro (Cat 18) with fallback to 4G / 3G / 2G
- Powered through backplane
- Dual micro SIM , single radio
- Telit LM960 Wireless modem, specific firmware varies depending on geography



ISR 1000 Portfolio

New!!!





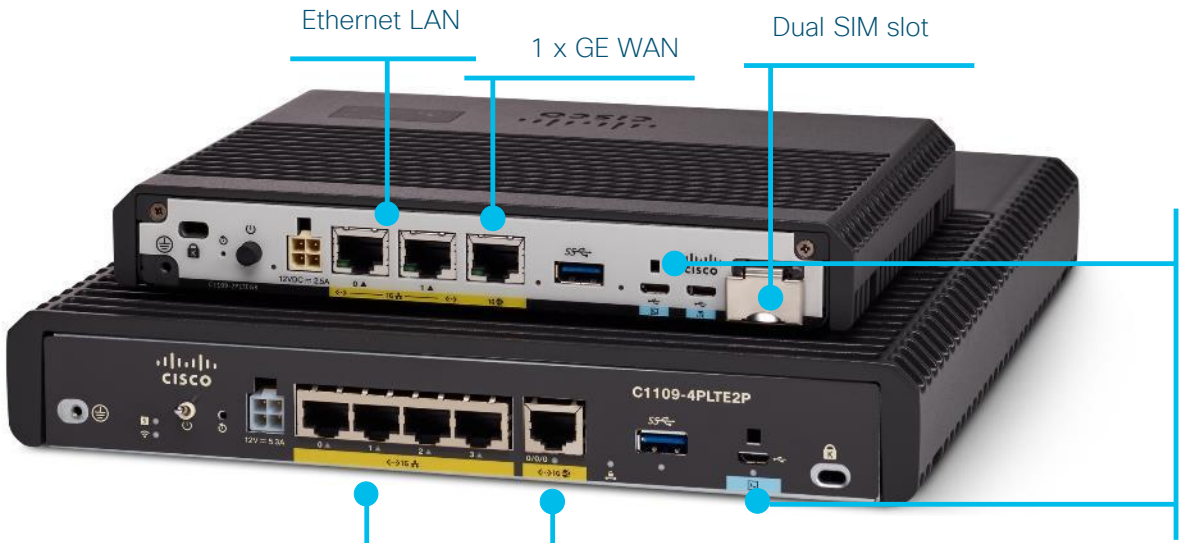
	C1161X-8P *	C112xX-8P *	C1111X-8P *	C111x-8P	C1101-4P	C1109-4P	C1109-2P
Crypto	480 Mbps	350 Mbps		250 Mbps		200 Mbps	
Cisco SD-WAN	Yes						
SD-WAN Security	Yes			No			
LTE	CAT18/CAT6 /CAT4	CAT18/CAT6 /CAT4	No	CAT6	CAT18/CAT6 /CAT4	CAT18/CAT6 /CAT4	CAT4
Wifi	No	Yes	No	Yes			No
DSL	No	Yes	No	Yes	No		
PoE	Yes			No			

* 4GB DRAM/FLASH variants available

C1109-2PLTE / C1109-4PLTE2P

External PSU

DRAM/FLASH: 4GB/4GB



IR1101 – The Next Generation Industrial ISR

Expansion modules for more interfaces

First IoT Router with IOS XE
High-end security Programmability

Modular LTE & 5G Ready

Edge computing enabled

Low average Power
consumption of only 10W

SD-WAN Support

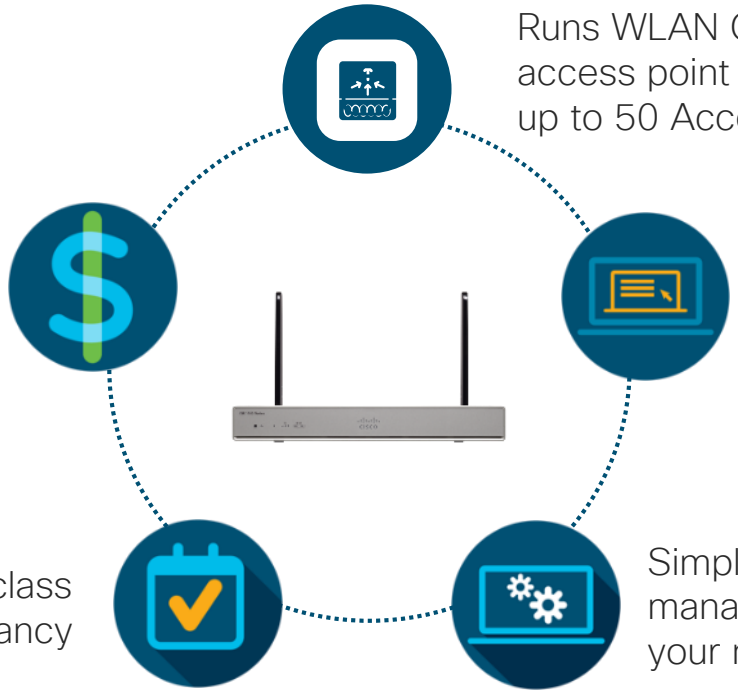
Compact form factor for
cabinet installations

Investment protection

Lower TCO

Extended product life time

Cisco ISR 1000 and Cisco Mobility Express



Runs WLAN Controller on embedded access point in ISR 1000, supporting up to 50 Access Points

Easy over-the-air 3 step configuration with Mobile app/WebUI best practices enabled by default

Simple UI easily monitors, manages and troubleshoots your network

Supports all enterprise class features with built-in redundancy

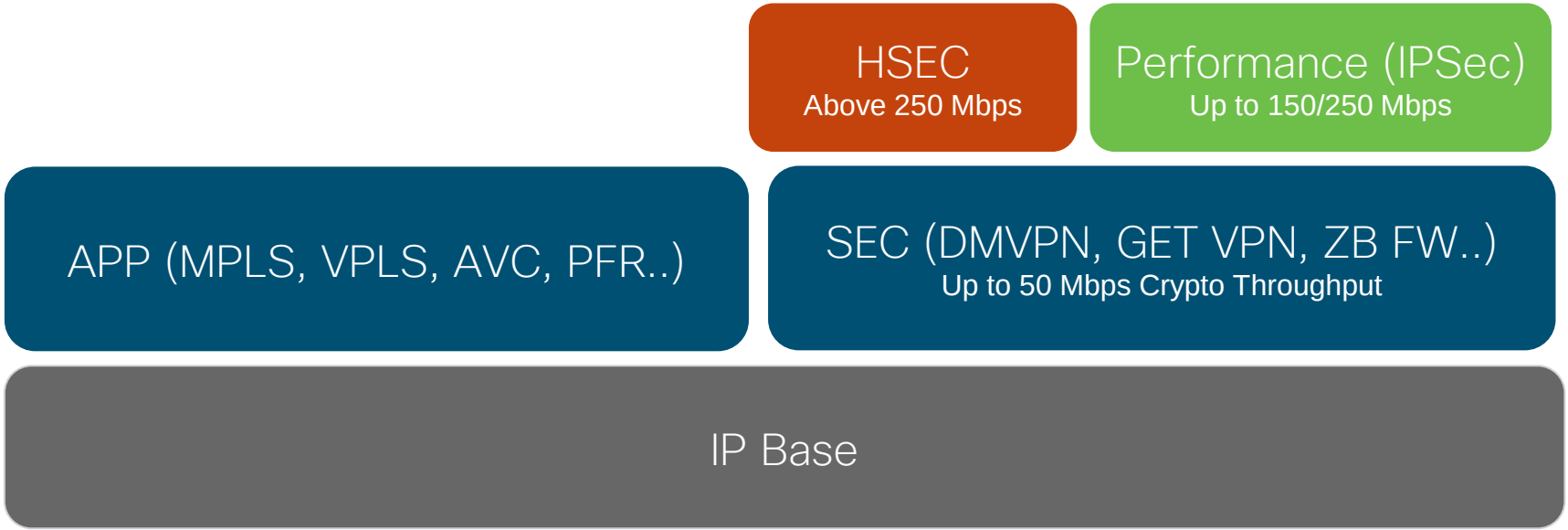
No licenses needed for ME and connect same Access Points to controller for more than 50 AP's

Simple, Fast IT | Flexible | Enterprise Class

Traditional Licensing Packaging Model

Default License: IP Base

- Technology Package: APP, SEC



Cisco ISR 4000 Series

Cisco ISR 4000 Series

Concurrent Services and Performance

4300 and 4200 architecture

Single Silicon with Multiple CPU cores

4221
4221X
(1 RU, 1.2 Gbps)

4321
(1 RU, 1.6 Gbps)

4331
(1 RU, 1.8 Gbps)

4351
(2 RU, 2 Gbps)

4431
(1 RU, 3.4 Gbps)

4451-X
(2 RU, 3.8 Gbps)

4461
(3 RU, 10 Gbps)

4400 architecture

Dedicated Silicon for Control & Data Plane

SD-WAN Ready

ISR 4000 series – Forwarding Throughput

Three Performance Levels

Platform	Factory Default	Performance License	Boost License
4461	1.5Gbps	3 Gbps	> 10 Gbps
4451	1Gbps	2 Gbps	> 3.8 Gbps
4431	500Mbps	1 Gbps	> 3.4 Gbps
4351	200Mbps	400 Mbps	> 2 Gbps
4331	100Mbps	300 Mbps	> 1.8 Gbps
4321	50Mbps	100 Mbps	> 1.6 Gbps
4221	35Mbps	75 Mbps	1.4 Gbps

Test results for IP Routing @ IMIX

Value of Modular – Flexibility with Investment Protection

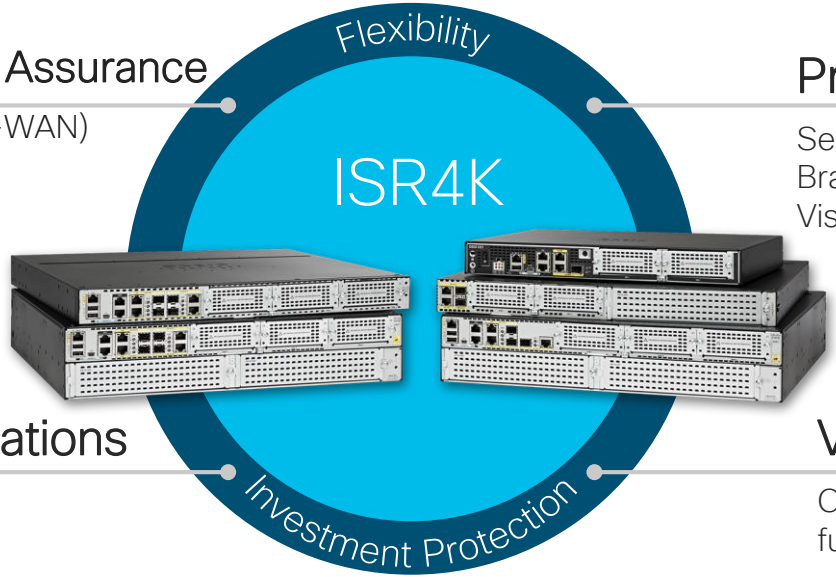
Enables performance, scalability and reliability of applications

WAN and Application Assurance

Software-defined WAN (SD-WAN)
Application optimization

Proactive Security

Secure connectivity
Branch threat defense
Visibility and analytics



Unified Communications

Voice with survivability
Session border controller

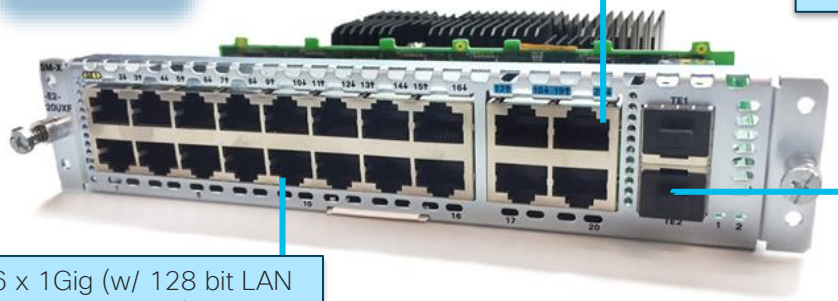
Virtualization

Cisco or third-party virtual network functions (VNF) and app hosting

Introducing UADP on ISR4K

Complete Branch Solution reducing appliance sprawl

Cisco UADP
2.0 Mini



4 x mGig (2.5G Ethernet)

2 x 10G ports
(SFP+)

16 x 1Gig (w/ 128 bit LAN
MACSec)

- 22 Port & 50-Port Modules*
- Rich Layer 2 Features
- LAN MACSEC for
switch to host communication
- 2.5 GE mGig

* 22-port takes single SM slot and 50-port takes Dual SM slot

Port Speed and Diversity
1G, 2.5G mGig, 10G Fiber

Built in Security
128-bit MACSec

Scalable PoE Options
PoE / PoE+ / UPOE

Cisco UADP ASIC
UADP 2.0 Mini

Cisco ASR 1000 series

Cisco ASR 1000 Series Routers Overview

2.5 Gbps to 200Gbps – Designed today to scale up in the future

COMPACT, POWERFUL ROUTER

- Line-rate performance 2.5G to 200G
- Investment protection with modular engines, IOS CLI and SPAs for I/O
- Hardware assists for ACL, QoS, etc.
- Hardware-based QoS engine with up to 464k queues
- New Ethernet CC, 100GE & 40GE EPA

BUSINESS-CRITICAL RESILIENCY

- Fully separated control and forwarding planes
- Hardware and software redundancy
- In-service software upgrades
- Inter and Intra-chassis redundancy
- DCI to support clustering across geographically dispersed DC

INSTANT ON SERVICE DELIVERY

- Scalable on-chip service enablement through software licensing
- Industry leading VPN/Crypto solutions
- Optimal user/app experience with AVC, Path Control, and AppNav
- Software consumption model with Cisco DNA subscription

Fixed Chassis

SD-WAN


ASR1001-X

2.5 to 20 Gbps


ASR1001-HX

44 to 60 Gbps


ASR1002-X

5 to 36 Gbps


ASR1002-HX

44 to 100 Gbps

Modular Chassis


ASR1006-X

40 to 100 Gbps


ASR1009-X

40 to 200 Gbps


ASR1013

40 to 200 Gbps

ASR 1000 Modular Systems

Modular Chassis

ASR1006-X

ASR1009-X

New EPAs with MACsec

EPA-1X40GE

EPA-2X40GE

EPA-QSFP-1X100GE

Next-gen Data Plane

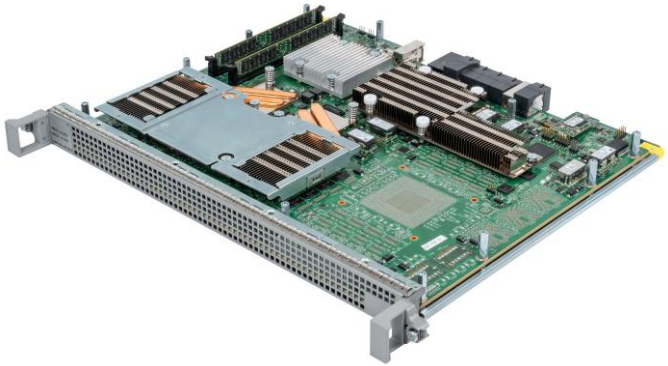
ESP-100X

ESP-200X

Full Modularity	Redundancy	Compatibility	Rich Services

Introducing ASR1000 ESP100-X and ESP200-X

Delivering cloud scale, high performance, secure services



ESP100-X

Scale WAN infrastructure while deploying stateful features

ESP200-X*

Transform WAN architectures to take advantage of public and hybrid cloud

Deploy With Confidence for

- Enterprise Cloud Edge
- Datacenter Edge
- WAN Aggregation
- Internet Edge
- Colocation Interconnect

* Not supported on ASR1013

3x IPSEC Performance

2x NAT Scale

ESP Generations

	ESP20	ESP40	ESP100	ESP200	ESP100X	ESP200X
System BW (IMIX)	20Gbps	40Gbps	130Gbps	260Gbps	134Gbps	268Gbps
Performance (64B)	26Mpps	26Mps	79Mpps	153Mpps	87Mpps	168Mpps
# of Processors	40	40	124	248	224	448
Clock Rate	1.2GHz	1.2GHz	1.5GHz	1.5GHz	1.0GHz	1.0GHz
Crypto BW (IMIX)	5Gbps	7Gbps	15Gbps	45Gbps	67Gbps	128Gbps
QFP Resource Memory	1GB	1GB	4GB	8GB	32GB	64GB
Packet Buffer	256MB	256MB	1GB	2GB	1.4GB	2.8GB
Control CPU	1.2GHz	Dual core 1.86GHz	Dual core 1.73GHz	Dual core 1.73GHz	Dual core 2.2GHz	Dual core 2.2GHz
Control Memory	4GB	8GB	16GB	32GB	16GB	32GB
TCAM	40Mb	40Mb	80Mb	2x80Mb	80Mb	2x80Mb
Chassis Support	ASR1004, 1006	ASR1004, 1006, 1013, 1006-x, 1009-x	ASR1006, 1013, 1006-x, 1009-x	ASR1013, 1009-x	ASR1013, 1006-X, 1009-X	ASR1006-X, 1009-X

Cisco ENCS 5000 series

Virtualized Branch CPEs

ENCS 5000 Series

Enterprise Network Compute System

SD-WAN
LTE Advanced
Modularity
RAID Storage
SDWAN Security

ENCS 5100 Series

ENCS 5400 Series

ENCS 54xx - XE-SDWAN & vEdge Cloud
ENCS 5104 - vEdge Cloud only

ENCS 5104
4Core (ISRv+1VNF)

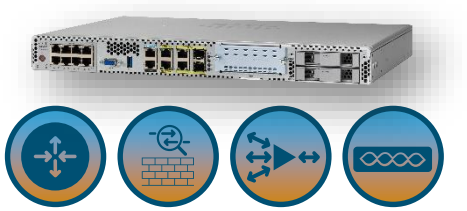
ENCS 5412
12Core(ISRv+5VNF)

ENCS 5408
8Core(ISRv+3VNF)

ENCS 5406
6Core(ISRv+2VNF)

Virtualized Services | Open for 3rd party apps | NFVIS Hypervisor | 500Mbps SD-WAN

What's so cool about Virtualizing a Branch CPE?



Full Service Elasticity

- Deploy in minutes – Rack & Stack a remote branch in 2 min
- Deploy as needed

Reduce number of network elements

- Less HW to handle – Install, Service contract etc.
- Less cables and buttons

Reduce on-site visits
Eliminate Truck rolls

- No need to add HW when adding a new Network service

Best-of-breed network

- Install whatever vendors you prefer on the same HW Platform
- Stitch installed services (VNFs) together with virtual patch cables

Simplify Performance Upgrades

- Add more cores to an App in minutes

Cisco DNA Licensing model for Routing

How to Choose?

Cisco DNA Premier

Cisco DNA Advantage

Cisco DNA Essentials

1. Choose on-premises or cloud managed
2. Identify license tier
3. Select bandwidth and platform
4. Pick license term

Routing

Offer Structure

Cisco DNA **Essentials**

Single SKU — 3/5 Year Subscription

- IP Base, Critical SEC and AppX licenses
- Cisco DNA Essentials
  - Centralized Management
  - Basic Security (FW/IPS)
  - Advanced SD-WAN

Cisco DNA **Advantage**

Single SKU — 3/5/7 Year Subscription

- Advance Malware Protection
- WAN Optimization (WAAS RTU)
- vAnalytics
- IP Base, All SEC, AppX and UC licenses
- Cisco DNA Advantage (with Essentials)
  - Advanced Security (FW/IPS/URL/AMP)
  - Secure and Segmented DIA
  - Cloud Connectivity Optimization

Cisco DNA **Premier**

Single SKU — 3/5 Year Subscription

- Thread Grid (200 samples/day)
- Umbrella SIG Essentials
- Advance Malware Protection
- WAN Optimization (WAAS RTU)
- vAnalytics
- IP Base, SEC, AppX and UC licenses
- Cisco DNA Advantage (with Essentials)
  - Advanced Security (FW/IPS/URL/AMP)
  - Secure and Segmented DIA
  - Cloud Connectivity Optimization

Cisco DNA Network Stack Essentials

Cisco DNA Network Stack Advantage

Software Support included in all subscriptions
Must attach a Cisco DNA license for Cisco SD-WAN

Capabilities for **Management** through **Cisco DNA Center**

Only for IOS-XE software. Network stack capabilities apply also if the routers are used without Cisco DNA Center for management

Advantage

Cisco DNA Advantage (Inclusive of Essentials)

IOS XE

3 to 7 Years Term

Automation
Policy based QoS Automation, SWIM (Patching), SD Bonjour, Reporting (Tableau)

Optimized Telemetry & Visibility
AVC (NBAR2)

IWAN
IWAN Application

Branch Virtualization
3rd party VNF orchestration, Backup/Snapshot/Restore, Stateful High Availability, Clustering

Assurance
Router 360, ENFV 360, Router underlay insights, ENFV Insights, 360 pages, Health score, Time Travel, Correlated Insights, Neighbor topology, Path trace, KPIs, Baselining, Trends, Application Experience and Performance, SDA, WiFi KPIs etc.)

Network Advantage (Inclusive of Essentials)

IOS XE

Perpetual

Overlay Technologies
MPLS, VPLS, LISP, VXLAN, LNS, OTV, EVC, OAM, multicast

Security
MACSEC-256, ALG for ZBFW, VASI, TrustSec (SGT, SGACL), SDA border, SDA Control Plane

Unified Communication
SRST, Support for Voice Modules

WAN Optimization
Cisco WAAS RTU (2500 ISR-WAAS & 6000 vWAAS RTU)

Cisco Innovation
SMU Patching, SGTs, ETA, ISSU, mDNS Bonjour, EPC

Essentials

Cisco DNA Essentials

IOS XE

3 to 5 Years Term

Automation
Inventory, Discovery, Topology, Software Image Management, Site Automation, Network Settings, Device Credential Update, Integrity Verification, Template Programmer, Canned Reports, PnP Application

Application Visibility
name, throughput

Advanced Telemetry and Visibility
Full Flexible NetFlow, Embedded Event Management

Branch Virtualization
NFV provisioning on ENCS and UCS-E, Cisco VNF orchestration (ISRv, vEdge, vASA, NGFW and vWAAS)

Router Deployment
Day 0 and Day 2 Changes

Assurance
Router Monitoring (Basic)
VNF monitoring (ISRv, vWAAS), ENFV (ENCS, UCSE), Dashboards (Overall Health, Network Health, Client Health), topology, pre- canned Reports, custom Thresholds, PSIRT Compliance

Network Essentials

IOS XE

Perpetual

Routing Essentials
BGP, OSPF, EIGRP, IGMP, IGRP, ISIS, VRF-lite, NAT, Basic QoS

Security
MACSEC-128, VPNs, ZBFW, PKI, ACLs, Umbrella Connector, Snort IPS, IKE, IPsec, ALG, SSLVPN, TrustSec SXP, GetVPN, FlexVPN, GRE, DMVPN

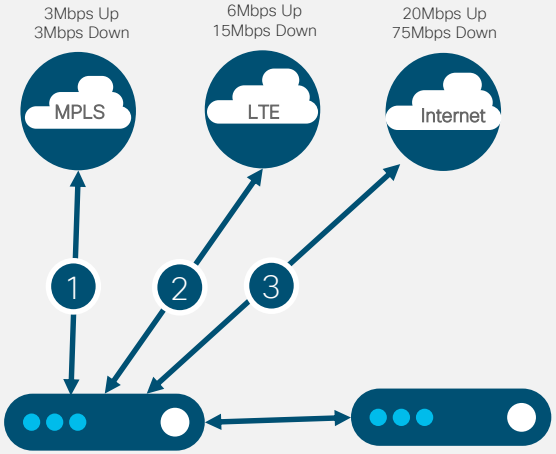
Unified Communication
Cube Connector

Router Management
TACACS+, NETCONF, AAA, DNS, DHCP

Application Experience
HQOS, PfR, PBR, AVC, NBAR, IPSLA, Full Flexible NetFlow

Platforms Supported: ISR 1K, ISR 4K, ASR 1K, ENCS (ISRv)

Bandwidth Metering
Cisco DNA Subscriptions



With Cisco DNA subscription, bandwidth entitlement is the sum of total bandwidth utilization (either upstream or downstream) across all WAN circuits.

Examples:

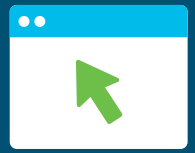
For a 100 Mbps license, utilization can be up to 100 Mbps upstream and 100 Mbps downstream

In the example, bandwidth utilization adds to 3+15+75= 93 Mbps (downstream) and to 3+6+20= 29 Mbps (upstream). Considering the maximum utilization, you will need a 100 Mbps license, permitting you to use 100 Mbps up and 100 Mbps down for 200 Mbps of aggregate bandwidth.

Aligned with how service providers sell WAN bandwidth

Monthly bandwidth utilization is calculated at the 95th percentile

Benefits of Software Subscription for SD-WAN and Routing



Access to ongoing innovations

- Cisco DNA Premier
- Cisco DNA Advantage
- Cisco DNA Essentials

License portability

Across ISR 1000 and 4000, ASR 1000, ENCS 5000, vEdge routers

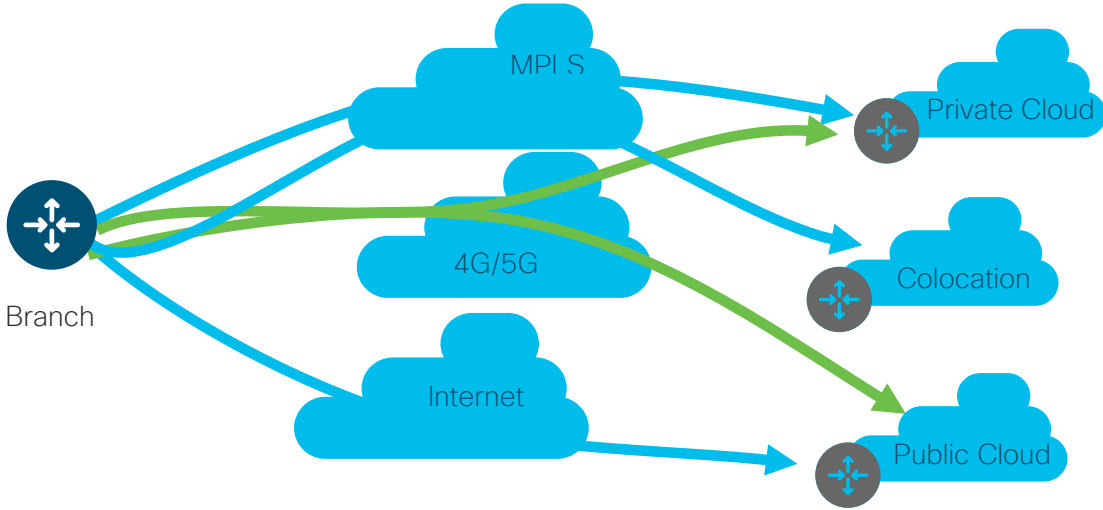
Management flexibility

Cloud managed or on-prem managed

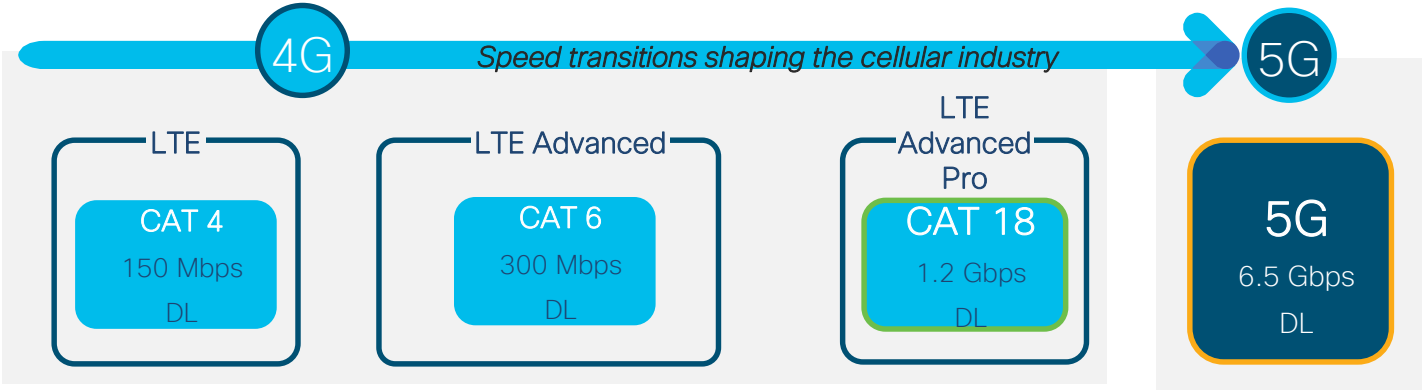
Cisco Routing platform Innovations

Wireless Mobility Becoming Increasingly Relied Upon in Modern WANs

- Cost effective connectivity of branches to Cloud using LTE/5G
- Leverage internet for public cloud and internet access
- Seamless extension of business policy from Branch to the cloud



Cisco Wireless WAN portfolio enabling new speed transitions



Cisco has a broad portfolio with flexibility for all market segments

Embedded LTE Platforms

ISR1K

ISR900

Platforms Supporting LTE Modules

ISR1K/ISR4K

Network Modules

LTE PIM

CAT18 PIM LTE module

CAT18 LTE

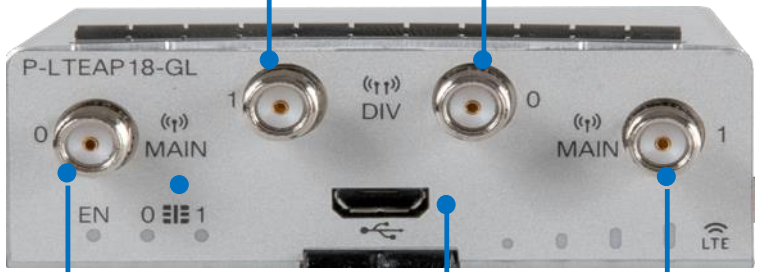
Dual Micro SIM

1200/150 Mbps

Supported on ISR1120 and ISR1160

SD-WAN support

PID	Modem	Region	LTE Bands
P-LTEAP18-GL	Telit Wireless	Global	1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 17, 18, 19, 20, 25, 26, 28, 29, 30, 32, 38, 39, 40, 41, 42, 43, 46, 48, 66, 71



Diversity antennas

- Used for additional reception or remote antennas, support for 4x4 MIMO

Micro USB Modem Debug

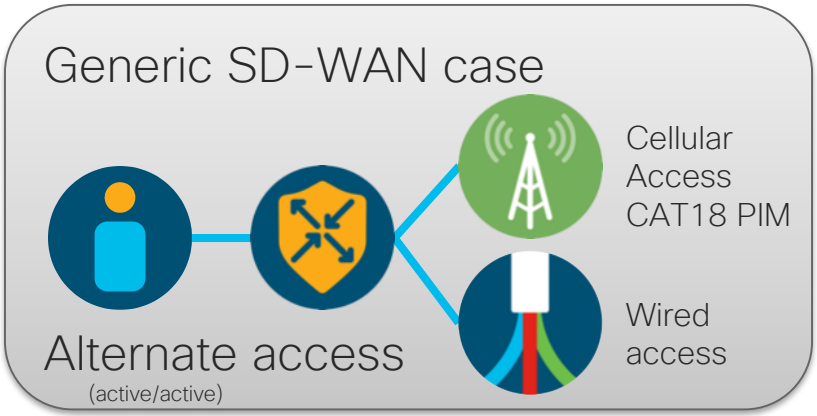
- Micro USB access for modem diagnostics

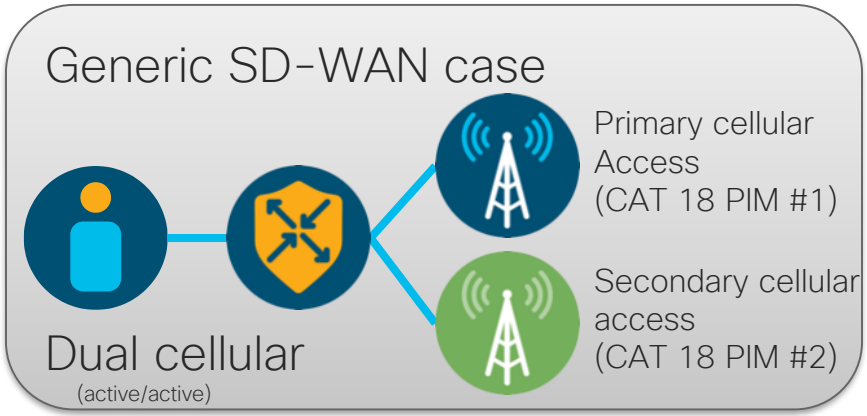
Main antennas

- Used for whichever SIM is active

Use cases for SD-WAN

Gigabit LTE with SD-WAN





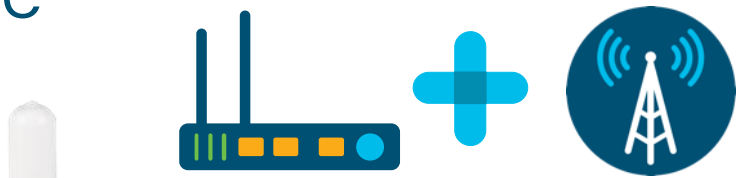
SD-WAN can take advantage of the LTE interface as it would any other access medium. Application based performance metrics will manage what traffic is routed to USB LTE or kept on terrestrial interfaces.

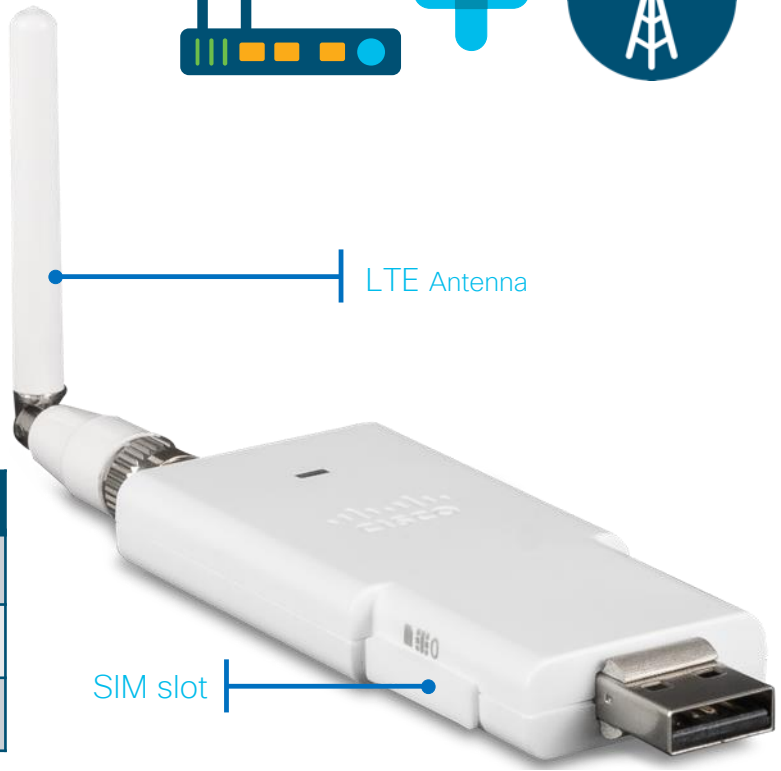
The P-LTEAP18-GL module allows flexibility for customers to choose what category to LTE connection to utilize. It offers an upgrade path. If the want to have the flexibility to upgrade from CAT6 to CAT18 or potentially full 5G in the future. This CAT18 module makes dual cellular deployments attractive compared to previous cellular offerings.

Category 4 USB LTE Dongle

- CAT4 LTE
- Single Micro SIM
- 75/50 Mbps
- Supported on ISR1000 only *
- SD-WAN support on roadmap

*selected platforms only



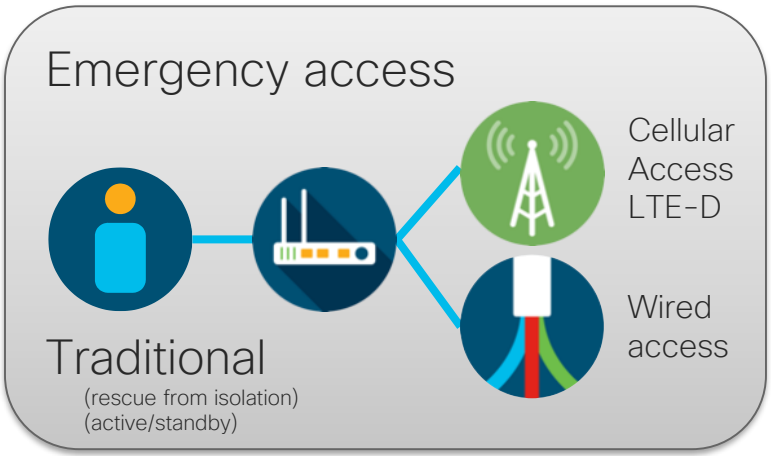


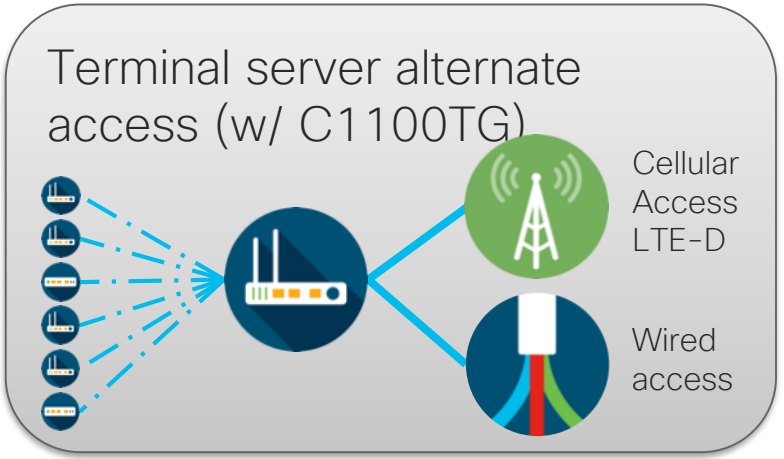
Modem Types	Region	Bands
D-LTE-GB	Global	1, 3, 7, 8, 20, 28
D-LTE-AS	ASEAN	1, 3, 5, 8, 40, 41
D-LTE-NA	North America	2, 4, 5, 12, 13, 14, 17

Key advantages of D-LTE

- Adds LTE functionality to units that do not include LTE in the base hardware
- Adds second LTE interface/radio (for active/active use case) to platforms that already include a LTE interface integrated into the platform
- LTE Category 4
- 75↓ / 50↑ Mb/sec downstream↓ / upstream↑ maximum throughput
- Single micro SIM , single radio
- Only one D-LTE dongle per router is supported

Use cases with USB based LTE Connectivity



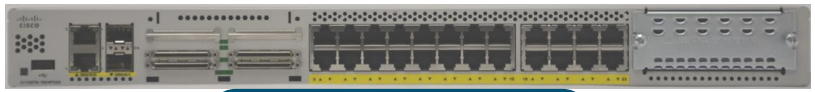


Use cases will typically provide an alternate method of access for backup or rescue conditions.

Some use cases could involve adding this USB LTE dongle as a second LTE interface. Others would allow adding LTE functionality to routers that did not include LTE in the baseline hardware configuration.

Introducing C1100T Terminal Gateway

Next Generation Terminal Server



C1100TG-1N24P32A

C1100TG-1N32A

- 2 Routed ethernet interfaces
- Up to 72 x RS232 Asynchronous ports
- 24 x Layer 2 Switch Ports
- 1 NIM Module (Supports select ISR4000 modules)
- Programmable IOS-XE

NEBS Level 3 Certified

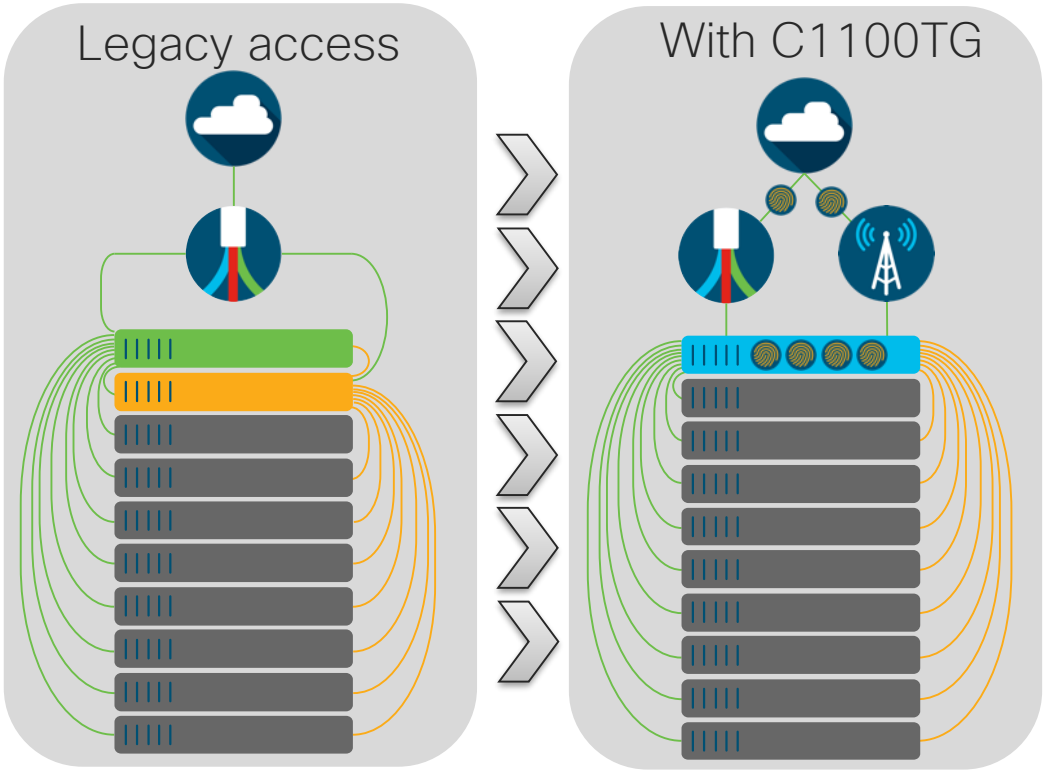
Redundant AC/ DC Power Options

Security: IPSec & Firewall Support

Optional 24-Port Switch Model

Optimal for Out of band (OOB) Management, Connectivity to servers and telecom equipment in Data Centers

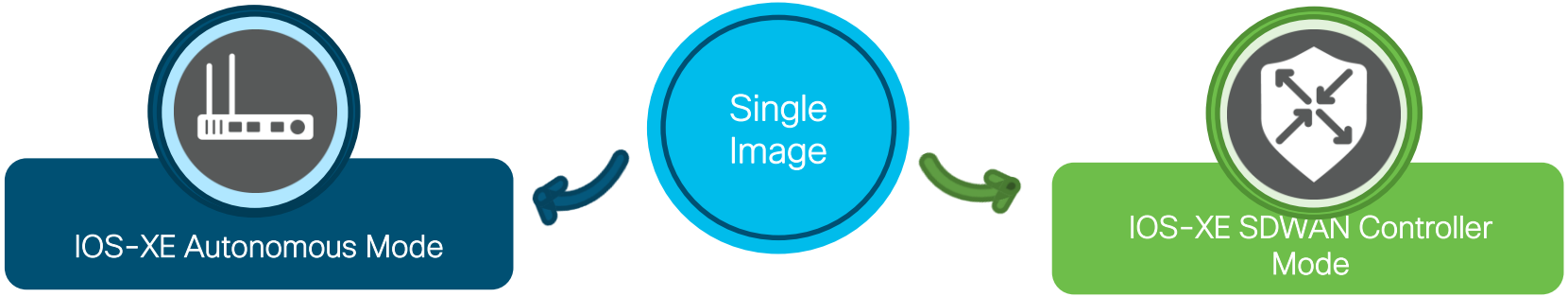
Use cases



- Previous solutions required both a terminal server and switch for management access.
- C1100TG consolidates this into a single 1RU platform with scale
- LTE access is also available for isolation workaround
- Crypto technology ensures secure connectivity

| Management ethernet
| ASYNC console access

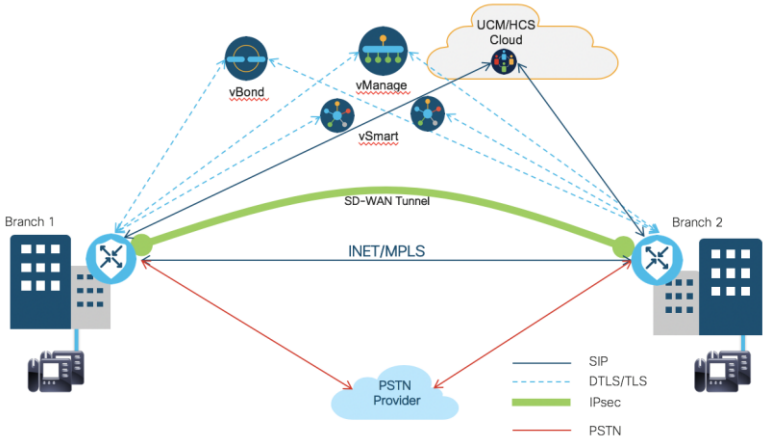
Introducing Single Image for IOS-XE and IOS-XE SD-WAN



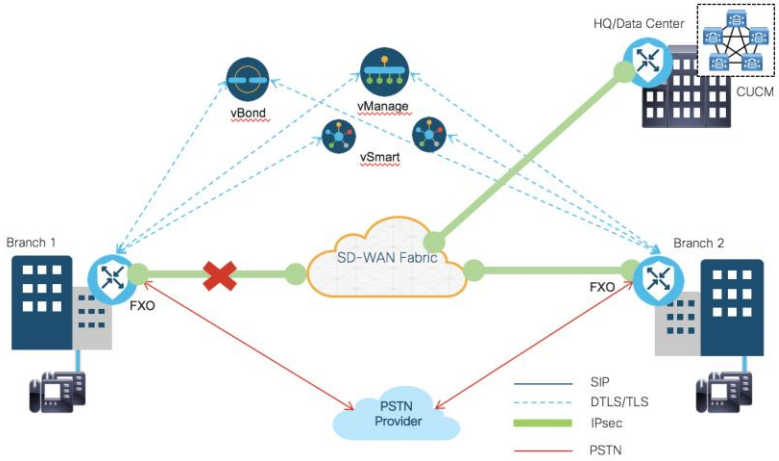
Simplicity	▪ Single file download for Routing and SDWAN deployments
Flexibility	▪ Seamless deployment for both Greenfield & Brownfield deployments ▪ Day-0 onboarding with either PnP or manual CLI mode
Ease of Use	▪ Seamless upgrade, boots directly in expected mode ▪ Full Configuration restored

Introducing SD-WAN & Integrated Voice Gateway Capabilities

UC Config and UC Policy



SRST Support with SD-WAN



VoIP Provisioning At Scale

Leverage the power of vManage Templating and Policy orchestration to provision scalable, consistent UC across the enterprise

Flexible Connectivity

Directly connect with Cloud or On-Premise call control with improved user experience while positioning for the future

Hardware Consolidation

Reduce CapEx and OpEx by consolidating UC and SD-WAN into a single CPE


CISCO