

Cisco 6400 Series Quick Look

The Cisco 6400 series universal access concentrator (UAC) is a scalable service gateway that enables the selection and delivery of high-speed network services, virtual private networks (VPNs), voice- and entertainment-driven traffic delivered over any type of DSL service. The Cisco 6400 UAC combines the richness of Cisco IOS® ATM switching and routing capabilities, and value added service selection in a modular, scalable, redundant, NEBS certified and ETSI form factor. The Cisco 6400 series UAC is an integral part of the Cisco end-to-end DSL architecture.

Target Markets

- Worldwide Telcos, PTTs, and RBOCs
- Worldwide Tier 1 - Tier 2 ISPs
- Enterprise (Home Gateway)

Features

- Enhanced portals to offer personalized on-demand services to each family member with Web service selection
- More than 14,000 homes reachable simultaneously for cost-effective high-speed service delivery with PPPoE, PPPoATM, or bridging (RFC 1483)
- Liberation from the complexities of IP address management with MultiDomain (MD) virtual routers
- Flexible accounting options for creative billing of personalized on-demand service
- Cost-effective traffic aggregation: OC-3c, STM-1c, DS3, OC-12c in 2H99
- IP and ATM quality of service (QoS)/ class of service (CoS) support including ABR, CBR, and VBR, as well as CAR, WFQ, WRED, and RSVP
- Integrated service selection gateway
- Fully redundant
- Scalable SVC and PVC support –up to 32K VCCs



*NEBS Certified

Key Benefits

- Increase revenue opportunity**
 - Offer scalable IP services over an ATM infrastructure
 - Apply CoS and QoS for differentiated DSL services
 - Allow for local Layer 3 services where desired
 - On-demand simultaneous services
- Reduce cost**
 - Highest-density circuit termination and forwarding
 - Reduce VC count via tunneling architecture
 - Reduce per-sub provisioning costs
 - Increase network scalability
 - Web-based dashboard for self-provisioned access to multiple destinations
- Management and accounting**
 - Fully redundant hot swappable
 - Radius accounting-SNMP support

Service Models Summary

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|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Wholesale | <ul style="list-style-type: none"> ATM VC switching |
| Dedicated Access | <ul style="list-style-type: none"> Per VC flow control VP/VC switching or VP multiplexing PNNI V1.0/ILMI V4.0 Bridged IP Configurationless CPE |
| Service Selection/Aggregation | <ul style="list-style-type: none"> Bridged IP L2TP tunneling aggregation PPP termination aggregation with MD virtual routing and IP address independence PPPoE/PPPoAs-based service selection Web-based service selection Cisco IOS routing and services Radius accounting |
| ISP/Enterprise | <ul style="list-style-type: none"> Bridged IP L2TP network server termination PPPoE/PPPoA termination AAA radius services |

Web Service Selection

- Customer benefits**
 - Turn services on/off instantly
 - Access multiple services simultaneously
 - Access personalized service portfolio
 - Select varying services security and quality options
- Service provider benefits**
 - Service advertisement
 - On-demand services
 - Usage-based
 - Standard interface for dial and DSL
 - Brand recognition



Services Connection Manager

- Provides element management capabilities
- Supports subscriber QoS profiles
- Supports service connection capabilities via profiles
- Supports pure ATM, PPP-IP, PPP-L2TP, Bridged-Bridged, Bridged-Routed architectures

Competitive Advantages

- Scalability—the Cisco 6400 can support up to 14,000 subscribers
- Reliability—designed as a carrier class, the Cisco 6400 is fully redundant
- Manageability—the Service Connection Manager (SCM) software makes provisioning and managing the 6400 easy
- Web service selection gateway built-in—no need for loading thousands of clients with PPPoE software for service selection. Users can use their existing Web browser for selecting different services.
- End-to-end solution—Cisco offers end-to-end solution, having tested and deployed large-scale networks, so there's no surprise for customers.
- ATM switch—the Cisco 6400 is also an ATM switch (5 Gbps) and can be used to aggregate traffic from multiple DSLAMs with OC-3, DS3, and OC-12 Cisco IOS router with key routing protocols support like RIP, OSPF, IGRP, EIGRP, and BGP
- Premium bandwidth delivery with ATM and IP QoS
- Fully NEBS certified and ETSI compliant

Ordering Information

Product Number	Description
Cisco 6400	
CISCO6400	Cisco 6400 chassis and 1 DC PEM
C6400-CHAS=	Cisco 6400 chassis and 1 DC PEM
CISCO6400-DC-OC-3	Cisco 6400 Bundle-1 NSP, 1 NRP, 2 OC-3, DC Power
CISCO6400-DC-DS3	Cisco 6400 Bundle-1 NSP, 1 NRP, 2 DS3, DC Power
C6400-BLOWER=	Cisco 6400 chassis blower
C6400-FLTR=	Cisco 6400 air filter kit
Power	
C6400-PWR-DC=	Cisco 6400 DC PEM
C6400-PWR-2DC	Cisco 6400 DC PEM
C6400-PWR-AC=	Cisco 6400 AC external redundant power supply
Node Switch Processor (NSP)	
C6400-NSP-1	Cisco 6400 node switch processor and slot cover
MEM-NSP-64M	NSP 64 MB DRAM
MEM-NSP-128M	NSP 128 MB DRAM (option)
MEM-NSP-FD20M	Cisco 6400 NSP 20 MB Flash disk
MEM-NSP-FD220	Cisco 6400 NSP 220 MB Flash disk (option)
MEM-NSP-FD350	Cisco 6400 NSP 350 MB Flash disk (option)
SF64J4-12.0.2DB	Cisco 6400 series Cisco IOS for NSP
(Spares for all of the above products are also available)	
Node Line Card (NLC)	
C6400-CARRIER	Cisco 6400 carrier module
NLC-2OC3-SM	2-port OC-3/STM-1 single mode
NLC-2DS3-BNC	2-port DS3 NLC module
(Spares for all of the above products are also available)	
Node Route Processor (NRP)	
C6400-NRP-1	Cisco 6400 node route processor
MEM-NRP-64M	NRP 64 MB DRAM
MEM-NRP-128M	NRP 128 MB DRAM (option)
MEM-NRP-FS8M	NRP 8 MB Flash memory
MEM-NRP-FS16M	NRP 16 MB Flash memory (option)
(Spares for all of the above products are also available)	
Cisco IOS for Cisco 6400	
S64J4-12.0.3DB	Cisco 6400 series Cisco IOS for NSP ¹
SF64J3-11.3.9DB	Cisco 6400 series Cisco IOS for NRP ²
SF64J3-11.3.9DB=	Cisco 6400 series Cisco IOS for NRP ²

Product Number	Description
Cisco IOS for Cisco 6400 (continued)	
S64J3-12.0.3DC	Cisco 6400 series Cisco IOS for NRP ²
S64J3-12.0.3DC=	Cisco 6400 series Cisco IOS for NRP ²
S64J5-12.0.3DC	Cisco 6400 series Cisco IOS for NRP-MD ²
S64J5-12.0.3DC=	Cisco 6400 series Cisco IOS for NRP-MD ²
S64J6-12.0.3DC	Cisco 6400 series Cisco IOS for NRP-MD with Web selection ²
S64J6-12.0.3DC=	Cisco 6400 series Cisco IOS for NRP-MD with Web selection ²
Upgrades	
FL64-J3-J5=	Upgrade from NRP to NRP-MD ²
FL64-J5-J6=	Upgrade from NRP-MD to NRP-MD with Web selection ²
FL64-J3-J6=	Upgrade from NRP to NRP-MD with Web selection ²
Covers	
C6400-PEM-CVR	Cisco 6400 PEM slot cover
C6400-NSP-CVR	Cisco 6400 NSP slot cover
C6400-NLC-CVR	Cisco 6400 NLC half-height slot cover
C6400-NRP-CVR	Cisco 6400 NRP/NLC full-height slot cover
(Spares for all of the above products are also available)	
Cisco 6400 Service Connection Manager	
SCM-1.0-6400-E	Entry service, manages up to 2 Cisco 6400s
SCM-1.0-6400-S	Small service, manages up to 10 Cisco 6400s
SCM-1.0-6400-M	Medium service, manages up to 50 Cisco 6400s
SCM-1.0-6400-L	Large service, manages up to 200 Cisco 6400s
Upgrades	
SCM-UPG-6400-E-S	Upgrade from entry to small service
SCM-UPG-6400-E-M	Upgrade from entry to medium service
SCM-UPG-6400-E-L	Upgrade from entry to large service
SCM-UPG-6400-S-M	Upgrade from small to medium service
SCM-UPG-6400-S-L	Upgrade from small to large service
SCM-UPG-6400-M-L	Upgrade from medium to large service

¹One per chassis even if redundant system

²One per NRP unless NRP is redundant; no charge for 2nd redundant NRP

