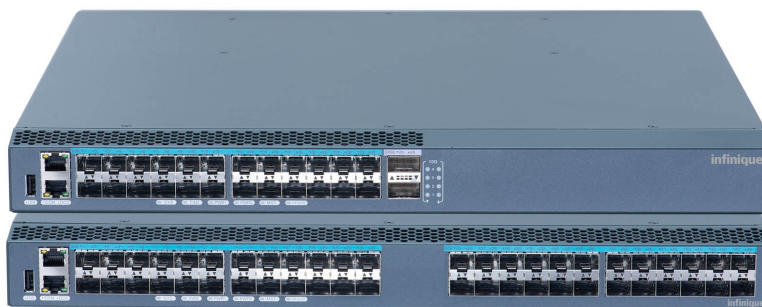


I2400M Series

Infinique Networks Layer3 Aggregation Switch

10G Managed and Stackable for Enterprise and SMB Applications



Overview

Infinique's 2400M Series Switches are a high performance 10G Layer-3 Stackable Managed network switches that are stable, reliable and are designed for ease of use. These switches offer excellent high speed performance through line-rate forwarding on all ports, and have advance redundancy and reliability features that are implemented through the industry standard protocols like the Ethernet Ring Protection Switching Protocol.

The 2400M series switches offer a comprehensive set of options for management of switches through protocols like SNMP and Cloud, providing easy configuration and setup of switches using Web or Command Line Interface. These switches come with up to 10G SFP+ port connections and Uplink of 40G and 25G through QSFP+ and SFP28 uplink ports greatly increasing the bandwidth and throughput. With improved fault tolerance and reliability via the Virtual Stacking Technology these switches help network administrators simplify network management and expansion.

Built with security and advance features, the switches can act as aggregation switches and meet the very comprehensive demands of Enterprise, Small and Medium Business Ethernet network infrastructure requirements for branch offices of corporate and banks, hotels, hospitals, schools, college and university campus, restaurants and retail chain stores.

Product Highlights

- High performance Gigabit and 10G Ports for Fast Connections
- 40 Gigabit and 25 Gigabit Uplink Ports for High Bandwidth Connections to support Servers and Storage
- Physical Stacking of up to 8 Switches to create a Single Virtual Switch or Logical Device for fault tolerance and reliability
- Supports Standard Spanning Tree Protocols ensuring seamless connectivity and high availability
- Universal 10/100/1000 Mbps ports for legacy to latest Gigabit devices
- Effectively access and manage network switches from remote locations using Cloud reducing management costs
- Zero Touch Provisioning for easy and quick deployment
- Effectively manage network bandwidth by traffic prioritization and resource allocation using advanced QoS
- Control network access with a range of features that provide user and device authentication and ensure network security
- Robust Aluminum metal alloy enclosure with Fan or Fan-less design for excellent heat dissipation
- Supports Industry Standards such as IEEE 802.3, IEEE 802.3u, IEEE 802.3z, IEEE 802.3ab, IEEE 802.3x, IEEE 802.3az, IEEE 802.3ah and more.

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Series Snapshot

Model/Max. Ports		26	48	50
Port Type	RJ45	NA	NA	24
	SFP+	24	48	18
	SFP28 (25G)	NA	NA	8
	QSFP+ (40G)	2	NA	NA
Power (AC)		Dual Modular	Dual Modular	Dual Modular
FAN		Dual Modular	Dual Modular	Dual Fixed
Switching Capacity (Gbps)		640	960	880

Refer Ordering Section for Part Numbers

Salient Features

10G high density ports and up to 40G Uplinks

As the application servers bandwidth moves upwards from 1G to 10G range, Infinique's I2400M series switches feature high density 10G ports with 40G or 25G uplinks to provide routing and extremely low latency making them suitable to be used as Aggregation Switches. The switches come in models with fixed configurations and high capacity port combinations of RJ45, SFP+, QSFP+ or SFP28 ports offering flexibility and providing an economical option catering to the requirements of Enterprise IT networks and applications.

High Availability

The I2400M series switches offer excellent feature of redundancy and reliability and cater to very diverse networking requirements. In addition to supporting traditional spanning tree protocols such as STP, RSTP, and MSTP, the switches also comply with the ITU-T G.8032 international standard, the Ethernet Ring Protection Switching (ERPS) protocol which enables rapid failover within Ethernet ring network topologies, ensuring seamless connectivity and minimal downtime.

Stack together for Bandwidth and Management

The I2400M series switches can be combined together to form a single virtual stack or logical unit. The stacking is achieved by connecting multiple switches together through the 10G SFP+ ports to form a single virtual switch that helps improve the switches link reliability, increase bandwidth and provide simple configuration and management, and ease of network expansion.

Quality of Service ensuring Performance

The Quality of Service (QoS) capabilities of switches guarantees the network traffic of various applications, such as streaming video, VoIP calls, and data transfer, is prioritized correctly and with the right resource allocation as per the requirements of the application. This is achieved with the advanced scheduling algorithms such as SP, WRR, WFQ, SP+WRR and SP+WFQ and diverse priority mapping techniques such as 802.1p and DSCP, that enable control over traffic classification and prioritization.

Zero Touch Provisioning for Quick Setup

Infinique's I2400M series provide advanced ZTP features for easy deployment. Using this feature the switches can discover and install necessary version files from a file server eliminating the need for manual setup during the initial setup. This helps reduce the configuration errors and accelerates the deployment process, while enhancing the overall network efficiency, making these switches an ideal choice for network administrators.

Management Options for Easy Administration

The I2400M series offer a comprehensive set of management features and options to provide an easy way to manage tasks. Available features include network management protocols like Cloud and SNMP, Configuration and Control options using Web and CLI, Monitoring and Diagnostics tools such as RMON and SYSLOG, help network administrators to monitor and maintain the network for optimum performance.

Authentication and Secure Access

These series of network switches offer a comprehensive suite of security features that provide both user and device authentication and protection. The features include user authentication, port security, Access Control Lists (ACL), Loopback Detection and 802.1x Authentication. Robust security functions such as IP Source Guard, DHCP Snooping, Dynamic ARP Inspection and PPPoE+ ensure excellent protection for network access. These network switches also support MAC binding, and counter measure against network storm, ARP snooping and protocol packet attacks making it an ideal access network switch.

Industry Standards Compliance

The I2400M series switches are designed for industry standards and include various IEEE standards such as IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3x, and IEEE 802.3az. These standards make sure that your network operates with the latest technologies and is compatible with a wide range of networking equipment, providing interoperability and future-proofing your infrastructure investment.

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NETWORK MANAGEMENT FEATURES

Ports and Interface

Basic Port Configuration	Auto MDI/MDIX, Port Type UNI/NNI Port Speed, Port Duplex, Port MTU(Jumbo Frame), Port Isolation, Port Loopback, Port Energy Control
MAC Address Management	MAC Address Aging Time, MAC Address Learning ON/OFF, MAC Address Learning Limitation, Static MAC Address, MAC Address Filter, MAC address VLAN Binding, MAC Debug
Storm Control	Storm, Flood Control and Shutdown Control for BUM
Logical	Loop-back, Tunnel, Null, L2/L3 VLAN and L3 Ethernet interfaces

Ring Protection

Spanning Tree Protocols	STP/RSTP/MSTP, BPDU Guard, BPDU Filter, Flap Guard, Loop Guard, Root Guard, TC Guard, BPDU L2protocol Tunnel
Other Protocols	VIST/VIST+, G.8032 (Ethernet Ring Protection Switching) v1, v2

Link Aggregation

LACP Configuration	LACP Link Aggregation, LACP Port Priority, LACP Load Balance, LACP Rate Monitor, LACP Debug
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VLAN

VLAN Management	VLAN, VLAN PVID, VLAN Trunk, VLAN Hybrid, VLAN Interface, MAC VLAN, Protocol VLAN, IP Subnet VLAN, Super VLAN, Voice VLAN, Private VLAN, Guest VLAN, GVRP, Basic QinQ, Selective QinQ, 802.1ad, VLAN Mapping, VLAN Debug, VLAN Isolation
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IP Services

IP Protocol	ARP, DNS, NTP Server/Client, ICMP, ECMP, GRE, IPIP, IPv6 over IPv4, ISATAP, IPv4 over IPv6, IPv6 over IPv6
Routing Protocol	Static Routing v4/v6, RIP/RIPng, OSPF v2/v3, BGP/BGP+, ISIS/ISIS v6, VRRP/VRRP v3, VBRP, PBR/PBR v6, IP-VRF
DHCP Service	DHCP v4/v6 Server, DHCP v4/v6 Client, DHCP v4/v6 Relay, DHCP Snooping, DHCP Option 51/82

Multicast

L2 Multicast Protocols	IGMP v1/v2/v3 Snooping, Fast Leave, IGMP Snooping Proxy, MLD Snooping, MVR, MVP
L3 Multicast Protocols	IGMPv1/v2/v3, PIM v4/v6-SM, PIM v4/v6-SSM, PIM-DM, PIM-SDM,

Quality of Service (QoS)

Flow Classification	802.1P Priority, DSCP Priority, VLAN ID, MAC Prefix, IP Subnet, Protocol, IP Precedence, IPv6 Traffic Class, Ethernet Type
Traffic Control	Rate Limit and Port based Bandwidth, Traffic Shaping
Traffic Classification	Three Color Marker, Priority Remark, Traffic Redirect/Meter/Mirror
Scheduling	Port-based Priority, SP, WRR, WFQ, SP+WRR, SP+WDRR, SP+WFQ
Congestion Management	Tail-drop, RED, WRED

Error Handling and Fault Detection

Error-Disable Configuration	Error-Disable Based on BPDU-guard, Loopback-detect, Port Security; Error-Disable Recovery
Fault Detection	UDLD, Loop-back Detection, CFM, Monitor Link (MTLK)

Multi Protocol Label Switching (MPLS)

MPLS L3 VPN	LDP, MPLS BGP, MPLS Option-A & Option-B, Multi-VRF
MPLS OAM	MPLS Ping/Traceroute, MPLS QoS, MPLS TE

Security

Port Security	Rule Based On IP/MAC/MAX/Sticky, Violation (Protect/Restrict/Shutdown), Recovery
Network Access Control	IP Source Guard (ISG), DHCP Snooping, ND Snooping, Host Guard
Access Control List	Standard IP ACL, Extended IP ACL, Standard MAC ACL, Extended MAC ACL, Standard Hybrid ACL, Extended Hybrid ACL, Standard IPv6 ACL, Extended IPv6 ACL, Time-based ACL
Threat Prevention	Dynamic ARP Inspection (DA), ARP Check, AARF ARP-Guard, ARP Speed Limit, ARP Source Suppression, PPPoE+

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NETWORK MANAGEMENT FEATURES

AAA	Local Authentication, Radius (Authentication, User Login Authorization and Accounting), TACACS+ (Authentication, User Login Authorization and Accounting, Command Authorization and Accounting)
802.1x	Port-based 802.1X, MAC-based 802.1X, MAC-Authentication, Guest-VLAN, VLAN Distribution (Auto-VLAN), ACL Distribution
Anti Attack	Anti-Attack Detect/Drop/Flood/Log, URPF, White List, Black List

Configuration and Management

Monitoring and Diagnostics	1:1 SPAN, N:1 SPAN, RSPAN, Flow-based Mirror, Ping, Tracert, DDM, VCT
Device Management	SNMP v1/v2/v3, SNMP Trap, RMON, SYSLOG (Logging to Terminal/Logging to Server/CLI Operation to Server), LLDP, WEB(HTTP), Console, Telnet, SSH, Cloud, System Upgrade (TFTP/FTP/SFTP/WEB), Configuration Management (Backup/Restore), Factory Reset, Password Reset, ISSU, Hot Patch, Keep-Alive Gateway, Cloud Management
Zero Touch Provisioning	ZTP Through DHCP Server, USB and Flash Disk

High Availability

Device Virtualization	H-VST, M-VST
Detection Mechanism	MAD LACP, MAD BFD, MAD Fast-Hello, MAD LACP
Protocols	HA, ULFD, UDLD, G.8032, ULPP, Monitor Link, VRRP, VRRPv3, VBRP, EEP, BFD with Static/RIP/OSPF/BGP/ISIS

Network Virtualization

VXLAN/EVPN	IPv4/IPv6 VXLAN Tunnel, VXLAN Distributed and Static Centralized Gateway, VXLAN QoS, BGP-EVPN
Data Center Interconnect	END-TO-END VXLAN, VLAN Hand-Off, Cross As Segment VXLAN

Stacking

Physical Stacking	Yes, Max Distance 80Km
Max No. of Switches	8
Bandwidth	160Gbps

Standards Compliance

IEEE Standard	802.1D Bridging and Spanning Tree Protocol 802.1p Quality of Service and Class of Service Priority 802.1Q Virtual LAN tagging 802.1ad Double Tagging of Data 802.1w Rapid Spanning Tree Protocol 802.1s Multiple Spanning Tree Protocol 802.1ag Connectivity Fault Management 802.1x Port-Based Network Access Control 802.1AB Link Layer Discovery Protocol 802.3 10BASE-T 802.3u 100BASE-T 802.3z 1000BASE-X 802.3ab 1000BASE-T 802.3ae 10G BASE-X 802.3by 25G BASE-X 802.3ba 40G BASE-X 802.3ah Ethernet in the First Mile Operations, Administration, and Maintenance 802.3ad Link Aggregation 802.3x Flow Control RFC 2460 Internet Protocol, Version 6 (IPv6) Specification RFC 4861 Neighbor Discovery for IP Version 6 (IPv6) RFC 4862 IPv6 Stateless Address Auto configuration RFC 4443 Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6)
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TECHNICAL SPECIFICATIONS

Non-POE Models

	I2410M-24X-2Q	I2420M-48X	I2430M-24T-18X-8Y
General			
10/100/1000 Ports	NA	NA	24x RJ45 Ports
SFP+ 10G Ports	24x 10G Fiber Ports	48x 10G Fiber Ports	18x 10G Fiber Ports
SFP28 25G Ports	NA	NA	8x 25G Fiber Ports
QSFP+ 40G Ports	2x 40G Fiber Ports	NA	NA
Console Ports	1x RJ-45, 1x USB		
Host Support	IPv4 / IPv6 ready		
LED Indicator Status	Power: Yellow, System: Yellow, Network: Link/Act Yellow, SFP: Link/Act Green, PoE: Green		
Fan	Dual Modular	Dual Modular	Dual Fixed
Performance			
Switching Bandwidth	640Gbps	960Gbps	880Gbps
Transmission	Store and Forward		
Forwarding Rate	476.19mpps	714.29mpps	601.19mpps
Buffer Memory	4.5M	9M	4.5M
Jumbo Frame	12Kbytes		
MAC Addresses Table Size	384K	384K	384K
VLAN Entries	4K	4K	
IPv4 Host Table (ARP)	62K	62K	62K
IPv4 Routing Entries	632K	632K	632K
IPv6 Host Table (ND)	19K	19K	19K
IPv6 Routing Entries	383K	383K	383K
L3 Multicast Entries	8K	8K	8K
MTBF	300,000 hours		
Power Management			
Power Supply Type	Dual Modular	Dual Modular	Dual Modular
Power Input	AC 100~240V 50~60Hz		
Max Power Consumption	94W	100W	83W
Environment			
Temperature (Celsius)	Operating: -5 °C to +45 °C; Storage: -40 °C to +70 °C		
Humidity	Operating: 10% to 90% non-condensing; Storage: 5% to 95% non-condensing		
Heat Dissipation (BTU)	321	553	283
Physical			
Dimensions (WxDxH) mm	442×420×44.2	442×420×44.2	442×420×44.2
Weight	5.5Kg	5.36Kg	6.0Kg
Mounting Options			
Standards and Compliance			
Safety	CE/LVD EN 62368-1 RoHS		
EMC/EMI	EN 55032, EN 55035, EN 61000-3-2, EN 61000-3-3		
Green Energy (EEE)	IEEE802.3az Energy Efficient Ethernet Task Force		
Lighting Protection	6KV		

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Ordering Information

Part Number	Description
Switches Models	
I2410M-24X-2Q	Infinique I2400M Series Layer 3 10G Cloud Managed Aggregation Switch, 24x 10G SFP+, 2x 40G QSFP+ Ports, Dual Fan Slots, Dual Power Slots
I2420M-48X	Infinique I2400M Series Layer 3 10G Cloud Managed Aggregation Switch, 48x 10G SFP+ Ports, Dual Fan Slots, Dual Power Slots
I2430M-24T-18X-8Y	Infinique I2400M Series Layer 3 10G Cloud Managed Aggregation Switch, 24x 100/1000M Ethernet, 18x 10G SFP+, 8x 25G SFP28 Ports, Dual Power Slots
Fan Module	
I2410M-FAN	Infinique I2400M Series Layer 3 10G Cloud Managed Aggregation Switch, Fan Module
I2420M-FAN	Infinique I2400M Series Layer 3 10G Cloud Managed Aggregation Switch, Fan Module
Power Module	
I2410M-AC-120-PWR	Infinique I2400M Series Layer 3 10G Cloud Managed Aggregation Switch, AC Input 100-240V, 120W, Output 12V/10A, Current Sharing, Hot Swappable Power Module
I2420M-AC-250-PWR	Infinique I2400M Series Layer 3 10G Cloud Managed Aggregation Switch, AC input 100-240V, 250W, Output 12V/10A, Current Sharing, Hot Swappable Power Module
I2430M-AC-120-PWR	Infinique I2400M Series Layer 3 10G Cloud Managed Aggregation Switch, AC input 100-240V, 250W, Output 12V/10A, Current Sharing, Hot Swappable Power Module

Customer Support, Service and Warranty

Infinique network switches come with a standard one-year limited hardware warranty that covers repair or replacement of parts. Cloud and Software: 90 days, can be extended with support contract