

# I2200M Series

## Infinique Networks Layer3-Lite Access Switch

10G Uplink, Cloud Managed, Stackable for SMB Applications



### Overview

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Infinique's 2200M Series Switches are a high performance Layer-3 Lite 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 advanced redundancy and reliability features that are implemented through the industry standard protocols like the Ethernet Ring Protection Switching Protocol.

The 2200M 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 provide higher bandwidth connections through 10 Gigabit SFP+ Uplink ports and help improve fault tolerance and reliability via Virtual Stacking Technology that simplifies network management and expansion.

These Layer-3 Lite switches meet the very comprehensive demands of Enterprise and Small and Medium Business customer requirements for IT networks of branch offices, hotels, hospitals, schools, warehouses, restaurants and retail stores.

### Product Highlights

- High performance Gigabit Ports for Fast Connections
- 10 Gigabit SFP+ 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
- Plug and Play PoE+ connectivity with Intelligent PoE power allocation
- 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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## Infinique Networks Layer3-Lite 10G Managed Access Switch

### Series Snapshot

<b>Model/Max. Ports</b>		12	28	28	52
<b>Port Type</b>	RJ45	8	24	24	48
	SFP	-	-	-	4
	SFP+	4	4	4	NA
<b>PoE+</b>				380W	
<b>Console Port (RJ45/USB)</b>		Both	Both	Both	Both
<b>Power (AC) - Fixed</b>		Single	Single	Single	Dual
<b>Switching Capacity (Gbps)</b>		96	128	128	104

Refer Ordering Section for Part Numbers

### Salient Features

#### High Availability

The I2200M 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.

#### Intelligent Power over Ethernet (PoE)

The I2200M series switches come with and without PoE support. The PoE supported models provide power over Ethernet which allows a Powered Device (PD) to be powered through the same standard Ethernet cable that transmits data. The PoE power provided by each port is automatically switched to PoE or PoE+ based on the connected Powered Device. Additionally the I2200M series switches monitor the Powered Device (PD) dynamically to check if the PD is online, and will reset and restart the device if there is an issue with data transmission.

#### Stack together for Bandwidth and Management

The I2200M 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 I2200M 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 I2200M 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 I2200M 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.

**NETWORK MANAGEMENT FEATURES**

**Ports and Interface**

Basic Port Configuration	Auto MDI/MDIX, Port Speed, Port Duplex, Port MTU( Jumbo Frame), Port Isolation
MAC Address Management	MAC Address Aging Time, MAC Address Learning ON/OFF, MAC Address Learning Limitation, Static MAC Address, MAC Address Filter
Storm Control	Storm, Flood Control and Shutdown Control for BUM
Logical	Loop-back, 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
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**VLAN**

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

IP Protocol	ARP, DNS Client, SNTP Client, ICMP, IPv6, IPv6 ND/SLAAC
Routing Protocol	Static Routing v4/v6 for Management
DHCP Service	DHCP Relay/Client, DHCP Snooping, DHCP Snooping Option 82

**Multicast**

L2 Multicast Protocols	IGMP v1/v2/v3 Snooping, Fast Leave, IGMP Snooping Querier, IGMP Filter, Static Group, MLD Snooping, MVR
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**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)

**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+
AAA	Local Authentication, Radius (Authentication, User Login Authorization, User Login Accounting), TACACS+ (Authentication, User Login Authorization, Command Authorization, User Login Accounting, Command 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

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**NETWORK MANAGEMENT FEATURES**

**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, EEP, BFD with Static Route

**Stacking**

Physical Stacking	Yes
Max No. of Switches	8
Bandwidth	80Gbps

**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 802.3ah 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)

# I2200M Series

## Infinique Networks Layer3-Lite 10G Managed Access Switch

### TECHNICAL SPECIFICATIONS

#### Non-POE Models

I2200M-8T-4X                      I2200M-24T-4X                      I2200M-48T-4G

#### General

10/100/1000 Ports	8x RJ-45 Ports	24x RJ-45 Ports	48x RJ-45 Ports
SFP 1G Ports	-	-	4x 1G Fiber Ports
SFP+ 10G Ports	4x 10G Fiber Ports	4x 10G Fiber Ports	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	Single Fixed		
Factory Reset Button	Yes		

#### Performance

Switching Bandwidth	96Gbps	128Gbps	104Gbps
Transmission	Store and Forward		
Forwarding Rate	71.42mpps	95.24mpps	77.38mpps
Buffer Memory	4.1MB		
Jumbo Frame	12Kbytes		
MAC Addresses Table Size	16K	16K	32K
VLAN Entries	4K		
IPv4 Host Table (ARP)	2K		
IPv6 Host Table (ND)	1.5K		
MTBF	300,000 hours		

#### Power Management

Power Supply Type	Single Fixed	Single Fixed	Dual Fixed
Power Input	AC 100~240V 50~60Hz		
Max Power Consumption	25W	30W	55W

#### 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)	69	89	188

#### Physical

Dimensions (WxDxH) mm	275×230×44.2	442×350×44.2	442×320×44.2
Weight	1.85Kg	2.9Kg	5.0Kg
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

**I2200M Series**

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**TECHNICAL SPECIFICATIONS**

**POE Models**

I2200M-24P-4X-380

**General**

10/100/1000 Ports	24x RJ-45 Ports
SFP 1G Ports	-
SFP+ 10G Ports	4x 10G Fiber Ports
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	Single Fixed
Factory Reset Button	Yes

**Performance**

Switching Bandwidth	128Gbps
Transmission	Store and Forward
Forwarding Rate	95.24mpps
Buffer Memory	4.1MB
Jumbo Frame	12Kbytes
MAC Addresses Table Size	16K
MTBF	300,000 hours
VLAN Entries	4K
IPv4 Host Table (ARP)	2K
IPv6 Host Table (ND)	1.5K

**Power Management**

Power Supply Type	Single Fixed
Power Input	AC 100~240V 50~60Hz
Max Power Consumption	410W
PoE Standard	IEEE802.3af/at
PoE Ports	24
PoE Power Budget	380W

**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)	99

**Physical**

Dimensions (WxDxH) mm	442×380×44.2
Weight	5.3Kg
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**

<b>Part Number</b>	<b>Description</b>
Non-PoE Models	
I2200M-8T-4X	Infinique I2200M Series Layer 3 Lite 1G Cloud Managed Access Switch, 8x 100/1000M Ethernet, 4x 10G SFP+ Ports, Single AC Power
I2200M-24T-4X	Infinique I2200M Series Layer 3 Lite 1G Cloud Managed Access Switch, 24x 100/1000M Ethernet, 4x 10G SFP+ Ports, Single AC Power
I2200M-48T-4G	Infinique I2200M Series Layer 3 Lite 1G Cloud Managed Access Switch, 48x 100/1000M Ethernet, 4x 1G SFP Ports, Dual AC Power
PoE Models	
I2200M-24P-4X-380	Infinique I2200M Series Layer 3 Lite 1G Cloud Managed Access Switch, 24x 100/1000M PoE Ethernet, 4x 10G SFP+ Ports, 380W PoE Budget, Single AC Power

**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