

I2100M Series

Infinique Networks Layer2 Access Switch

Managed Gigabit Switch for Enterprise and SMB Applications



Overview

Infinique's 2100M Series Switches are a Layer-2 high performance managed network switches that are stable, reliable and designed for ease of use. These Layer-2 switches offer excellent high speed performance through line-rate forwarding on all ports, and have advance redundancy and reliability features implemented through the industry standard protocols like the Ethernet Ring Protection Switching Protocol.

The 2100M 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 Layer-2 managed 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
- Supports Standard Spanning Tree Protocols ensuring seamless connectivity and high availability
- Universal 10/100/1000 Mbps ports for legacy to latest Gigabit devices
- 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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Series Snapshot

Model/Max. Ports		10	10	18	20	28	28	54
Port Type	RJ45	8	8	16	16	24	24	48
	SFP	2	2	2	4	4	2	
	SFP+	NA	NA	NA	NA	NA	NA	4
PoE+			140W		280W		380W	760W
Console Port (RJ45/USB)		RJ45	RJ45	RJ45	RJ45	RJ45	RJ45	Both
FAN		No	Yes	No	Yes	No	Yes	Yes
Switching Capacity (Gbps)		20	20	36	40	56	56	216

Refer Ordering Section for Part Numbers

Salient Features

High Availability

The I2100M 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 I2100M series switches have models 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.

Non-Blocking High Speed Forwarding

The switches are designed for non-blocking high-speed data forwarding across all the ports providing an efficient responsive network. Whether you are using data-intensive applications or have demanding workloads, these switches can guarantee a smooth flow of data, making it an ideal solution for diverse networking scenarios.

Quality of Service ensuring Performance

The Quality of Service (QoS) capabilities of the IM2100 network 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 I2100M 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 I2100M 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 I2100M 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

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 Control and Shutdown Control for BUM

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	G.8032 (Ethernet Ring Protection Switching)

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
Rate Limit	Rate Limit and Port based Bandwidth
Scheduling	Port-based Priority, SP, WRR, WFQ, SP+WRR, SP+WFQ

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
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
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

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
Zero Touch Provisioning	ZTP Through DHCP Server

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NETWORK MANAGEMENT FEATURES

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
 802.3ah 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

	I2100M-8T-2G	I2100M-16T-2G	I2100M-24T-4G
General			
10/100/1000 Ports	8x RJ-45 Ports	16x RJ-45 Ports	24x RJ-45 Ports
SFP 1G Ports	2x 1G Fiber Ports	2x 1G Fiber Ports	4x 1G Fiber Ports
Console Ports		1x RJ-45	
Host Support		IPv4 / IPv6 ready	
LED Indicator Status	Power: Yellow, System: Yellow, Network: Link/Act Yellow, SFP: Link/Act Green, PoE: Green		
Factory Reset Button		Yes	
Performance			
Switching Bandwidth	20Gbps	36Gbps	56Gbps
Transmission		Store and Forward	
Forwarding Rate	14.88mpps	26.78mpps	41.66mpps
Buffer Memory		4.1MB	
Jumbo Frame		10Kbytes	
MAC Addresses Table Size		8K	
MTBF		300,000 hours	
Power Management			
Power Supply Type		Fixed	
Power Input		AC 100~240V 50~60Hz	
Max Power Consumption	8W	10W	20W
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)	25	33.78	68.25
Physical			
Dimensions (WxDxH) mm	280x180x44.2	440x208x44.2	440x208x44.2
Weight	1.85Kg	2.9Kg	3.13Kg
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	4KV		

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TECHNICAL SPECIFICATIONS

POE Models

I2100M-8P-2G-140 I2100M-16P-4G-280 I2100M-24P-4G-380 I2100M-48P-4X-760

General

10/100/1000 Ports	8x RJ-45 Ports	16x RJ-45 Ports	24x RJ-45 Ports	48x RJ-45 Ports
SFP 1G Ports	1x Fiber Port	4x 1G Fiber Ports	4x 1G Fiber Ports	NA
SFP+ 10G Ports	NA	NA	NA	4x 10G Fiber Ports
Console Ports			1x RJ-45	
Host Support			IPv4 / IPv6 ready	
LED Indicator Status	Power: Yellow, System: Yellow, Network: Link/Act Yellow, SFP: Link/Act Green, PoE: Green			
Factory Reset Button			Yes	

Performance

Switching Bandwidth	20Gbps	40Gbps	56Gbps	216Gbps
Transmission			Store and Forward	
Forwarding Rate	14.88mpps	29.76mpps	41.66mpps	130.94mpps
Buffer Memory			4.1MB	
Jumbo Frame		10Kbytes		12Kbytes
MAC Addresses Table Size		8K		32K
MTBF			300,000 hours	

Power Management

Power Supply Type			Fixed	
Power Input			AC 100~240V 50~60Hz	
Max Power Consumption	150W	300W	410W	808W
PoE Standard			IEEE802.3af/at	
PoE Ports	8	16	24	48
PoE Power Budget	140W	280W	380W	760W

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)	546	965.87	1467.57	2200

Physical

Dimensions (WxDxH) mm	280x180x44.2	440x208x44.2	440x208x44.2	442x420x44.2
Weight	2.5Kg	3.73Kg	3.85Kg	7.02Kg
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	4KV

6KV

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Ordering Information

Part Number	Description
Non-PoE Models	
I2100M-8T-2G	Infinique I2100M Series Layer 2 1G Cloud Web Managed Access Switch, 8x 100/1000M Ethernet, 2x 1G SFP Ports, Single AC Power
I2100M-16T-2G	Infinique I2100M Series Layer 2 1G Cloud Managed Access Switch, 16x 100/1000M Ethernet, 2x 1G SFP Ports, Single AC Power
I2100M-24T-4G	Infinique I2100M Series Layer 2 1G Cloud Managed Access Switch, 24x 100/1000M Ethernet, 4x 1G SFP Ports, Single AC Power
PoE Models	
I2100M-8P-2G-140	Infinique I2100M Series Layer 2 1G Cloud Managed Access Switch, 8x 100/1000M PoE+ Ethernet, 2x 1G SFP Ports, 140W PoE Budget, Single AC Power
I2100M-16P-4G-280	Infinique I2100M Series Layer 2 1G Cloud Managed Access Switch, 16x 100/1000M PoE+ Ethernet, 4x 1G SFP Ports, 280W PoE Budget, Single AC Power
I2100M-24P-4G-380	Infinique I2100M Series Layer 2 1G Cloud Managed Access Switch, 24x 100/1000M PoE+ Ethernet, 4x 1G SFP Ports, 380W PoE Budget, Single AC Power
I2100M-48P-4X-760	Infinique I2100M Series Layer 2 1G Cloud Managed Access Switch, 48x 100/1000M PoE+ Ethernet, 4x 1/10G SFP+ Ports, 760W 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