

Technical Specification - Software (v7.4)

Class	Feature	Description (M750/M751)	Default Profile	Extended-buffer	IPv6 Profile	Layer3 Profile	Ipran Profile
Ethernet basic	Jumbo frame	Maximum jumbo frame size	9600	9600	9600	9600	9600
	Unicast MAC	MAC address capacity	98304	12288	98304	98304	98304
		MAC learning rate (SW)	> 4000pps				
		MAC learning rate (HW)	> 10Gbps				
		Blackhole MAC address capacity	128				
	Multicast MAC	MAC address capacity	2048	1024	1024	1024	2048
	VLAN	VLAN IDs	4094				
		VLAN instances	4094				
		VLANs to enable statistics	256				
	VLAN mapping	Maximum mapping table	64				
		Maximum rules number	1024				
	EVC	Maximum EVC number	4094				
	Link aggregation (Static & LACP)	Maximum member number per group	128				
		Maximum group number	64				
		Load balance key mode	static/dlb/rr/resilient/self-healing				
		Convergence time	< 50ms				
	VLAN classification	Maximum rule number	4096				
		Maximum group number	1				
		MAC based rule capacity	512	512	384	512	512
		IPv4 based rule capacity	448	448	256	1024	512
		IPv6 based rule capacity	32	32	256	0	0
		Protocol based rule capacity	7				
Ethernet ring protection	STP	Convergence time	< 30s				
	RSTP	Convergence time	< 1s				
	MSTP	MSTP instance number	64				
		Convergence time	< 1s				
	ERPS	Maximum domain number	16				
		Ring number	1 Primary ring/domain 2 Sub ring/domain				
		Maximum protection instance number per ring	64				
		Switchover time	< 50 ms				
	G.8031	Group number	256	256	0	0	16
		Switchover time	< 50 ms				
	G.8032	Rings	128	128	0	0	16
		Maximum member ports per Ring	256	256	0	0	32
		Switchover time	< 50 ms				
Ethernet OAM	CFM(802.1ag)	Maximum session number	512				
		Maximum domain number	8				
		CCM interval types	7				
		CCM minimum interval	3.3ms				
		Maximum down MEP number	1024				
		Maximum up MEP number	1024				
		Maximum LMEP number	1024				
IPv4 unicast	ARP	ARP capacity	12288	4096	6144	16384	12288
	IPv4	FIB	57344	28672	12288	57344	57344
	ECMP	ECMP group	240 (Share with IPv6)				
	PBR	Policy route map	64				
		Policy based routing ACE	256	256	128	256	128
	OSPF	Maximum static neighbors	256				
		Maximum summary address	2048				
IPv4 multicast	IPMC	Multicast routing table	2048	512	1024	2048	1024
		Multicast routing downstream interfaces	4096	1024	2048	5120	2048
	IGMP snooping	Maximum groups number	2048				
		Maximum member number	8192				
	MVR	Maximum group number	2048	512	1024	2048	1024
		Maximum member number	4096	1024	2048	4096	2048
IPv6	Host route	NDP capacity	2048	1024	4096	0	2048



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unicast	IPv6	FIBv6	4096	1024	6144	0	1024
		ECMP group	240 (Share with IPv4)			0	240
IPv6 multicast	IPMC	Multicast routing table	256	256	512	0	0
		Number of interfaces that support multicast routing table	512	512	1024	0	0
	MVR v6	Maximum entry number	256	0	512	0	0
		Maximum member number	512	0	1024	0	0
IP tunnel	IP tunnel	Tunnel peer capacity	8				
QoS	Per-port queue number	Unicast queue	8				
		Multicast queue	1				
		Monitor queue	1				
		Packet buffer	4.5MByte	9MByte	4.5MByte	4.5MByte	4.5MByte
	Granularity	Policer granularity	0~2M: 10K				
			2M~100M: 40K				
			100M~1G: 80K				
			1G~2G: 120K				
			2G~4G: 250K				
		Queue shape granularity	4G~10G: 500K				
		Port shape granularity	10k				
	Flow entry	Ingress port QoS ipv4 flow entries	1532				
		Ingress port QoS ipv6 flow entries					
		Ingress port QoS flow stats entries	128				
ACL	IPv4 ACL	Ingress port acl for IPv4	2926			2976	
		Ingress VLAN acl for IPv4					
		Egress port acl for IPv4	878			928	
		Egress VLAN acl for IPv4					
	IPv6 ACL	Ingress port acl for IPv6	2926			0	0
		Ingress VLAN acl for IPv6				0	0
		Egress port acl for IPv6	878			0	0
		Egress VLAN acl for IPv6				0	0
	ACL flow stats	Ingress acl flow stats entries	1022				
		Egress acl flow stats entries	1023				
	CoPP	CoPP rules	249			250	
		CoPP flow stats entries	249			250	
Security	IP source guard	IPv4 maximum rules number	768		512	512	512
		IPv6 maximum rules number	64		128	0	0
	MAC based 802.1X	Maximum entries	512	512	512	512	512
	DHCP-snooping	Maximum bound entry	4096				
IPFIX	IPFIX	Ingress IPFIX entries	8192				
		Egress IPFIX entries	8192				
		Ingress IPFIX resource	512				
		Egress IPFIX resource	512				
Reliability	BFD	Maximum session number	share 128				
	S-BFD	Maximum session number					
	VRRP	Maximum group number	255				
	Smart link	Maximum group number	16				
		Maximum instance number	64				
		Switchover time	<50ms				
		Maximum group number	16				
	Monitor link	Maximum up-link number per group	24				
		Maximum down-link number per group	24				
	MLAG	Maximum MLAG group number	63				
Virtual Network	VARP	Virtual IP number per Port	15				
	VXLAN	VXLAN tunnel	6144		4088		2040
		VNI	2000	2000	2000	2000	1000
		VTEP peer	1024	1024	1024	1024	256

Network management (M750/M751)

Feature			Description (M750/M751)
Type	Sub type	Feature	
Ethernet basic features	Ethernet	Interface	Ethernet interface operating modes(full duplex, half duplex, and auto-negotiation)
			Ethernet interface operating rates
			Jumbo frame
			Port-xconnect
		Flow-control	Flow-control tx/rx
		Storm-control	Port based storm-control
			VLAN based storm-control
		Port-block	Port-block(know-unicast/unknow-unicast/know-multicast/unknow-multicast/broadcast)
		Port-isolate	L2/L3/All port-isolate
			Uni-direction isolate
		L2 protocol tunnel	L2 Protocol Tunnel(support CDP/CFM/DOT1X/LLDP/SLOW-PROTO/STP/VTP)
		Forward mode	Store-and-forward
			Cut-through
	VLAN	VLAN access mode	Access/Trunk
		VLAN classification	Default VLAN
			VLAN classification (port based/mac based/ip based/protocol based)
		QinQ	Basic QinQ
			Selective QinQ
			VLAN Mapping(1:1 VLAN Translation)
			VLAN Mapping(N:1 VLAN Translation)
		VLAN statistics	VLAN Statistics
		Private VLAN	Private VLAN
		Voice VLAN	Voice VLAN
		Guest VLAN	Guest VLAN
	MAC	MAC address table	Automatic learning and aging of MAC addresses
			Clear FDB based on PORT+VLAN
			Hardware learning
			Static and dynamic MAC address entries
		MAC flapping detect	Blackhole MAC
			MAC flapping detect
		Port bridge	Port Bridge
	LAG	Link aggregation	Static-LAG & LACP
			Static load balance (LB)
			Dynamic load balance (LB)
			Round-robin load balance (R)
			LAG self-healing
			Weighted link aggregation
Ethernet ring protection features	xSTP	STP	Spanning-tree protocol
		RSTP	Rapid spanning-tree protocol
		MSTP	Multi-instance spanning-tree protocol
		Spanning-tree protocol protection	BPDU filter/guard
			Root guard
			Loop guard
			Anti TC-BPDU attack
	ERPS	ERPS	Single ERPS ring
			Tangent ERPS rings
			Intersecting ERPS rings
			Compatible with RRPP
	G.8031	G.8031	G.8031 Ethernet linear network protection
	G.8032	G.8032	G.8032 v1/v2
			Single ring
	Loopback detect	Loopback detect	Sub ring
			Loopback-detection

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Feature			Description (M750/M751)
Type	Sub type	Feature	
Layer2 multicast	Layer2 multicast	IGMP snooping	IGMPv1/v2/v3 snooping
			Fast leave
		MVR	Static IGMP snooping group
			MVR (Multicast VLAN registration)
IPv4 forwarding	ARP	ARP	Static and dynamic ARP entries
			Aging of ARP entries
			Gratuitous ARP
		ARP proxy	Basic ARP-proxy
			Local ARP-proxy
	IPv4 unicast routing	IPv4 static routes	IPv4 static routes
			Blackhole routes
			Co-work with IP SLA
			Virtual routing and forwarding (VRF)
			uRPF check
		RIP	RIP v1/v2
		OSPFv2	OSPF v2
		IS-IS	IS-IS
			IS-IS Extensions for segment-routing
		BGP	IBGP
			EBGP
		Route policy	Route-map
			IPv4 prefix-list
		PBR	Policy-based routing (PBR)
		ICMP	ICMP redirect
			ICMP unreachable
		ECMP	ECMP(SLB)
			ECMP(DLB)
			ECMP(RR)
			ECMP self-healing
		IP unnumbered	IP unnumbered
	IPv4 multicast routing	IGMP	IGMP v1/v2/v3
			IGMP-proxy
			IGMP SSM mapping
		PIM	PIM-SM
			PIM-SSM
IPv6 forwarding	IPv6 basic protocol	ICMPv6	ICMPv6
		NDP	NDP
		PMTU	PMTU
	IPv6 unicast routing	IPv6 static routes	IPv6 static routes
		RIPng	RIPng
		BGP4+	BGP4+
		OSPFv3	OSPF v3
		IS-IS	IS-IS
		VRRP v3	VRRP v3
	IPv6 multicast routing	MLD v1/v2	MLD v1/v2
		MLD v1/v2 snooping	MLD v1/v2 snooping
		MVR6	MVR6
		PIM-SM v6	PIM-SM v6
	IP tunnel	IPv6 over IPv4 tunnel	IPv6 over IPv4 tunnel
		6to4 tunnel	6to4 tunnel
		ISATAP tunnel	ISATAP tunnel
	IPv6 service	DHCPv6	DHCPv6 relay
			DHCPv6 snooping
		IPv6 route policy	IPv6 Prefix-list
Device reliability features	BFD	BFD	BFD for Static route
			BFD for OSPFv2
			BFD for VRRP/Track



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Type	Sub type	Feature	
	VRRP	VRRP	BFD for PBR
			VRRP
			Track for VRRP
	Smart link	Smart link	Multi-instance
			Load balance
			Multi-link
			Monitor-link
	MLAG	MLAG	MLAG basic
			MLAG orphan port
Ethernet OAM	EFM	EFM (802.3ah)	Auto detection
			Network fault detection
			Network fault handle
			Remote loopback
	CFM	CFM (802.1ag)	Hardware CCM detect
			MAC Ping
			MAC Trace
QoS features	Y.1731	Y.1731	Latency and jitter measure
	QoS	Traffic classification	Traffic classification based on COS/DSCP (Simple classification)
			Traffic classification based on ACL (Complex classification)
			Traffic classification based on inner header of the tunnel packets
		Traffic behaviors	Queue scheduling
			Remark the priority fields(COS/DSCP) of the packet based on ACL
			Remark the priority fields(COS/DSCP) of the packet based on table map
			Flow redirection
			Flow mirror
		Traffic policing	Traffic policing based on direction(in/out) of port
			Traffic policing based on direction(in/out) of VLAN
			Traffic policing based on direction(in/out) of flow
			Traffic policing based on direction(in/out) of aggregated flow
		Traffic shaping	Queue based traffic shaping
			Port based traffic shaping
		Congestion management	SP (strict priority) scheduling
			WDRR (weighted deficit round robin) scheduling
			SP + WDRR mixed scheduling
		Congestion avoidance	Tail drop (TD)
			Weighted random early detection (WRED)
		Traffic statistics	Packet counts and bytes statistics based on traffic classification
			Packet counts and bytes statistics based on the color after traffic policing
			Forwarded and discarded packet counts and bytes statistics
		ECN (Explicit congestion notification)	ECN tags based on tail drop
			ECN tags based on WRED
Virtual Network	VARP	Virtual gateway	VARP(Virtual-ARP)
	Tunnel	VxLAN	VARP subnet
			Manual configure VxLAN tunnel
			VxLAN distributed gateway
			VxLAN active-active access
			Overlay network based on VxLAN
			L2 protocol packet passthrough
			Edit DSCP in VxLAN outer header
			Edit ethertype in VxLAN inner header
			BGP EVPN
			Support to enable/disable overlay split horizon per-VNI
		GRE tunnel	GRE tunnel
		NVGRE tunnel	NVGRE tunnel
		GENEVE tunnel	GENEVE tunnel
	DCB	DCBX	LLDP support DCBX TLV
		PFC	PFC
Metro features	IPRAN	LDP	LDP
		MPLS forwarding	MPLS forwarding
		VPWS	VPWS



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Type	Sub type	Feature	
Security and management		VPLS	VPLS
		MPLS OAM	MPLS OAM
		MPLS statistics	MPLS statistics
		L2VPN	L2VPN
		L3VPN	L3VPN
		ACL	MPLS ACL
		QoS	MPLS QoS
		SR	MPLS-based segment-routing
	System security	SSH	SSH v1/v2 RSA Key generation
		RADIUS	RADIUS
		TACAS+	TACAS+
		AAA	Authentication
			Authorization
			Accounting
		Dot1x	Port based dot1x
			MAC based dot1x
			Guest VLAN
		ACL	MAC/IP ACL
			Basic mode ACL
			Port-group ACL
			VLAN-group ACL
			IPv6 ACL
			ACL UDF
			Global ACL
			Time range
		ARP inspection	ARP inspection
		IP source guard	IP source guard
		Port Security	Limitation on MAC address learning on interface
		VLAN Security	Limitation on MAC address learning on VLAN
		Control plane policy (CoPP)	Black list / White list Rate limit
		CPU traffic limit	CPU traffic limit
		Prevent DDOS attack	Prevent DDOS attack (ICMP Flood/Smurf/Fraggle/LAND/SYN Flood)
		Login filter	Telnet/SSH ACL filtering Telnet/SSH IPv6 ACL filtering
		Link flapping detection	Link flapping detection
	Network management	DHCP	DHCP server
			DHCP relay
			DHCP snooping
			DHCP client
			DHCP option 82
			DHCP option 252
		RMON	RMON
		sFlow	sFlow v4/v5
		IP SLA	IP SLA
		IPFIX	IPFIX
		Latency/Buffer monitor	Latency monitor Buffer monitor
		EFD	Elephant flow detection
		NTP	Network time protocol (NTP)
		PTP (IEEE 1588 Precise time protocol)	Transparent clock (TC)
Configuration and maintenance	Terminal services	Errdisable	Errdisable detection and recovery
		DNS	Static DNS Client
		LLDP	LLDP
		Command line interface	Configurations through CLI (Command line interface)
		Help	Banner configuration



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Feature			Description (M750/M751)
Type	Sub type	Feature	
		information	Help information in English
		Terminal service	Vty terminal service
			Console terminal service
	Configuration management	Management interface	Inband management interface and configuration Outband management interface and configuration
		User privilege management	Privileged user proirity and privileged commands
		SNMP	Network management based on SNMP v1/v2c/v3
			Public and private MIB
			Public and private trap
		WEB	Configuration and management based on WEB UI
		RPC-API	Configuration and management based on RPC-API
		Smart config	Smart config(Automatically configuration when system start)
		OVSDB	Configuration and management based on OVSDB
		system profile configuration	Change the system specifications by choose different STM profiles
		License control	Feature configuration based on license
		Restore factory default configuration	Restore factory default configuration
	File system	File system	File system(support directory and file management)
		Upload and download	Upload and download files through FTP or TFTP
			Upload and download files through Xmodem
	Debugging and maintenance	Debug	Per-module debug features
			ICMP debug
		BHM	Software process monitor: Beat heart monitor
			Hardware watch dog
		Log & alarm	CPU usage display and alarm
			Memory usage display and alarm
			Device temperature, PSU, FAN status display and alarm
			User operation logs
			Management of logs, alarms, and debugging information
		VCT	Virtual cable test
		system diagnostics	Detailed diagnostic-information collection
		Reboot	Manual reboot
			Schedule reboot
			Reboot Information logging
		Network diagnostics	Ping
			IPv6 Ping
			Traceroute
		Mirror	Port mirror
			Flow mirror
			Remote mirror
			Multi-destination mirror(m:n)
			Use CPU as mirror source
			Use CPU as mirror destination and analyze packet
		CPU statistics	ERSPAN
			To CPU / From CPU packets statistics
			Layer2 network connectivity detection - L2Ping (MAC Ping/Trace)
			Unidirectional link detection
			Unidirectional forwarding of the fiber
		Loopback	Port loopback
			Hardware loopback (Internal/External)
		System time	Time configuration
			Timezone
	Version upgrade	System soft ware upgrade	Upgrade with the local image file
		Uboot upgrade	Upgrade with the remote TFTP server
		Uboot upgrade	Online upgrade uboot