

# DATACOM



DM1105E

DM1205E

DM1305E

GIGABIT ETHERNET SWITCHES

DATASHEET

# DM1105E, DM1205E, DM1305E

## GIGABIT ETHERNET SWITCHES

### LINE OF MANAGED GIGABIT ETHERNET SWITCHES

The DM1005E switch line is a Gigabit Ethernet wire-speed solution to meet the growing bandwidth demand in enterprise networking applications, including models with and without PoE+ and with 1GE or 10GE uplink optical interfaces.

The switches have switching capacity ranging from 56Gbit/s to 216Gbit/s with all packet processing implemented in hardware, at wire-speed, ensuring the switching of all packets without traffic blocking. Functionality such as IP filters and routing also runs on hardware, with no impact on CPU performance or packet forwarding.

They have a CLI configuration interface with automatic syntax assistance, accessible through SSH, Telnet and RS-232 Console. Internal Web server and SNMP agent are also available.

To ensure network security, switches allow the creation of a reliable management structure through authentication via RADIUS. It also supports protection against Denial of Service (DoS/DDoS) attacks and port and MAC Address authentication as per IEEE802.1x. It has protection mechanisms against broadcast and multicast attacks.

The DM1005E switches support a range of advanced functionalities, such as concurrent VLAN configuration, Link Aggregation, and Spanning Tree network protection and redundancy protocol (STP, MSTP, and RSTP). For Multicast, IGMP Snooping and MLD Snooping functionality are supported.

For network optimization, the switches have 8 CoS queues per port with traffic classification by IEEE802.1p and multiple matches using ACLs, allowing for bandwidth throttling and traffic conformation.

- DM1105E - Managed L2 Switches
- DM1205E – L2+ Switches, with Stacking Support
- DM1305E – L3 Switches, with Stacking Support
- 56Gbps to 216Gbit/s switching capacity
- GE (SFP) or 10GE (SFP+) uplinks
- Models with 24 or 48 10/100/1000Base-T RJ45 ports
- MAC table with 8K, 16K, or 32K addresses, depending on model
- VLAN, QoS, STP
- Models with PoE+ support
- Internal power supply

# HARDWARE FEATURES

Item	DM1105E 24GT+4GX	DM1105E 24GP+4XS	DM1105E 48GT+6XS	DM1105E 48GP+6XS	DM1205E 24GT+4XS	DM1205E 24GP+4XS	DM1205E 48GT+4XS	DM1205E 48GP+4XS	DM1305E 24GT+4XS	DM1305E 48GT+4XS
10/100/1000 Base-T Interfaces	24	-	48	-	24	-	48	-	24	48
10/100/1000 Base-T (PoE) interfaces	-	24	-	48	-	24	-	48	-	-
GE SFP Optical Interfaces	4	-	-	-	-	-	-	-	-	-
GE/10GE SFP+ optical interfaces	-	4	6	6	4	4	4	4	4	4
Auto-negotiation and Auto MDIX, Support for half and full duplex modes	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Management Interfaces	-	1x RJ45 console (RS232)	1x RJ45 console (RS232)	1x RJ45 console (RS232)	1x RJ45 console (RS232) 1x USB Console	1x RJ45 console (RS232) 1x USB Console	1x RJ45 console (RS232) 1x USB Console 1x MGMT (out-of-band)	1x RJ45 console (RS232) 1x USB Console 1x MGMT (out-of-band)	1x RJ45 console (RS232) 1x USB Console 1x MGMT (out-of-band)	1x RJ45 console (RS232) 1x USB Console 1x MGMT (out-of-band)
Reset Button	✓	✓	✓	✓	-	-	✓	✓	✓	✓
Switch Fabric (Gbps)	56	128	216	216	128	128	176	176	128	176
Packet Forwarding (Mpps)	41,7	95,2	129,3	129,3	95	95	131	131	95	131
Processor	500Mhz	800Mhz	Dual Core 1Ghz	Dual Core 1Ghz	800Mhz	800Mhz	800Mhz	800Mhz	800Mhz	800Mhz
Flash Memory (MB)	16	32	64	64	32	32	288	288	160	160
RAM (MB)	128	128	256	256	256	256	256	256	512	512
Packet Buffer (MB)	1,5	1,5	2	2	1,5	1,5	3	3	1,5	3
Dimensions W x D x H (mm)	441x130x44	441x270x44	441x270x44	441x330x44	440x207x44	440x300x44	440x280x44	440x320x44	440x240x43.6	440x240x44
19" Rack Installation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fanless	✓	-	-	-	✓	-	-	-	-	-
Operating Temperature (°C)	0 to 40	0 to 40	0 to 40	0 to 40	0 to 50	0 to 50	0 to 50	0 to 50	0 to 50	0 to 50
Operating Humidity (Non-Condensing)	10% to 90%	10% to 90%	10% to 90%	10% to 90%	10% to 90%	10% to 90%	10% to 90%	10% to 90%	10% to 90%	10% to 90%

Storage Temperature(°C)	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70
Storage Humidity (Non-Condensing)	10% to 90%	10% to 90%	10% to 90%	10% to 90%	10% to 90%	10% to 90%	10% to 90%	10% to 90%	10% to 90%	10% to 90%
Internal Power Supply AC 100~240Vac, 50/60Hz with Auto Select	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ABNT power cable	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MTBF (hours)	>90000	>90000	>90000	>90000	>90000	>90000	>90000	>90000	>90000	>90000
PoE/PoE+ support (802.3af and 802.3at)	-	✓	-	✓	-	✓	-	✓	-	-
Maximum PoE Power	-	380W	-	400W	-	370W	-	740W	-	-
Typical consumption	20W	450W	48W	450W	21W	420W	50W	897W	30W	50W
Green Ethernet (802.3az)	✓	✓	✓	✓	-	-	-	-	-	-
Switching Type	Store-and-forward	Store-and-forward	Store-and-forward	Store-and-forward	Store-and-forward	Store-and-forward	Store-and-forward	Store-and-forward	Store-and-forward	Store-and-forward
Latency 1000Mbps	< 5us	< 5us	< 5us	< 5us	< 5us	< 5us	< 5us	< 5us	< 5us	< 5us
MAC Table	8k	16k	32k	32k	16k	16K	16K	16K	16K	16K
ACL	383	383	383	383	512	512	512	512	1k	1k
Jumbo Frames (bytes)	10.000	10.000	12.000	12.000	10.000	10.000	10.000	10.000	10.000	10.000
IPv4 Routes	-	-	-	-	422	422	425	425	1k	1k
IPv6 Routes	-	-	-	-	101	101	104	104	256	256
Multicast Groups	256	256	256	256	4k	4k	4k	4k	4k	4k
LED de Power	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
LED System	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
LED Link/Activty/Speed	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Standards met	IEEE 802.3, IEEE 802.3i, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3x, IEEE 802.3z, IEEE 802.3ad, IEEE 802.3ac, IEEE 802.1ax, IEEE 802.1p, IEEE 802.1q, RoHS Compliant, Maximum Noise 65dBA (ABNT 10152)									
Cabling	10BASE-T UTP Category 3,4,5 (maximum 100m), 100BASE-Tx UTP Category 5,5e cable (maximum 100m), 1000BASE-T UTP Category 5e,6 cable (maximum 100m)									

# SOFTWARE FEATURES

Group	Feature	DM1105E	DM1205E	DM1305E
<b>Resiliency and Availability</b>	Virtual Stacking (Number of Switches in the stack)	-	9	9
	IEEE 802.1D STP/802.1w RSTP/802.1s MSTP	✓	✓	✓
	BPDU Guard	✓	✓	✓
	xSTP instances	16	64	64
	Root guard	-	✓	✓
	Loop guard	-	✓	✓
	TCN	✓	✓	✓
	IEEE 802.3ad LACP (groups/ports per group)	8/8	64/8	128/8
	LACP source/destination IP	✓	✓	✓
	ITU-T G.8032(ERPS)	-	✓	✓
	Multilayer Ring Protection Protocol (MRPP)	-	✓	✓
	Loopback-detection	✓	✓	✓
<b>VLAN</b>	802.1Q Concurrent VLANs	256	4k	4k
	VLAN Untagged	✓	✓	✓
	VLAN Tagged (trunking)	✓	✓	✓
	Super VLAN	-	-	✓
	Port-based VLAN	✓	✓	✓
	Protocol-based VLAN	✓	✓	✓
	IP subnet based VLAN	-	✓	✓
	Voice VLAN	✓	✓	✓
	Mac VLAN	✓	✓	✓
	Surveillance VLAN	✓	-	-
	Private VLAN (Port Isolation)	-	✓	✓
	GVRP	✓	✓	✓
	802.1ad Vlan Stacking (QinQ)	-	✓	✓
	Flexible QinQ	-	✓	✓
	VLAN translation	-	✓	✓
Guest VLAN	✓	✓	✓	
<b>Safety</b>	Layer 2 MAC filtering	✓	✓	✓

Group	Feature	DM1105E	DM1205E	DM1305E
	BPDU Tunnel	-	√	√
	SSH v1/v2	√	√	√
	Protection against DoS attack	IPv4	IPv4/IPv6	IPv4/IPv6
	URPF	-	-	√
	IPv4/IPv6 Source Guard	IPv4	√	√
	Dynamic ARP Inspection (DAI)	IPv4	IPv4/IPv6	IPv4/IPv6
	Anti ARP Spoofing, Anti ARP Scan, ARP Binding	-	IPv4/IPv6	IPv4/IPv6
	Broadcast / Multicast / Unicast Storm Control	√	√	√
	TCP's SYN Flood	-	√	√
	UDP Flood	-	√	√
	MD5, SHA-256 encryption	-	√	√
	MAC Sticky (Static)	√	√	√
	IP+MAC+ Port Binding	√	√	√
	MAC Authentication Bypass (MAB)	√	√	√
	MAC Limit per port	√	√	√
	MAC Limit per VLAN	-	√	√
	Port Security	√	√	√
	802.1x Port Based Access Control	√	√	√
<b>DHCP</b>	DHCP/DHCPv6 snooping, VLAN-based	√	√	√
	User-defined DHCP option 82	-	√	√
	DHCP Client/Relay/Server	client	√	√
	DHCP relay per VLAN	-	√	√
	DHCP option 43/60/82	-	√	√
	DHCPv6 option37/38	-	√	-
	DHCPv6 Relay/Server	-	√	√
	DHCP Relay / Server Pools	-	64	64
<b>ACL</b>	Source IPv4/IPv6 ACL	√	√	√
	Destination IPv4/IPv6 ACL	√	√	√
	Protocol ACL	√	√	√
	TCP/UDP Port	√	√	√
	DSCP ACL	√	√	√
	ToS ACL	√	√	√











Group	Feature	DM1105E	DM1205E	DM1305E
	IP Precedence ACL	√	√	√
	TCP Flags ACL	√	√	√
	ICMP Type ACL	√	√	√
	ICMP Code ACL	√	√	√
	Preventing ICMP/ICMPv6 attacks through ACLs	√	√	√
	Source MAC ACL	√	√	√
	Destination MAC ACL	√	√	√
	Ethertype ACL	√	√	√
	User-Defined ACL	√	√	√
	Time Range ACL	-	√	√
	ACL on VLAN interface	√	√	√
QoS	Egress Queues by Port	8	8	8
	Classification according to COS / DSCP	√	√	√
	Prioritize from DSCP to 802.1p	√	√	√
	Remark COS / DSCP / IP Precedence	√	√	√
	QoS CAR	-	√	√
	Tail Drop	-	√	√
	Rate Limit per port	√	√	√
	Ingress Traffic Shaping	-	√	√
	Queuing scheduling method ( SP/WRR/ SP +WRR)	SP/WRR	SP/WDRR/SP+WDRR)	SP/WDRR/SWDRR
L2 and L3 Multicast	Multicast VLAN Registration (MVR)	√	√	√
	IGMP Query	√	√	√
	IGMP Snooping (v1,v2,v3)	v1 / v2	√	√
	IGMP Snooping Fast Leave(v2,v3)	-	√	√
	IGMP Filter	-	√	√
	PIM-DM/SM/SSM	-	-	√
	Anycast RP	-	-	√
	IPv6 MLD v1/v2 Snooping	√	√	√
Routing	Static Routing	-	√	√
	Routing between VLANs	-	√	√
	Interfaces IP	-	64	64
	Concurrently Routable VLANs	-	64	64

Group	Feature	DM1105E	DM1205E	DM1305E
	RIP v1,v2	-	-	√
	OSPF v2	-	-	√
	IPv6 Static Route	-	-	√
	RIPng	-	-	√
	OSPFv3	-	-	√
	BGP4+	-	-	√
	ECMP	-	-	√
	BFD	-	-	√
	VRRP	-	-	√
	PBR	-	√	√
<b>VRF</b>	VRF Instances	-	-	251
	IPv4/IPv6 Dual Protocol Stack	-	√	√
	Telnet / SSH / web over IPv6	web	√	√
	IPv6 Neighbor Discovery	-	√	√
	Path MTU Discovery	-	√	√
<b>IPv6</b>	RFC 4862 ("IPv6 Stateless Address Autoconfiguration - SLAAC")	-	√	√
	ISATP Tunnel	-	-	√
	6 to 4 Tunnel	-	-	√
	IPv6 Tunneling	-	-	√
	http/https web interface	√	√	√
	HTTPS with SSL	√	√	√
	Command Line Interface (CLI)	√	√	√
	Telnet	√	√	√
	Two Firmware Images	√	√	√
	ICMPv4 / ICMPv6 (ping)	√	√	√
	Traceroute	√	√	√
	Simultaneous Telnet/SSH connections	5	5	5
	Configuration Backup and Restore	√	√	√
	Multilevel CLI	-	-	√
	Encrypted password & community	√	√	√
	Radius Authentication	√	√	√
	Radius Authorization	√	√	√
<b>Management</b>				



Group	Feature	DM1105E	DM1205E	DM1305E
	Radius Accounting	-	√	√
	TACACS+ Authentication	√	√	√
	TACACS+ Authorization	√	√	√
	TACACS+ Accounting	√	√	√
	Syslog Accounting	√	√	√
	TFTP/FTP/SFTP/SCP	TFTP/FTP	√	√
	SNTPv4	√	√	√
	NTP with MD5 authentication	-	√	√
	Port Mirroring (Traffic Monitor)	√	√	√
	RSPAN	-	√	√
	OAM EFM/CFM (802.3ah / 802.3ag)	-	√	√
	sFlow	-	√	√
	UDLD	√	√	√
	Cable Diagnostics	√	√	√
	DDM	√	√	√
	LLDP/LLDP-MED	√	√	√
	SNMP v1/v2c/v3	√	√	√
	SNMP traps	√	√	√
	Syslog for flash and Syslog server	√	√	√
	Dying gasp	-	√	-
	Zero touch provisioning via DHCP options	-	√	√
<b>Mibs</b>	RFC 1066 TCP/IP - based MIB	√	√	√
	RFC1213, 1157 SNMPv2c/v3 MIB	√	√	√
	RFC1493 bridge MIB	√	√	√
	RFC 2674 bridge MIB extension	√	√	√
	RFC1643 ethernet MIB	√	√	√
	RFC1757 RMON group 1,2,3,9	√	√	√
	RFC 2925 Remote Management MIB	√	√	√
	RFC 2233 (rfc2233) - SMIV2 MIB	√	√	√

# DM1005E – ORDERING INFORMATION

MODEL	DESCRIPTION	PHOTO
DM1105E 24GT+4GX 825.4523.xx	Fanless L2 switch with 24 electrical Gigabit Ethernet ports and two optical Gigabit Ethernet uplink ports on SFP connectors. SFPs must be purchased separately.	
DM1105E 24GP+4XS 825.4524.xx	L2 switch with 24 electrical Gigabit Ethernet ports with PoE+ support and four optical 10 Gigabit Ethernet uplink ports on SFP+ connectors. SFPs+ must be purchased separately.	
DM1105E 48GT+6XS 825.4525.xx	L2 switch with 48 electrical Gigabit Ethernet ports and six optical 10 Gigabit Ethernet uplink ports on SFP+ connectors. SFP+s must be purchased separately.	
DM1105E 48GP+6XS 825.4526.xx	L2 switch with 48 electrical Gigabit Ethernet ports with PoE+ support and six optical 10 Gigabit Ethernet uplink ports on SFP+ connectors. SFP+s must be purchased separately.	
DM1205E 24GT+4XS 825.4527.xx	L2+ switch with 24 electrical Gigabit Ethernet ports and four optical 10 Gigabit Ethernet uplink ports on SFP+ connectors. SFPs+ must be purchased separately.	
DM1205E 24GP+4XS 825.4528.xx	L2+ switch with 24 electrical Gigabit Ethernet ports with PoE+ support and four optical 10 Gigabit Ethernet uplink ports on SFP+ connectors. SFPs+ must be purchased separately.	
DM1205E 48GT+4XS 825.4529.xx	L2+ switch with 48 electrical Gigabit Ethernet ports and four optical 10 Gigabit Ethernet uplink ports on SFP+ connectors. SFPs+ must be purchased separately.	
DM1205E 48GP+4XS 825.4530.xx	L2+ switch with 48 electrical Gigabit Ethernet ports with PoE+ support and four optical 10 Gigabit Ethernet uplink ports on SFP+ connectors. SFPs+ must be purchased separately.	
DM1305E 24GT+4XS 825.4531.xx	L3 switch with 24 electrical Gigabit Ethernet ports and four optical 10 Gigabit Ethernet uplink ports on SFP+ connectors. SFPs+ must be purchased separately.	
DM1305E 48GT+4XS 825.4532.xx	L3 switch with 48 electrical Gigabit Ethernet ports and four 10 Gigabit Ethernet optical uplink ports on SFP+ connectors. SFPs+ must be purchased separately.	
SFP+ AOC Cable 3m 710.0420.xx	AOC - Active Optical Cable 10G SFP+ to SFP+ (3m)	

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