



MILITARY-GRADE
ETHERNET



MILTECH 912, 918 & 919 PLATFORM UPGRADE COMPARISON

FEATURES		OLD	NEW
PORT CONTROL	Port speed, duplex mode, and flow control	✓	✓
	Port frame size (jumbo frames)	✓	✓
	Port state (administrative status)	✓	✓
	Port status (link monitoring)	✓	✓
	Port statistics (MIB counters)	✓	✓
	Port VeriPHY (cable diagnostics)	✓	✓
	POE/POE+	✓	✓
	POE/POE+ with LLDP	✓	✓
	Node Processor Interface (NPI) port		✓
	PCIe		✓
	Inband management (VRAP)		✓
QoS	On-the-fly SFP detection	✓	✓
	Unidirectional Link Detection (UDLD)		✓
	Traffic classes (8 active priorities)	✓	✓
	Port default priority	✓	✓
	User priority	✓	✓
	Input priority mapping		✓
	QoS control list (QCL mode)	✓	✓
	Storm control for UC, MC, BC, and unknown	✓	✓
	Random Early Detection (RED)	✓	✓
	Policers—port policers and global/VCAP (ACL) policers	✓	✓
	Port and queue egress shapers	✓	✓
	DiffServ (RF 2474) remarking		✓
	Tag remarking		✓
	Scheduler mode	✓	✓
L2 SWITCHING	IEEE 802.1D Bridge, auto MAC address learning/aging and MAC addresses (static)	✓	✓
	IEEE 802.1Q Virtual LAN	✓	✓
	Private VLAN (static)	✓	✓
	Port isolation (static)	✓	✓
	MAC-based and protocol-based VLAN		✓
	IP subnet-based VLAN		✓
	VLAN trunking	✓	✓
	GARP VLAN registration (GVRP)		✓
	IEEE 802.1ad Provider Bridge (native or translated VLAN)	✓	✓
	IEEE 802.1Q-2005		✓
	Multiple spanning tree—MSTP, TSTP, STP		✓
	Rapid spanning tree—RSTP, STP		✓
	Loop guard	✓	✓
	IEEE 802.3ad Link Aggregation, static and LACP	✓	✓

FEATURES		OLD	NEW
L2 SWITCHING	BPDUs guard and restricted role		✓
	VSC6812SDK and VSC6813SDK	✓	✓
	BPDUs transparency and forwarding (customer specific)	✓	✓
	Error disable recovery		✓
	IGMPv2 snooping	✓	✓
	IGMPv3 snooping		✓
	MLDv1 snooping		✓
	MLDv2 snooping		✓
	IGMP filtering profile		✓
	IPMC throttling, filtering, and leave proxy		✓
	Multicast VLAN registration (MRV) and MRV profile		✓
	Voice VLAN		✓
	DHCP snooping		✓
	ARP inspection		✓
L3 SWITCHING	Port mirroring	✓	✓
	Flow mirroring		✓
	Rmirror		✓
	DHCP option 82 relay		✓
	Universal Plug and Play (UPnP)		✓
	IPv4 unicast static routing		✓
	IPv4 unicast static routing (hardware accelerated)		✓
	IPv6 unicast static routing		✓
	IPv6 unicast static routing (hardware accelerated)		✓
	SECURITY	Network Access Server (NAS)	
Port-based 802.1X		✓	✓
Single 802.1X			✓
Multiple 802.1X			✓
MAC-based authentication		✓	✓
VLAN assignment			✓
QoS assignment			✓
Guest VLAN			✓
RADIUS accounting			✓
MAC address limit			✓
MAC freeze (customer specific)			✓
MAC spoofing (customer specific)			✓
IP MAC binding, dynamic to static			✓
TACACS+ Accounting, authentication and authorization, command authorization		✓	
Web and CLI authentication	✓	✓	
Authorization (15 levels)		✓	
ACLs for filtering, policing, and port copy	✓	✓	
IP source guard		✓	

FEATURES		OLD	NEW
PORT CONTROL	Topology	✓	✓
	SPOM (single point of management)	✓	✓
	SPROUT (stacking protocol using routing technology), shortest path forwarding	✓	✓
	Master re-election	✓	✓
	Features WebStaX SMBStaX	✓	✓
	VSC6812SDK and VSC6813SDK	✓	✓
	VStaX+ (12G)	✓	✓
	Basic forwarding (VStaX, VStaX+)	✓	✓
	Advanced forwarding (VStaX+)	✓	✓
	Congestion management (VStaX+)	✓	✓
	48-port stacking (VStaX+)	✓	✓
	Mixed 24/48 GbE port stacking (VStaX+)	✓	✓
SYNC	SNTP and client	✓	
	NTPv4 client		✓
ROBUSTNESS	Cold start	✓	✓
	Cool start	✓	✓
POWER SAVINGS	ActiPHY™, PerfectReach™	✓	✓
	Ethernet Energy Efficient (EEE) power management	✓	✓
	LED power management	✓	✓
	Thermal protection	✓	✓
	Adaptive fan control	✓	✓
MANAGEMENT	JSON-RPC		✓
	Stack IP address	✓	✓
	DHCP client	✓	✓
	DHCP server		✓
	Double VLAN tag management	✓	✓
	DNS client, proxy		✓
	HTTP server and HTTPS	✓	✓
	Web with stack management	✓	✓
	CLI console port	✓	✓
	CLI Telnet		✓
	CLI stack management		✓
	Industry-standard CLI	✓	✓
	Industry-standard CLI debug commands	✓	✓
	Industry-standard configuration	✓	✓
	Management access filtering	✓	✓
	SSHv2		✓
	IPv6 Management		✓
	IPv6 Ready Logo Phase 2		✓
RFC 4884 (ICMPv6)		✓	

FEATURES		OLD	NEW
MANAGEMENT	System Syslog	✓	✓
	Software upload through Web	✓	✓
	SNMPv1/v2c/v3 Agent		✓
	RMON Group 1, 2, 3, and 9		✓
	RMON alarm and event (CLI, Web)	✓	✓
	SNMP multiple trap destinations	✓	✓
	IEEE 802.1AB-2005 Link Layer Discovery, LLDP	✓	✓
	TIA 1057 LLDP-MED		✓
	Cisco Discovery filtering, CDP		✓
	sFlow		✓
	Configuration download and upload	✓	✓
	Loop detection default restore	✓	✓
	Symbolic Register Access	✓	✓
	Daylight savings		✓
	MIBS	RFC 1213 MIB II	✓
RFC 1215 A Convention for Defining Traps for Use with the SNMP		✓	✓
RFC 2613 SMON MIB: VLAN statistics and port copy			✓
RFC 2674 VLAN MIB			✓
RFC 2819 RMON (Group 1, 2, 3, and 9)			✓
RFC 2863 Interface Group MIB using SMI v2			✓
RFC 3411 SNMP Management Frameworks		✓	✓
RFC 3414 User-based Security Model for SNMPv3			✓
RFC 3415 View-based Access Control Model for SNMP			✓
RFC 3621 LLDP-MED Power		✓	✓
RFC 3635 Ethernet-like MIB		✓	✓
RFC 3636 802.3 Medium Attachment Units (MAUs) MIB			✓
RFC 4133 Entity MIB v3			✓
RFC 4188 Bridge MIB		✓	✓
RFC 4292 IP Forwarding Table MIB			✓
RFC 4293 Management Information Base for the Internet Protocol (IP)			✓
RFC 4668 RADIUS Authentication Client MIB			✓
RFC 4670 RADIUS Accounting MIB			✓
RFC 5519 Multicast Group Membership Discovery MIB			✓
IEEE 802.1 MSTP MIB		✓	✓
IEEE 802.1AB LLDP MIB (LLDP MIB included in clause of standard)	✓	✓	
IEEE 802.1X MIB (PAE MIB included in clause of standard)		✓	
IEEE 802.1Q Bridge MIB 2008		✓	
IEEE 802.3ad MIB (LACP MIB included in clause of standard)		✓	
Phase 1 Private MIB support		✓	
TIA 1057 LLDP MED (MIB is part of the standard)		✓	