TECHAYA

RUGGED ENVIRONMENT SOLUTIONS

The *ICE898G* is a Managed industrial Ethernet Switch, equipped with 7 ports 10/100TX and 3 ports 10/100/1000 RJ-45/100-FX/Gigabit SX/LX combo ports. The *ICE898G* is designed as rugged in aluminum material and with wide operating temperature.

The software supports full L2 management features, ring redundancy, network control, security and alert features. The *ICE898G* also supports RS-232 console for out of band management.

ICE898G

Techaya's Rapid Super Ring technology provides network redundancy with can self-recover in less than 30ms at full load. Moreover, *ICE898G* provides users with many advanced management features.

The *ICE898G* can be configured smartly by console CLI and web browser. Network administrators can define event notification to be sent via E-mail, SNMP trap, Syslog or relay output. Online status of each port is also shown on web page. To optimize network traffic, network administrators can segment ports into different VLANs, or filter multicast traffic by IGMP Snooping. Bandwidth can be managed by port rate control to avoid abnormal broadcast storm. To enhance security, port access can be limited to predefined IP address table, binding MAC address to specific port or managed by HTTPS or SSH. Network determinism is answered by QoS, Quality of Service, for traffic prioritization. *ICE898G* is the perfect combination of intelligent network management and robust network operation.

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Specifications

Technology

Standard	IEEE 802.3 10Base-T Ethernet
	IEEE 802.3u 100Base-TX Fast Ethernet
	IEEE 802.3ab 1000Base-TX
	IEEE 802.3z Gigabit Ethernet Fiber
	IEEE 802.3x Flow Control and Back-pressure
	IEEE 802.1p class of service
	IEEE 802.1Q VLAN
	IEEE 802.1D Rapid Spanning Tree Protocol (RSTP)
	IEEE802.3ad LACP, IEEE802.1x
Processing	Store and Forward architecture
Packet Filter	Broadcast packet filtering

Interface

Number of Ports	10/100TX: 7 x Rj-45, Auto MDI/MDI-X, Auto Negotiation
	10/100/1000TX: 3 RJ-45, combo with SFP
	Gigabit Fiber / 100Base-FX: 3 x SFP with Hot-Swapable function
Network Cable	10Base-T: 2-pair UTP/STP Cat. 3, 4, 5 cable, EIA/TIA-568 100-ohm (100m)
	100 Base-TX: 2-pair UTP/STP Cat. 5 cable, EIA/TIA-568 100-ohm (100m)
	1000 Base-TX: 4-pair UTP/STP Cat. 5 cable, EIA/TIA-568 100-ohm (100m)
LED Indicators	10/100 RJ-45: Link/Activity (Green), Full Duplex/Collision (Yellow)
	Gigabit Copper: Link/Activity (Green)
	SFP: Link/Activity (Green)
	Per Unit: Power (Green), Digital Output (Red),
	Digital Input (Green), R.M. (Green)
RS232 Console	RJ-45 connector, Pin 3:TxD, Pin 6:RxD, Pin 5:GND
Power	2 sets of power Input
Digital Input	2 sets of Digital Input
Diagnostic LED	Digital Output: Relay Output and controlled by system configuration.
Alarm	Digital Output: Relay Output and controlled by system configuration.
Reset	Reset button is provided to restore default settings

Redundancy

Network Redundancy	R.S.R (Rapid Super Ring): Recovery time < 30ms
	Dual Homing (R.S.R over RSTP), RSTP, STP:
	Provides more flexible redundant ring algorithm with RSTP
Power Redundancy	Dual power inputs

Management

Configuration	Cisco-Like CLI, Web, TFTP update, configuration backup and restore,
	DHCP Client, warm reboot, reset to default, Admin password, Aging
	Time Port Speed/Duplex Control, Status, Statistic, MAC table display
	SNMP V1/V2c, Traps, RMON (Statistics, History, Alarm, Events)
MIB:	MIB-II, Bridge MIB, Ethernet-like MIB, VLAN MIB, Private MIB
Port Trunk:	Up to 5 Static Trunk and 802.3ad LACP SNTP for time management

VLAN:	Supports IEEE802.1Q VLAN, GVRP, Management VLAN adjustment
Quality of Service	Four priority queues per port, 802.1p COS and Layer 3 TOS/DiffServ IGMP Snooping for multicast filter and IGMP Query mode
Rate Control	Ingress/Egress Broadcast/Multicast/Unknown DA control
Port Mirroring	Online traffic monitoring on selected ports
IP Security	Supports IP address security to prevent unauthorized access
Port Security	Supports MAC address and Port binding, IEEE802.1x
E-mail warning, SMTP	Automatic e-mail warning by pre-defined events
System Event Log	Supports both Local mode and Server mode

Performance

Transfer Rate	Wire Speed:14,880 pps for 10M, 148,800 pps for 100M, 1488100 for Gigabit
Transfer Packet Size	64 bytes to 1522 bytes (with VLAN tag)
MAC Address	8K MAC address table
Memory Buffer	1Mbits
Back-plane	7.4 Gbps

Power Requirements

Power Supply	Input Voltage: 24 VDC (12 to 48 VDC), dual inputs Reverse Polarity Protection: Present
Power Consumption	15 Watts

Mechanical

Installation	DIN-rail kit and wall-mounting ear
Casing	IP-30 protection, aluminum case
Dimensions	96 mm (W) x 137 mm (H) x 119mm (D)

Environmental

Operating Temperature	-40 to +80C (-40 to +176F)
Operating Humidity	5% to 95% (Non-condensing)
Storage Temperature	-40 to +85C(-40 to +185F)
2KV Hi-Pot	for all ports and power

Regulatory Approvals

EMI	FCC Class A, EN55022 Class A
EMC	EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11
Safety	UL, cUL, EN60950
Shock	IEC 60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
MTBF	at least 200000 hours * MIL-HDBK-217F GB (MILITARY HANDBOOK) standard