



LAND



SEA



AIR

THOR200-PE20

2U HALF RUGGEDIZED SWITCH



- 20-port Full Gigabit Ethernet ports, including 16 Gigabit RJ45 and 4 100/1000M SFP
- 8-port IEEE 802.3at/af compliant PoE, up to 30W/port
- Layer 2+ Managed Switch
- 12V~30V DC-IN
- Operating Temperature: -40°C~ 70°C



Introduction

(1) High performance CPU & Full Gigabit Switching

- Powerful 1.2GHz ARM Cortex-A9 processor
- Non-blocking switch fabric with high throughput 40Gbps
- Broadcom high performance chipset up to 80Gbps Switching Capacity
- 8 flexible Class of Service(CoS) queues
- 16K MAC address table
- 9Kb Jumbo Frame
- Energy-Efficient Ethernet for power saving

(2) L2+ Management Switch Features

- Various configuration paths, including WebGUI, CLI, SNMP, Modbus TCP, LLDP topology control
- Layer 2 Switch features include VLAN, QoS, LACP/Trunk, Rapid Spanning Tree protocol...etc.
- IGMP Snooping v1/v2/v3, IGMP Query, 512 L2 Multicast Groups for video applications
- Built-in DHCP Server that automatically provides and assigns IP addresses, default gateways to clients

(3) ITU ERPSv2 PLUS Ring Technology

- ITU G.8032 v1/v2 ERPS Ring Redundancy & HW-based CFM for quick acknowledgement while GbE copper link failure, providing 20ms recovery time, seamless restoration.
- ERPSv2 available to replace Ring + Chain + Dual Homing
- Inter-Operability with 3rd party industrial switch and still remain fast recovery time.
- Support Enhanced RSTP for large ring network topology with up to 80 switches.

(4) Extreme PoE Capability

- 8-port IEEE 802.3at/af compliant PoE, up to 30W/port
- Up to 120W power budget
- Complete PoE management including Power Budget Control, PoE Scheduling and PoE Status

(5) IEC62443-4-2 Level 3 / 4 Cyber Security

- L2-L7 IPv4/IPv6* Access Control List (ACL)
- DHCP Snooping, IP Source Guard, Dynamic ARP Inspection
- 802.1Q VLAN, Private VLAN, Advanced Port Security*
- Multi-Level user passwords
- HTTPS/SSH/SFTP, 256-bit encryption
- 802.1X MAB for non-802.1X compliant end devices
- RADIUS/TACACS+ centralized password authentication

Specifications

SYSTEM

Processor	1.2GHz ARM Cortex-A9 processor
Switch Technology	Broadcom BCM53547 chipset, up to 80Gbps Switching Capacity for high density application Non-Blocking Switch Capacity in 16GT+4GF: 40Gbps Forwarding Rate in 16GT+4GF: 29.76Mpps (20x1,488,000pps) Store and Forward Technology, Internal Packet Buffer: 4Mb
Number of MAC Address	16K
Jumbo Frame	9216 Bytes
VLAN	256 VLANs, VLAN ID 1~4094
IGMP Groups	512

I/O PORT

Ethernet Port	16 x 100/1000Base-T RJ45 Auto Negotiation, Auto MDI/MDIX (8 x 802.3at/af PoE+ PSE port) 4 x 100/1000M SFP, DDM
Console	1 x RS232 in RJ45 for System Configuration
Digital Input, Digital Output	2 x DI, 2 x DO
Power Input	1 x DC-IN with D38999 connector
Reset	System Reboot(2-6 Seconds)/Default Settings Reset(over 7 Seconds)
System LED	1 x Power: Green On 1 x DO/Alarm: Red On

SOFTWARE

Management	WebGUI, Command Line Interface (CLI), IPv4/IPv6(RFC2460), Telnet, SNMP v1/v2c/v3, RMON, SNMP Trap, LLDP, DHCP Server/Client/Option 82, TFTP, System Log, SMTP
Traffic Management	Flow Control, Rate Control, Storm Control, CoS, QoS, RFC 2474 DiffServ
Filter	IGMP Snooping v1/v2/v3, IGMP Snooping Fast-Leave / Immediate-Leave, IGMP Query, GMRP, IEEE802.1Q VLAN, QinQ, GVRP, Private VLAN, IGMP Query
Security	IEEE 802.1X/RADIUS, TLS v1.2, Access Control List (ACL, MAC/IP/ARP filter), HTTPs/SSH secure login, First login password management
Advanced Security	TACACS+, Mutli-user authentication, IEEE802.1x MAB, DHCP

	Snooping/IPSG, Dynamic ARP inspection, SFTP
Redundancy	ERPSv2 PLUS, HW CFM, Rapid Spanning Tree Protocol includes STP/RSTP/MSTP, eRSTP, Loop Protection, Port Trunk/801.1AX/802.3ad LACP eRSTP (Enhanced Rapid Spanning Tree), up to 80 switches in one Ring
Time Management	NTP, IEEE 1588 Precision Time Protocol v2
Utility	ViewMaster, NetMaster
MIB	ERPS MIB, MIB-II, P-BRIDGE MIB, Q-BRIDGE MIB, Bridge MIB, RMON MIB Group 1, 2, 3, Private MIB
Diagnostic	LLDP, Port Mirror, Ping, Port Statistic, Event Log
POWER REQUIREMENT	
Power Input	12V~30V DC
MECHANICAL	
Dimension	220 x 200 x 88 mm(W x D x H)
Weight	5kg
Chassis	Aluminum AL6061
Heatsink	Aluminum Alloy, Corrosion Resistant.
Finish	Anodic aluminum oxide.
Cooling	Natural Passive Convection/Conduction. No Moving Parts
ENVIRONMENTAL	
Reliability	No Moving Parts; Passive Cooling. Designed & Manufactured using ISO 9001/2000 Certified Quality Program.
Operating Temp.	-40 to 70°C (ambient with air flow)
Storage Temp.	-40 to 85°C
Relative Humidity	0% to 95%, non-condensing.
STANDARD	
	IEEE 802.3 10Base-T Ethernet
	IEEE 802.3u 100Base-TX Fast Ethernet
	IEEE 802.3u 100Base-FX Fast Ethernet Fiber
	IEEE 802.3ab 1000Base-T Gigabit Ethernet Copper
	IEEE 802.3z Gigabit Ethernet Fiber
	IEEE 802.3x Flow Control and back-pressure

IEEE 802.3az (Energy Efficient Ethernet)

IEEE 802.1p Class of Service (CoS)

IEEE 802.1Q VLAN and GVRP

IEEE 802.1AB Link Layer Discovery Protocol (LLDP)

IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP)

IEEE 802.1S Multiple Spanning Tree Protocol (MSTP)

IEEE 801.1AX/802.3ad Link Aggregation Control Protocol (LACP)

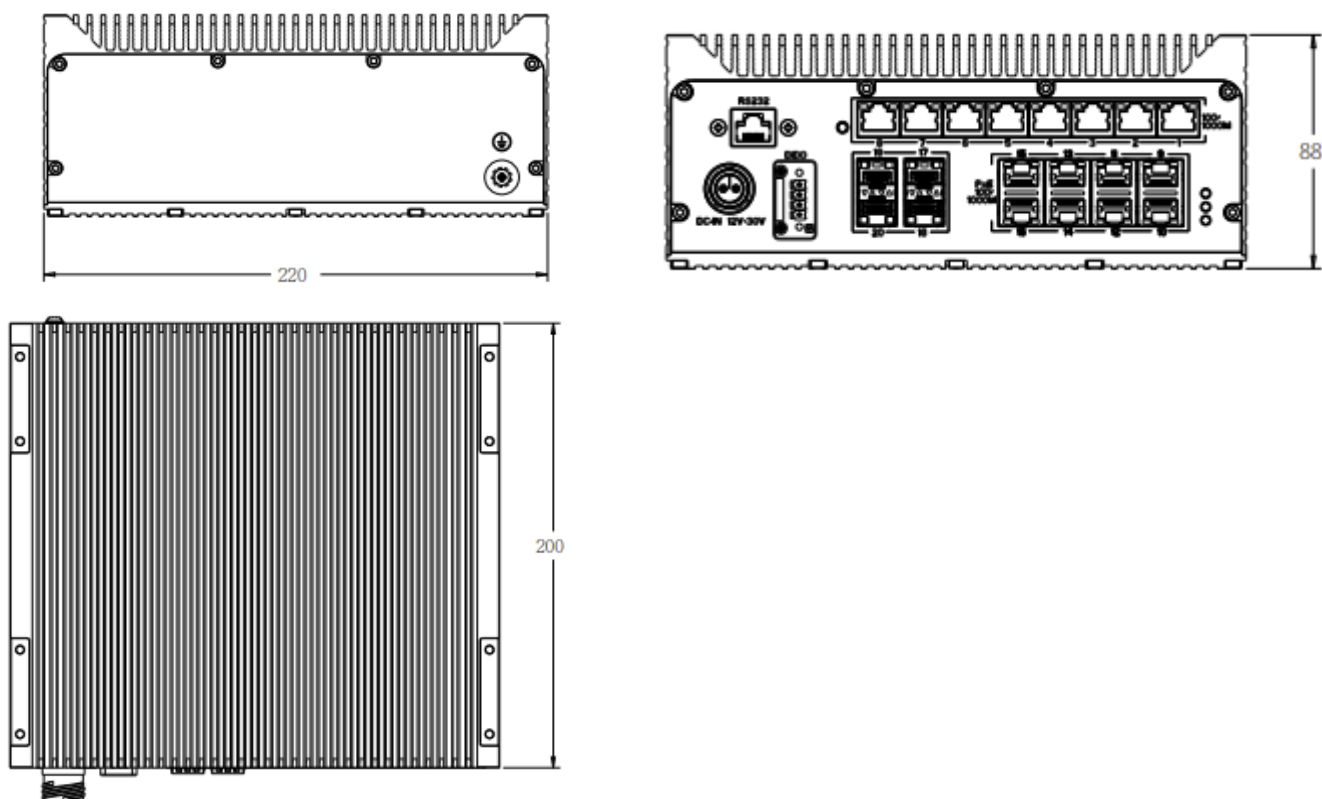
IEEE 802.1x Port based Network Access Protocol

IEEE 1588 Precision Time Protocol v2

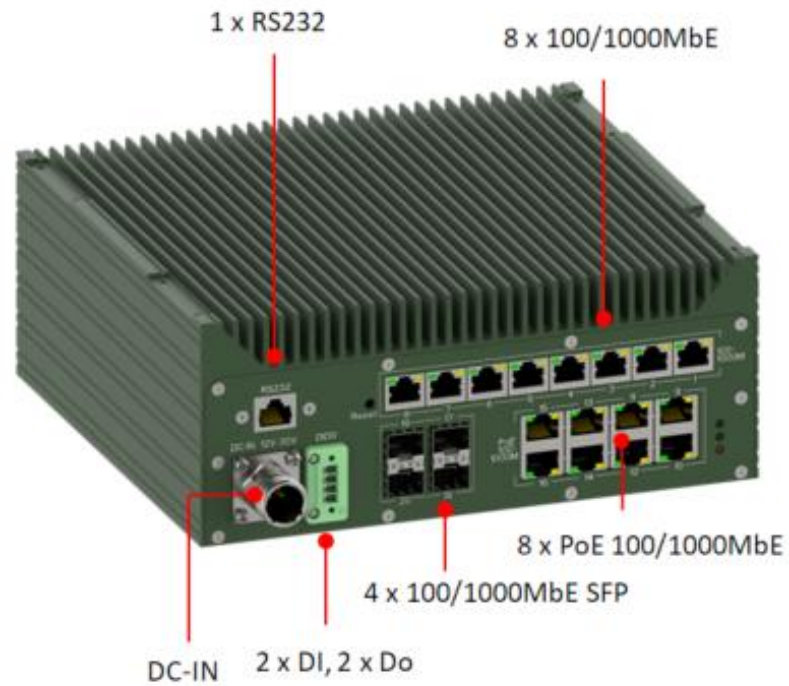
ITU-T G.8032 version 2 Ethernet ring protection switching(ERPSv2)

IEEE 802.3af/at Power-over-Ethernet

Dimension



Appearance



This datasheet is for marketing purposes only and does not constitute a warranty. All specifications, dimensions, and data are subject to change without notice. For the latest specifications and updates, please contact your 7STARLAKE representative.