

ITS EXPRESS ***ITS-3416***

Most Advanced TS-2/Hardened Base Layer 3 Cabinet Switch

NOW SHIPPING

**10GB
SFP+**

**Base
Layer 3
Hardened**

**156GB
BACK
PLANE**

**-40~85°C
Temperature**

**Copper
Testing
Capable**

**Optical
Monitoring**



ITS Express switches have been specifically engineered to handle the challenging demands of tough environmental conditions and High bandwidth, Real-time 4k Multicast environments.

A vast array of redundancy protocols combined with dual redundant power supplies ensure maximum uptime for mission critical applications.

The ITS-3416 provides State of the art Switching Next-Generation ASICs and a robust backplane (156GBPS)

Network Security, Port-based Network Access Control (IEEE 802.1X) HTTPS Secure Web GUI, SSHv2 for Secure Remote Command Line Login, Rate Limiting, ACL Policies, QOS, TOS, COS. Adaptive Cut-Through Switching Q in Q Vlans

State of the Art Firmware features, which have been designed around the ITS Market and heavy multi-cast environments

Two Optics are Included with each switch.



ITS-3416

Static Routing

**Exceeds NEMA TS-2 Spec's
Remote monitoring (RMON)**

Advanced Real Time Copper Cable testing

Optical Monitoring With Mapping Capabilities

16 Port 10/100/1000TX Copper Ports 156 GBPS Back-Plane

4 x 1Gb/2.5Gb/10Gb Base SFP+ Dual Speed Hybrid Fiber Ports

Event Notification: Email SMTP, Syslog, SNMP & Relay Output

Fast ITS Ring Recovery Time < 10ms over 250 units of connections

Mix and Match Multimode/Single Mode/Single Strand Fiber SFP

Multiple Switch Configurations: Web, Telnet, CLI, CLI Menu

Easy to Configure, Web interface designed by ITS users

Email notifications For Fiber Outages, Port Down, ETC.

Designed For Heavy Multi-Cast in Harsh environments

Full Layer 3 Management, 802.1x Authentication

Mix and Match 1Gb/2.5Gb/10Gb Fiber

S-Flow network monitoring

sflow

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Express Supply Inc.

www.expressupply.net

407-497-8614

Specifications

Switch Model	ITS-3416
Physical Ports	
10/100/1000Base-TX Ports RJ45 Auto MDI/MDIX	16
1Gb/2.5Gb/10GbSFP/SFP+	4
Technology	
Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX and 100Base-FX IEEE 802.3ab for 1000Base-T IEEE 802.3z for 1000Base-X IEEE 802.3ae for 10Gigabit Ethernet IEEE 802.3bz for 2.5GBase-X IEEE 802.3x for Flow control IEEE 802.3ad for LACP (Link Aggregation Control Protocol) IEEE 802.1p for COS (Class of Service) IEEE 802.1Q for VLAN Tagging IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol) IEEE 802.1s for MSTP (Multiple Spanning Tree Protocol) IEEE 802.1x for Authentication IEEE 802.1AB for LLDP (Link Layer Discovery Protocol)
MAC Table	64k
Packet Buffer	64Mbits
Flash Memory	128MB
DRAM Size	512MB
Jumbo frame	Up to 9K Bytes
Priority Queues	8
Processing	Adaptive Cut-Through / Store-and-Forward
Switch Properties	Static Routing Switching bandwidth:156Gbps Max. Number of Available VLANs: 4096 IGMP multicast groups: 256 for each VLAN Port rate limiting: User Define
Security Features	Device Binding security feature Enable/disable ports, MAC based port security Port based network access control (802.1x) MAC-based authentication MAC address limit VLAN (802.1Q) to segregate and secure network traffic Radius centralized password management SNMPv3 encrypted authentication and access security Hhttps / SSH enhance network security Web and CLI authentication and authorization Authorization (15 levels) IP source guard
Software Features	IEEE 802.1D Bridge, auto MAC address learning/aging and MAC address (static) MSTP (RSTP/STP compatible) Redundant Ring (ITS Ring) with recovery time less than 30ms over 250 units TOS/Diffserv supported Quality of Service (802.1p) for real-time traffic VLAN (802.1Q) with VLAN tagging IGMP v2/v3 Snooping IP-based bandwidth management Application-based QoS management DOS/DDOS auto prevention

	Port configuration, status, statistics, monitoring, security DHCP Server/Client/Relay Modbus TCP SMTP Client NTP server
Network Redundancy	STP, RSTP, MSTP, ITS Ring, ITS Chain, Express Chain, Multi-vendor ring compatibility
RS-232 Serial Console Port	RS-232 in RJ-45 connector with console cable. 115200bps, 8, N, 1
LED Indicators	
System Ready Indicator (PWR)	Green: Indicates that the system ready. The LED is blinking when the system is upgrading firmware
Power Indicator (PWR1 / PWR2)	Green: Power LED x 2
Ring Master Indicator (R.M.)	Green: Indicates that the system is operating in ITS Ring Master mode
ITS Indicator (Ring)	Green: Indicates that the system operating in ITS Ring mode Green Blinking: Indicates that the ITS Ring is broken.
Fault Indicator (Fault)	Amber : Indicate unexpected event occurred
Fault Contact	
Relay	Relay output to carry capacity of 1A at 24VDC
Power	
Redundant power input modular	Dual DC inputs. 12~48VDC (Max. rating : 60VDC) at terminal block
Power consumption (Typ.)	35 watts
Overload current protection	Present
Reverse Polarity Protection	Present
Physical Characteristic	
Enclosure	IP-30
Weight (g)	TBD
Dimension (W x D x H)	115 (W) x 154 (D) x 170 (H)mm (4.53 x 6.26 x 6.06 inch)
Environmental	
Storage Temperature	-40 to 90°C (-40 to 194°F)
Operating Temperature	-40 to 85°C (-40 to 185°F)
Operating Humidity	5% to 95% Non-condensing
Regulatory Approvals	
Power Automation	IEC 61850-3, IEEE 1613
EMC	EN 55022, EN 55024(CE EMC), EN 50121-5, FCC, EN 50121-3-2(EN50155), EN 61000-6-2, EN 61000-6-4, IEC 61000-3-2, IEC 61000-3-3
EMI	CISPR 22, EN 55011, FCC Part 15B Class A
EMS	EN 61000-4-2 (ESD), EN 61000-4-3 (RS), EN 61000-4-4 (EFT), EN 61000-4-5 (Surge), EN 61000-4-6 (CS), EN 61000-4-8 (PFMF), EN 61000-4-11 (DIP)
Shock	IEC 60068-2-27, IEC 61373(EN50155)
Free Fall	IEC 60068-2-31 (IEC 60068-2-32)
Vibration	IEC 60068-2-6, IEC 61373(EN50155)
Safety	EN60950-1
Warranty	5 years

