

Indura™ S100 Rugged Ethernet Switch

100 Gigabit Ethernet for Extreme Performance
in Mobile Environments



- 100 GigE performance
- Layer 3 management
- Compact and lightweight
- 12VDC or 48VDC power supply
- Designed for high reliability in extreme environments
- Customizable to meet program-specific requirements
- Commercial off-the-shelf (COTS) technology for cost-effective flexibility

The Dynatem Indura™ family is a modular and scalable line of IP networking products for use in mobile and edge applications. The rugged and compact Indura family leverages commercial-off-the-shelf (COTS) technology to deliver data center performance and features in applications that are size, weight and power (SWaP) constrained — enabling the integration of highly secure and reliable network centric C4ISR systems in mobile manned/unmanned land, sea or air platforms.

With 100 Gigabits of data throughput per port, the Indura S100 brings extreme data communications performance to rugged and mobile environments. Featuring Sixteen (16) 40/56/100GbE ports, total throughput of 3.2Tb/s and only 300ns port-to-port latency in a compact and lightweight footprint, the S100 is the ideal network backbone for deep learning, artificial intelligence (AI), signal processing and other demanding high performance applications.

The rugged and reliable S100 can withstand extreme shock and vibration and is customizable to meet user-specific application requirements, including validation and certification testing. The S100 has no vents or moving parts and is liquid cooled, increasing reliability while reducing the footprint. The unique liquid cooling technology easily interfaces with on-platform cooling systems, offering significant savings in integration cost and complexity.

Layer 3 management further delivers a high level of control over data streams and traffic, along with enhanced security capabilities critical to mobile deployments.

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System Specifications	
Network	<p>Interfaces: Sixteen (16) 40/56/100GbE QSFP28 Ports; Up to Thirty-Two (32) 50GbE Ports; Up to Sixty-Four (64) 10/25GbE Ports</p> <p>Throughput: 3.2Tb/s - Processing Capacity: 2.38Bpps - Port-to-Port Latency: 300ns, Zero Packet Loss</p>
Management Ports	<p>One (1) 10/100/1000 RJ45 (Out-of-band) Port</p> <p>One (1) USB Port</p> <p>One (1) RS-232 RJ45 Serial Port</p>
Layer 2	<p>Flow Control: 802.3ad LAG & LACP: 16 Ports/Channel, 64 Groups/System, Multi-chassis LAG STP support</p> <p>Spanning Tree: 802.1W Rapid Spanning Tree (BPDU Filter, Root Guard, Loop Guard, BPDU Guard, RSTP, MSTP and PVRST)</p> <p>Link Aggregation: 802.1AX Link Aggregation (Max 32 Groups per Device, 8 Ports/Group)</p> <p>VLAN: 802.1Q Multiple STP, 4K</p> <p>L2 Multicast: IGMPv2/v3, Snooping, Querier</p> <p>Other: LLDP, Store & Forward, HLL, 1/10/25/40/50/56/100GbE, Jumbo Frames (9216 Bytes)</p>
Layer 3	<p>General: User and Management VRFs, IPv4 & IPv6 Routing Including Route Maps, MP-BGP, OSPFv2 - PIM-SSM, PIM-SM, BFD (BGP, OSPF, Static Routes), VRRP, DHCPv4/v6 Relay - Router Port, int VLAN, NULL Interface for Routing, ECMP, 64-way, IGMPv2/v3 Snooping Querier</p> <p>Synchronization: PTP IEEE-1588 (SMPTE Profile), NTP</p> <p>QoS: 802.3X Flow Control, WRED, Fast ECN & PFC, 802.1Qbb Priority Flow Control, 802.1Qaz ETS, DCBX App TLV Support, Advanced QoS (Qualification, Rewrite, Policers), 802.1AB Shared Buffer Management</p>
Other	<p>Monitoring: sFlow, Real time Queue Depth Histograms & Thresholds, Port Mirroring (SPAN & ERSPAN), Enhanced Link & Phy Monitoring, BER Degradation Monitor, Enhanced Health Mechanism</p> <p>Display: OLED Display with Protection</p> <p>LEDs: One (1) PSU Power, One (1) System Health, One (1) Switch Power, One (1) Bad port, One (1) Identifier</p>
Power	<p>Input: 48VDC Nom. (20 to 58VDC, 1.3A Max); 12VDC Nom. (9 to 18VDC, 25A Max)</p> <p>Protection: Integrated Inrush Protection and Ignition Key Sense</p> <p>Consumption: 210W Peak</p>
Environmental	<p>Operating Temp: 0 to +45°C (extended temperature options available) - Storage Temp: -40 to +70°C</p>
Mechanical	<p>Fanless and Vent-Free Steel Enclosure</p> <p>Dimensions: 206 x 380 x 83mm / 8.1 x 15 x 3.25in (W x D x H) - Excluding Connectors</p> <p>Weight: ~6Kg / 13lbs (including coolant)</p>
Cooling	<p>Coolant Flow: 75lph, 35°C Inlet, 30% v/v Glycol Coolant</p> <p>Filter: Integrated Mesh Protection Filter</p> <p>Protection: Condensation Detection, System Watchdog, Flow Rate, Internal Temperature, Inlet/Outlet Temperature, Humidity, Input Voltage/Current/Energy</p>

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Since 1981, Dynatem has been a trusted supplier of rugged and secure mission-critical solutions for defense and aerospace applications. We are proven experts in designing and building rugged, small form factor technology products for use in harsh environments. Dynatem solutions can be found in mission-critical defense systems around the world—powering airborne, ground and shipboard deployments.