T-ATCA 510

100GE ADVANCEDTCA® SWITCH BLADE

Advanced TCA (ATCA) specifications enable rapid development of mission-critical telecom applications, IP-based multimedia services (IMS), and metro Ethernet aggregation service routing. ATCA also support security functions like firewall and cyber security, and other DPI network applications such as lawful enforcements and traffic management. ATCA is the ideal path for implementing SDN and NFV technologies as it offers an open platform for hosting virtualized network functions such as virtualized Evolved Packet Core (vEPC) and virtual customer premises equipment (vCPE), and can support OpenFlow application programming interfaces (API).

These applications and functions require a cost-effective, high performance, high bandwidth and high availability solution, which can be achieved using ATCA standard architecture. Central to this architecture is the ATCA switch blade, which provides connectivity between ATCA chassis node blades and external networks.

Telco Systems' T-ATCA 510 delivers unparalleled connectivity to ATCA platforms with support for 10/40/100Gbps multi-rate switching on the fabric interface (FI) and 1/10Gbps multi-rate switching on the base interface (BI). The T-ATCA 510 provides flexible port fan-out of up to 40 x 10GE fabric interface ports or 2x 100GE plus 24x 10GE or 2x 100GE plus 4x 40GE plus 8x 10GE.

T-ATCA 510 uniquely delivers an extensive networking software suite, BiNOX™, to provide a complete networking solution for ATCA platforms. BiNOX™ is Telco Systems' field-proven, carrier-grade networking operating system, offering superior control and security while delivering wire speed Layer 2-4 networking. BiNOX helps eliminate oversubscription and traffic congestion and supports low latency requirements which are mandatory in carrier-grade and cloud networks.

BiNOX™ networking software delivers state of the art connectivity, including switching, IPv4/IPv6 routing, protection and redundancy, load balancing, MPLS, QoS and OpenFlow support. Telco Systems' BiNOX-powered T-ATCA product line offers ready-to-deploy networking devices that allow much faster integration, interoperability with Tier 1 network devices, and more robust solutions. Devices powered by BiNOX™ are widely deployed in critical carrier and enterprise networks worldwide.

- 4K VLAN address support
- 128 trunk group support
- Full MPLS/VPLS/VPWS implementation
- Flexible management options via SSH, Telnet, Console, SNMPv3, NETCONF, Syslog

PRODUCT HIGHLIGHTS

- PICMG 3.0 / 3.1* R2.0 compliant
- Supports up to 16-slot platforms
- 2x 1GE/10GE base interface ports
- 2x 100GE/40GE or 16x 10GE, 4x 40GE or 16x 10GE and 8x 10GE fabric interface ports
- More than 440Gbps external connectivity, and a total of 960Gbps switching capacity
- Wire speed non-blocking L2-4 switching
- IPv4 and IPv6 switching on both BI & FI
- Advanced load balancing on L2 - L4

- Advanced switch over redundancy
- Unique Hierarchal QoS (HQoS*) for service assurance
- Advanced security mechanisms
- Enhanced protection and resiliency options
- Ethernet OAM (EFM, CFM, Y.1731, RFC2544* / Y.1654*)
- Proven interoperability with ATCA chassis, CPU blades and shelf management
- NEBS and ETSI compliant

Telco Systems

PRODUCT SPECIFICATIONS

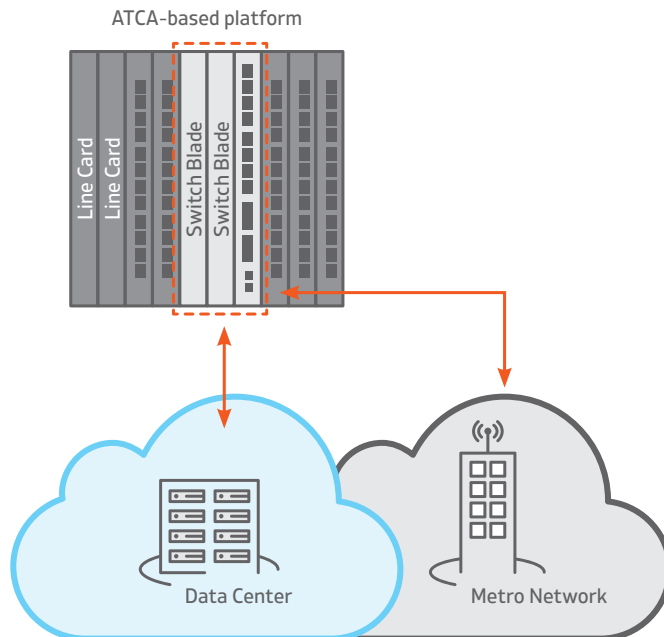|	
Fabric Interface (FI)	Wire speed, 100GE ATCA switch 960Gbps full duplex switch capacity 2 x 100GE/40GE (QSFP28/QSFP+) or 16 x 10GE (MPO breakout cable and SFP+), 4 x 40GE (40G QSFP+) or 16 x 10GE (MPO breakout cable and SFP+) and 8 x 10GE (SFP+)
Base Interface (BI)	2 x 1/10GE (SFP+) uplink of 10GbaseSR / LR / ER / ZR / Direct Attached Copper *Includes laser monitoring and 2 x SFP+ uplinks of 1000base-SR/SLR/ER/ZR/Copper SFP 2 x 100BaseT shelf manager controller (ShMC)
Layer 2	Standard Ethernet bridging Port/MAC/Subnet/Flow based VLAN QinQ, VLAN swap, flexible VLAN manipulations VLAN statistic,L2 OAM (EFM,CFM,Y.1731,RFC2544), port mirroring, laser monitoring, LLDP (link layer discovery), ACL, all MEF services, OpenFlow*
Layer 2.5 & 3	Static routing, OSPFV2, VRRP, BFD, MPLS L2VPN, full VPLS PE, HVPLS, VPWS, MPLS L3VPN*
Resiliency	xSTP, resilient link, G.8032, G.8031 LAG: Static/IEEE 802.3ad LACP Sub-50ms RSVP-TE FRR, HVPLS dual homing, secondary LSP
Quality of Service	SP, WRR, DRR and hybrid scheduling, congestion avoidance WRED and tail drop, rate limit and shaper 802.1P, DSCP & ToS
Load Balancing	Advanced load balancing capabilities with dynamic "bucket" management updates
Redundancy	Hitless switch over mechanism under switch/link fail, dual chassis LAG*, N+M payload blade control, stacking*
Management	Console, Telnet, SSHv2, Radius, TACACS+, SNMP, v1/2/3, xFTP, NTP, DNS resolver, NETCONF
Security	ACLs, RADIUS, SSHv2, SNMPv3, SFTP, port security, broadcast storm prevention, secured access
EMC & Immunity	FCC 47 CFR, Part 15 Subpart B (2009 Class A) ICES-003 (2004) / CISPR 22: 2008 / ANSI C63.4:2009 EN 55022:2006 + A1:2007 + A2:2010, Class A EN 55024:2010 IEC 61000-4-2:2008 IEC 61000-4-3:2006 + A1:2007 + A2:2010 IEC 61000-4-4:2004 + A1:2010 IEC 61000-4-5:2005 IEC 61000-4-6:2008 IEC 61000-4-8:2009
Safety	UL 60950-1:2007, 2nd edition CSA C22.2 No. 60950-1-07, 2nd edition

ATCA-based platform

KEY APPLICATIONS

- Security-based application as firewall and cyber-security
- Intelligent Policy Enforcement (IPE)
- Traffic management
- Gigabit Passive Optical Network (GPON) optical line terminal
- Virtualized Evolved Packet Core (vEPC) and virtual customer premises equipment (vCPE).
- Carrier Ethernet/MPLS aggregation platform
- Industrial inspections machines for semiconductor industry

ORDERING INFORMATION

Part Number	Description
T-ATCA510	Next generation 100GE ATCA switch blade, supports Layer 2/3; BiNOX network OS
BTI-100GLR4L-Q28-LN2-SM-LC	QSFP28 Transceiver for LAN WDM 100GBASE-LR4, SM (1310nm), DDM, Connector: LC, Distance: 2km
BTI-100GLR4-Q28-LN10-SM-LC	QSFP28 Transceiver for LAN WDM 100GBASE-LR4, SM (1310nm), DDM, Connector: LC, Distance: 10km
BTI-100GSR4-Q28-VS01-MM-MPO	QSFP28 Transceiver for 100GBASE-SR4, MM (850nm), DDM, Connector: MPO, Distance: 70m/100m

PN:T-ATCA-FEB17