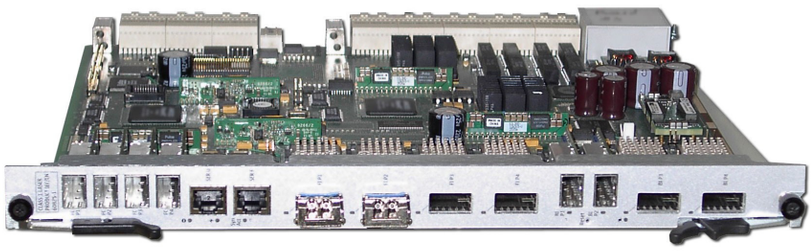
Telco Systems
A BATM Company

T-HUB1

AdvancedTCA® Hub Module

GigE & Fiber Channel with 10GE Uplinks



The Telco Systems T-HUB1 delivers unparallel connectivity to ATCA platforms with support of 10GE uplinks on both BI & FI. ATCA enables fast development of new systems for communications, enterprise, medical and military applications that require high performance and high availability. Central to this ATCA architecture is the ATCA Hub module that provides connectivity between ATCA chassis slots. The Telco Systems T-HUB1 uniquely delivers extensive networking software suite, BiNOS™, to provide complete networking solution to ATCA platforms.

BiNOS™ is Telco Systems field proven carrier grade Networking Operating System offering superior control and security while delivering wire speed layer 2-4 networking.

BiNOS™ networking software delivers state of the art connectivity, including Switching, IPv4/IPv6 routing, MPLS, QoS, Protection & Redundancy etc. BiNOS™ powered HUB modules deliver a ready to deploy networking devices allowing much faster integration and more robust total solution.

BiNOS™ is deployed in numerous critical carrier and enterprise networks worldwide. The Telco Systems T-HUB1 provides flexible Fabric Interface connections, with Gigabit Ethernet and Fiber Channel to all 23" chassis slots. 10GE Ethernet uplinks and multiple Fiber Channel interfaces provide traffic aggregation from the T-HUB1 module.

Telco Systems development team, logistics organization and technical support combine to deliver leading ATCA systems solutions.■

Product Highlights

- PICMG 3.0/3.1 Compliant
- Supports 23" 16-slot platforms
- GigE base interface with 2x10GE uplinks
- GigE and 1/2/4 Gbps Fiber Channel Fabric interface with 4x10GE uplinks
- Separate Base and Fabric Interface Switching & CPU to provide enhanced security and protection
- Wire speed L2-4 switching
- IPv4 and IPv6 switching on both BI & FI
- Powered by BiNOS™ Multi-layer networking operating system software
- Industry standard CLI
- Highly manageable, via SSH, Telnet, Console, SNMP, Syslog
- Unique Qos, Security and Protection
- Optional RTM to support Network timing with clocking inputs and outputs
- IPMI Controller (dual I²C)
- Fast Ethernet update channel between Hub blades
- Proven interoperability with ATCA chassis, shelf management and modules
- OEM and private label options

Specifications

Backplane Interfaces

Fabric Interfaces (FI)
- 14x Gigabit Ethernet
- 4x slots with additional 2x Gigabit Ethernet. (Delivering 3 Gigabit Ethernet to 4 slots and 1Gbps to the remaining 10 slots)
- 14x Fiber Channel (FC-AL) 1/2/4 Gpbs

Base Interface (BI)
- 14x 100/1000 BasesT Ethernet
- 2x 100BaseT Shelf Manager controller (ShMC)

Intelligent Platform Management Bus (IPMB)
- 2 x I²C

Update Channel
- Fast Ethernet interconnection between the two Hub blades

RTM
- 2x Ethernet for FI & BI CPU management
- Master Clock Management (MCG)

Front Panel

Fabric Interfaces
- 4x 10Gigabit Ethernet (XFP)
- 4x Fiber Channel 1/2/4 Gbps (SFP)

Base Interfaces
- 2x 10Gigabit Ethernet (XFP)
- 2x Gigabit Ethernet (SFP)

Management
- 2x Console (RJ45)

Network Timing RTM (optional)
- PICMG 3.0 chapter 6.7
- GR-499-CORE, R-1244-CORE, GR-253-CORE
- G.703, G.783, G.803, G.812, G.813

Backplane Interfaces
- 8KHz (CLK1A/B), 19.44KHz (CLK2A/B) & Multi-rate clock (CLK3A/B)

RTM External Interfaces
- Dual BITS/SSU input and output with full SSU support.
- Inter-chassis clock distribution

BiNOS™ Software
- **L2 Protocols:** 802.1Q VLAN, STP, RSTP, MSTP, IGMP, LACP
- **L3 Protocols:** RIP, OSPF, BGP, IS-IS, VRRP, PIM-xM, IPv4, IPv6
- **Quality of Service (QOS):** TOS, DiffServ, Rate Limiting, Queuing management, WRED, 802.1p
- **Security:** ACL, RADIUS, SSH, 802.1x, SNMPv3
- **Resiliency & High Availability:** Resilient Link, sub 50mSec rings, hot swap
- **Management:** CLI, Telnet, RMON, Java GUI, EMS, NMS integration, Ethernet OA&M including Metro Ethernet Forum, 802.1ah, 802.3ag
- **VPN:** L2-VPN, Q-in-Q, L3-VPN (VRF)

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