



● Shared Memory between Packet Buffer and Table

- ⊕ Large MAC address table for NB-IoT application
- ⊕ Embedded large-size packet buffer optimized for handling bursty data traffic
- ⊕ Large ALPM route entries for IPv4/IPv6 dual stack deployment

● Advanced Integrated Telemetry Engine™

- ⊕ Multiple dimensions of visualization capabilities
- ⊕ Buffer and Latency monitoring
- ⊕ NetFlow session-level forwarding status monitoring
- ⊕ Per flow ERSPAN capability monitoring

● Programmable Tunnel

- ⊕ Programmable parsing and editing capability
- ⊕ Encryption and decryption for unknown tunnels
- ⊕ Cost effective and low power solution for vBRAS of edge computing

● Fixed and Low Latency

- ⊕ Proven Cut-through low latency technology
- ⊕ X-PIPE 1.0 technology to ensure the packet with high priority can obtain low latency performance

●●● Overview

The Centec® CTC7132 (TsingMa) is a purpose built device to address the challenge in the recent network evolution such as Cloud computing. To offer enhanced system function integration with lower system BoM cost, the CTC7132 family combines a feature-rich switch core and an embedded ARM A53 CPU Core running at 800MHz/1.2GHz. CTC7132 provides 440G I/O bandwidth and 400Gcore bandwidth.

The CTC7132 SerDes design is compliant with flexible I/O standards including 100BASE-FX/ SGMII / USXGMII/ QSGMII/ XAUI /DXAUI /XFI /SFI /10G-KR /25G/ 40G-KR4 /50G/ 100G-KR4. With up to 48 ports of MGig downlink ports, and 10G/40G 25GE/50GE/100GE uplinks, CTC7132 supports stacking with multiple speed rates.

Built on field proven architecture, the 6th generation CTC7132 family provides highly optimized pipeline technology to address the Cloud computing requirements for larger entry, lower latency and more flexible pipeline.

●●● Features

● Full-set of Layer 2 Switching

- ⊕ VLAN, MAC, LAG, broadcast storm control
- ⊕ VXLAN to the edge node
- ⊕ IEEE 802.1BR for Bridge Port Extension
- ⊕ DCB (PFC, ECN, ETS) feature set support for RDMA technology

● Full-set of Layer 3 Routing

- ⊕ Support ALPM algorithm for IPv4/IPv6 dual stack
- ⊕ Wire speed NAT / NATP / NAT-PT forwarding
- ⊕ CAPWAP tunnel encapsulation/ decapsulation, fragmentation/ reassembly, encryption/decryption
- ⊕ IPv4 and IPv6 conversion (6in4, 6to4, IVI, etc.)

● MPLS

- ⊕ LSP, L2VPN, L3VPN, L2VPN-L3VPN Gateway
- ⊕ Segment Routing

● Comprehensive OAM/APS feature

- ⊕ IEEE802.1ag CFM/ Y.1731-compliant Ethernet OAM
- ⊕ G.8031/G.8032-compliant Ethernet APS
- ⊕ G.8113.1 / G.8113.2-compliant MPLS-TP OAM
- ⊕ G.8131 and G.8132 compliant MPLS-TP APS
- ⊕ Automatic switching by BFD/OAM defect

● Telemetry

- ⊕ Buffer/Latency monitoring
- ⊕ Hardware support for NetFlow
- ⊕ ERSPAN (Ingress Timestamp and latency)

● Programmability

- ⊕ L2-L4 Programmable Edit
- ⊕ Programmable tunnel encapsulation/ decapsulation

● Security and traffic management

- ⊕ VLAN / MAC / Port / IP binding
- ⊕ CPU traffic control preventing DoS attacks

● Network time synchronization

- ⊕ IEEE 1588v2 and Synchronous Ethernet for delay-sensitive applications

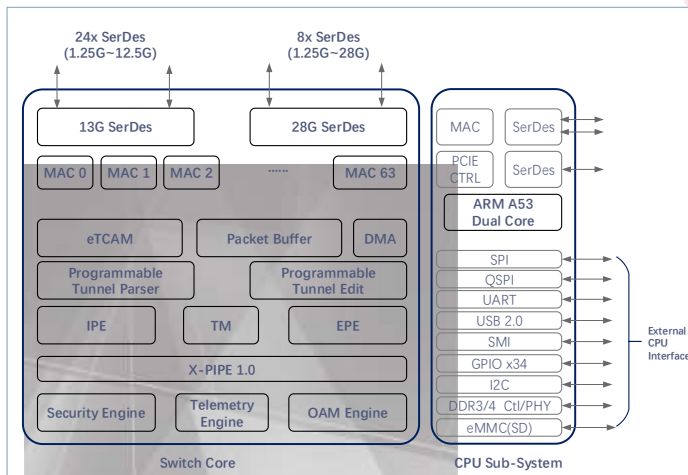
●●● Application

CTC7132	
√	Enterprise
√	Metro
√	XGPON/ NGPON
√	Hyper Converged

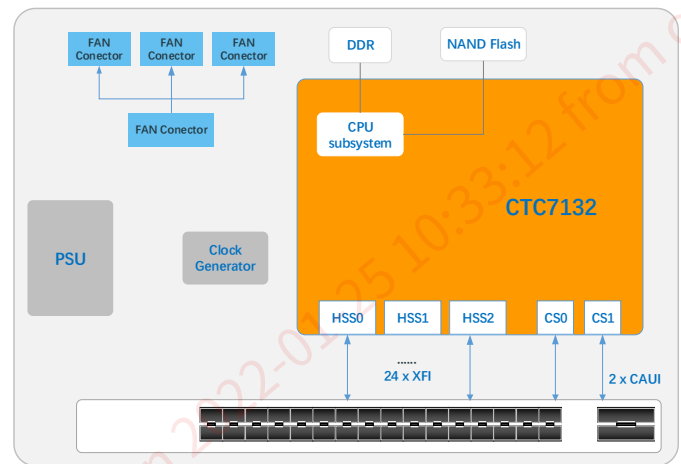
●●● Physical facts

Package	FCPBGA 1143
Technology	TSMC 28nm low power technology
Typical Power dissipation	25W

CTC7132 Function Block



Enterprise Pizza-box 10G Application



Application	Typical Configuration
1G Access	24x 1G+ 4x 10G 48x 1G+4x 10G+2x 40G [Stacking]
2.5G Access/Aggregation	48x 2.5G+4x 25G+2x 50G [Stacking]
Multi-Gig Aggregation	24x 1G/2.5G/5G/10G+2x 40G/100G
Centralized Chassis	8x XAUI/40G 24x 100M/1G/10G + 8x 1G/10G/25G

X-Engine™ Innovation

CTC7132 incorporates innovative X-Engine™, which includes OAM/BFD Engine, Telemetry Engine, Security Engine, and Wireless Engine to offer enhanced wire speed capabilities and higher levels of integration to meet the requirements for edge multi-service access scenarios and the converged network.

In Campus Networking, leveraging the Telemetry Engine, CTC7132 can provide the statistics of session-based service, packet-drop, as well as the stats data of the Max/Min latency and jitter. In Carrier Network, via OAM/BFD Engine, CTC7132 provides high-precision, multi-entry OAM and BFD sessions. In addition, CTC7132 offers 2544/TWAMP solution for IPRAN.

About Centec

Centec Networks provides innovative switching silicon and whitebox solutions that improve SDN deployment. Centec is committed to empowering SDN for carrier, enterprise, and data center networks. Leveraging a high-performance open SDN architecture, Centec enables seamless migration from traditional L2, L3, and MPLS/MPLS-TP architecture to the new SDN eras while solving SDN's biggest challenges. Centec and our customers are redefining the future of network switching.

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