

TETA 32100 model: 32x100G



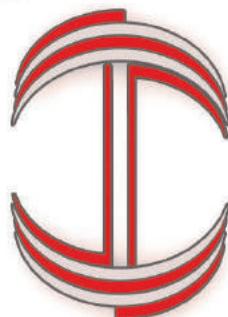
TETA 7210 model: 48x10G+6x40G

Convertible to 24x10G by splitter



Usage:

Data Center: ToR, Leaf, Spine
Service Provider: Core, Aggregation, Access
Enterprise: Stackable L2/L3 switch



TETA

شرکت تحقیق و توسعه ارتباط
(سهامی خامن)

سوئیچ/روترهای پر ظرفیت شرکت تتا

تهران - خیابان گاندی جنوی
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ویژگی‌های کلیدی

Full Layer-2, Layer-3 protocol stack support

Multiple Architectures & Customized Operating Systems by TETA

High Availability & Resiliency, Performance at Scale

Reliability, Manageability, Programmability & Extensibility

Modular Software

Break monolithic switch software into multiple containerized components

Deploy new features without impacting end users

In-service upgrades with zero downtime

Roll out updates securely and reliably across the fleet in hours instead of weeks

Early detection of failure, fault correlation, and automated recovery mechanisms without human intervention

Netbouncer and Everflow

Hybrid Legacy, SDN based Operating System

Support OpenFlow, PCEP, SR, link-state address-family for NG-SDN application

Utilize cloud-scale deep telemetry and fully automated failure mitigation

OpenStack Neutron ML2 Integration

Market-leading SDN controller Integration: OpenDaylight, ONOS, Ryu

RESTful APIs, NETCONF, RESTCONF, gNMI, Python for the API

Standard SNMP v2,v3, YANG Models

CLI, Linux standard shell, DevOps automation tool, Ansible Test Automation

Docker based software architecture

Fast/Warm/Cold Reboot Support

FEC control

CORD ready: telcos and the head-end for operators

Decouples Hardware & Software using SAI

Specific Use Cases

Hardware Firewall

Network Policy Control

DIP Packet Inspection

Hardware Load-balancer

Circuit Pusher

Network as a service

کاربردها در کریر و ارائه دهنده سرویس

طراحی نسل قدیم: لایه هسته، لایه توزیع،

لایه لبه و لایه دسترسی

طراحی نوین بر مبنای SDN

کاربردها در مراکز داده

Leaf, Spine, ToR

طراحی نسل قدیم / بر مبنای SDN

کاربردها در سازمان‌های بزرگ

سوئیچ‌های مرکزی

کاربردها

امکانات

قابلیت‌های نرم افزاری مدیریت

قابلیت‌های اختصاصی مرکز داده

VxLAN/HW-VTEP
OpenFlow 1.3.4
CORD ready
802.1Qau
802.1Qaz
802.1Qbb
DCBX
EVB(802.1Qbg)
MLAG
802.3x

قابلیت‌های امنیت و کیفیت

Security
Ingress/Egress/VTY/Control-plane ACL
AAA: RADIUS /TACACS+/Local
802.1x

QoS
COS
DSCP

DWRR and Strict scheduling
WRED-ECN
Traffic shape
Ingress policing, Egress shaping
PFC
CoPP

قابلیت‌های لایه 2

L2 MAC Address Table: 40K

Aging support

Static MAC

Unicast/multicast traffic balance

Broadcast

Unknown multicast

DLF (unknown unicast)

Jumbo Frame

LLDP

SPAN/RSPAN

FEC

MLAG

LACP

32-way ECMP

Storm Control

VLAN

MSTP

VRRP

QinQ

Chipset Shell

Industrial standard CLI

CLI filtering, pagination and interface range

Text-based configuration

SSH v2

SFTP/SCP/TFTP

Multiple Images

Incremental software update

DHCP Client/Server/Relay

Docker based, Swarm/kubernetes compatible

Automation tools: Ansible/Chef/Python

New network applications extensibility

Distributed processing/Software mobility/ Database clustering

ASIC pipeline and buffers monitoring, packet tracing.

Syslog

Diagnostic dump

sFlow

NetFlow/IPFIX

EverFlow/telemetry

Chipset pipeline monitoring

SPAN / ERSPAN

Fast/Warm/Cold reboot

ZTP

Restful API

قابلیت‌های سوئیچ/روتر لایه 3 (packet forwarding)

BFD

Graceful restart

BGP ipv4[labeled]
(MPLS)

BGP ipv6[labeled]
(MPLS)

BGP vpnv4 (MPLS)

BGP vpnv6 (MPLS)

BGP LS (SDN)

BGP flowspec (SDN)

BGP evpn (SDN)

Babel

OpenFabric

LDP (MPLS)

EIGRP

ISISv4

ISISv6

NHRP

OSPFv2

OSPFv3

OSPF SR (MPLS)

PIM-SM

PIM-SSM

PBR

RIP

RIPng

SHARP

Route-map

Access-list

Community-list

DHCP relay, DNS, NTPv4

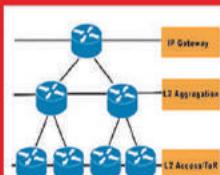
مشخصات سخت افزاری سوچی TETA32100

ASIC	3.2Tbps Broadcom Tomahawk BCM56960 switching silicon
Forwarding performance	4400 Mpps: 32x100G
Processor	Intel Atom 2558 processor (4 core)
RAM	8GB DDR3
HDD	64GB M.2 SATA SSD
Forwarding table	UFT (Unified Forwarding Table)
Latency	less than 500 ns (PHY-less)
Hardware accelerators	VXLAN/NVGRE/GENEVE acceleration
DCB features	802.1Qau, 802.1Qaz, 802.1Qbb, DCBX, EVB(802.1Qbg), MLAG, 32-way ECMP
Power supply	Redundant 1+1 power, DC/AC power option available
Cooling	Redundant N+1 cooling
MAC address table size	40960
ARP table size	8192
Route table size	128k

مشخصات سخت افزاری سوچی TETA7210

ASIC	720Gbps Broadcom Trident2 BCM56854 switching silicon
Forwarding performance	1071 Mpps: 48x10G + 6x40G
Processor	Intel Atom 2558 (4 core)
RAM	8GB DDR3
HDD	64GB M.2 SATA SSD
Forwarding table	UFT (Unified Forwarding Table)
Latency	less than 700 ns (PHY-less)
Hardware accelerators	Hardware VXLAN/NVGRE acceleration
DCB features	802.1Qau, 802.1Qaz, 802.1Qbb, DCBX, EVB(802.1Qbg), MLAG, 32-way ECMP
Power supply	Redundant 1+1 power, DC/AC power option available
Cooling	Redundant N+1 cooling
MAC address table size	32768
ARP table size	16384
Route table size	384k

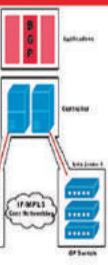
Traditional



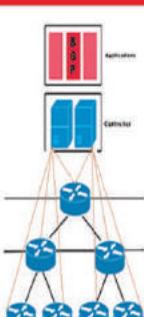
Features:

- | | |
|-----------------------------------|-------------------|
| LLDP | PIM |
| Link Aggregation | Security |
| VLAN | Management |
| Spanning-tree | VXLAN |
| Storm Control | NVGRE |
| IGMP Snooping | Fabric Path |
| Dual-Stack (IPv4/V6) | MPLS |
| QoS | OpenFlow 1.3, 1.4 |
| Multi-VRF Routing (BGP/OSPF/ISIS) | ... |

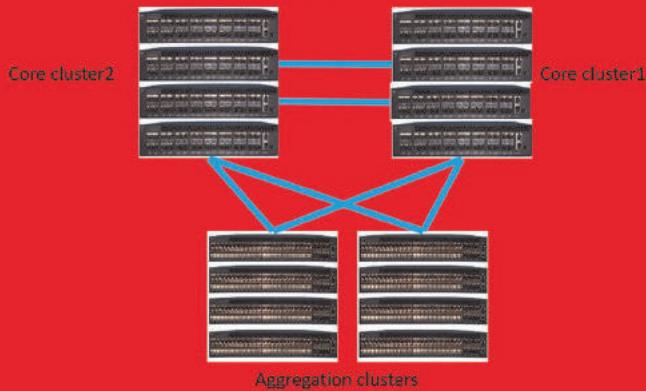
SDN



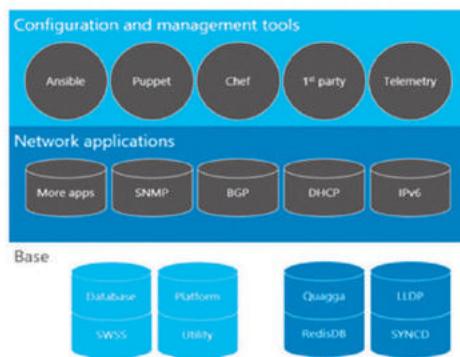
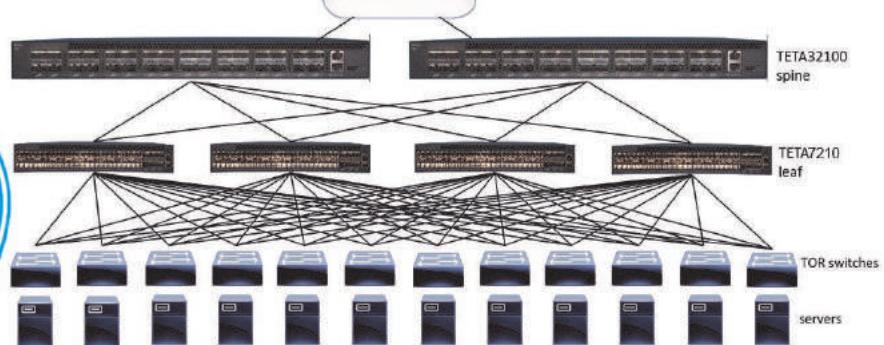
Next-Generation SDN



نمونه‌ای از جایگشت فیزیکی در شبکه‌ی اپراتورها
با استفاده از معماری سلسله مراتبی



نمونه‌ای از
جایگشت فیزیکی
در مرکز داده با همپندی
CLOS



معماری