



iTN8800-E

iTN8800-E is a chassis-based IP/MPLS service access and aggregation device. The device provides FE/GE, 10G, 25G and 100G interfaces in a 3U-high chassis with 10 slots for various types of service interface cards. It supports full redundancy for power supply and control unit. Together with Raisecom intelligent CPE, the whole access/aggregation solution is able to deliver and aggregate CE2.0 compliant services and MPLS VPN services on Raisecom unified service provisioning, monitoring and management platform. The solution is perfect for government/enterprise leased-line service delivery, 4G/5G mobile backhauling, Internet and Cloud connection, and campus networking. The support of high-speed interfaces and the support of IPv4/v6 dual-stack ensure the solution to be a future-proof investment of customers.



iTN8800-E-DC



iTN8800-E-NXU



iTN8800-A-RC1



iTN8800-A-RK4



iTN8800-A-RX4



iTN8800-A-RG8

Highlights >>

Power Reliability	Dual hot-swappable power supply with voltage/temperature monitoring
Flexible Service Delivery	Standard CE2.0 service (E-Line, E-LAN, E-Tree, E-Access) delivery VPWS, VPLS, H-VPLS, L3VPN, services over MPLS EVPNv4/v6 over MPLS/SR* Flexible traffic classification guarantees customer-defined service SLA
Committed Network Resiliency	Protection mechanism including switchport backup, IEEE802.1ax Link Aggregation, MC-LAG, ITU-T G.8032 ERPS, Static/dynamic IP FRR, TE/LDP/VPN/EVPN* FRR, VRRP, MPLS PW redundancy, MPLS TE hot-standby guarantee network resiliency in chain, star, mesh, dual-homing and ring topologies
OAM & Hardware-based SLA	Hardware-based IEEE802.1ag/ITU-T Y.1731 end-to-end CFM (CCM interval 3.3ms), hardware-based ITU-T Y.1731 end-to-end SLA performance monitoring (1us measurement resolution) speed up service provisioning and trouble-shooting BFD helps customer achieve fast fault detection for dynamic IP services and MPLS services Standard RFC2544, Y.1564 SAT tests for various types of services
IPv4/v6 Dual-Stack	IPv6 for management/services, 6PE/6VPE support help customers plan their future network evolution
Synchronization	SyncE and IEEE1588v2 ready for mobile backhaul

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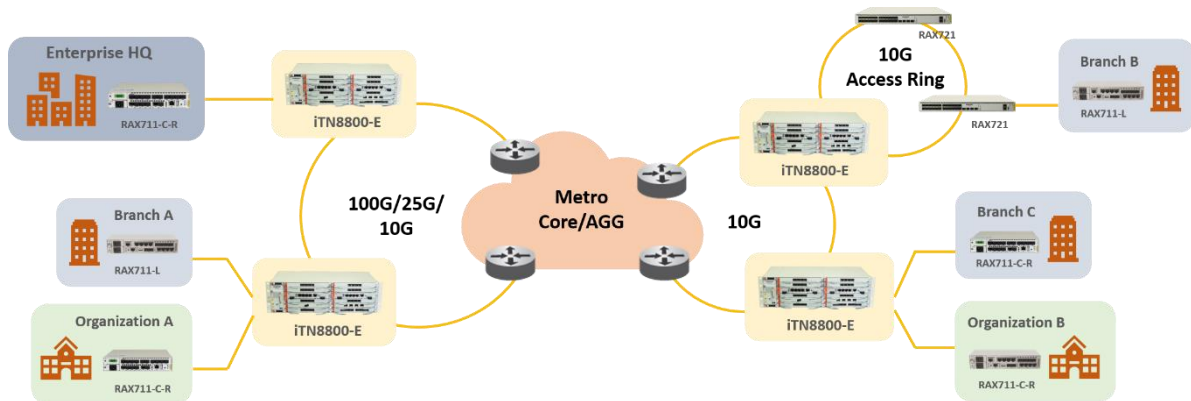
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Application >>

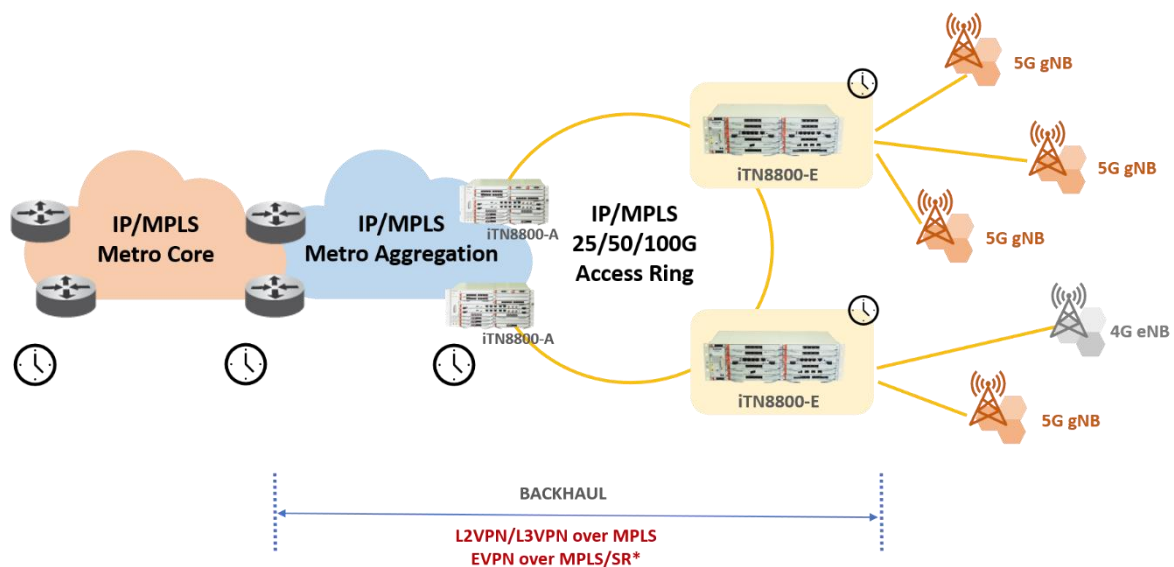
Business Leased-Line Service Delivery

iTN8800-E working with Raisecom intelligent CPE RAX700 series can deliver 1G/10G standard CE2.0 E-Line, E-LAN, E-Tree and E-access services. It is also capable of delivering L2VPN and L3VPN services over MPLS core, EVPN over MPLS core and EVPN over SR as a PE device. The service delivery can be very flexible. ZTP and hardware-based CFM and SLA ensure service providers an easier way to deploy and manage the services. Various fault detection and protection mechanisms guarantee high availability and stability of services.



New Generation Mobile Backhaul

MPLS L2VPN + L3VPN and MPLS E2E L3VPN are the common ways to carry mobile backhaul traffic as the mobile network is evolving to 4G and 5G. New technologies like EVPN and SR are also introduced to simplify the network, and optimize network agility and scalability in the 5G era. iTN8800-E supports these services with full flexibility, guaranteed SLA and high reliability, and its support of SyncE and IEEE1588 V2 guarantees accurate synchronization along the service delivery.



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Key Features >>

Ethernet Service

- MAC address table: 32K
- Jumbo frame up to 10K Bytes
- 4,094 VLANs, IEEE802.1Q VLAN, IEEE802.1ad QinQ
- Layer 2 control protocol (L2CP) handling
- Super VLAN
- Private VLAN (PVLAN) with primary, community and isolated type

IP Service

- IPv4/v6 static routing
- RIPv1/v2/ng, OSPFv2/v3, ISISv4/v6 and BGP4/4+
- PMTU IPv4/v6
- VRF Lite IPv4/v6
- DHCPv4/v6 server, client, relay, snooping
- 6PE/6VPE

MPLS Service

- MPLS L2VPN: VPWS, VPLS, H-VPLS, MS-PW
- MPLS L3VPN
- MPLS EVPN*
- Static CR-LSP, LDP, CSPF, RSVP-TE, tunnel policy
- Inter-AS MPLS L2VPN Option A, B, C
- Inter-AS MPLS L3VPN Option A, B, C

Multicast

- IGMP v1, v2, v3
- IGMP Snooping, MVR, VLAN copy, Proxy
- MLD v1, v2
- MLD Snooping
- PIM-SM and PIM-SSM IPv4/v6

QoS

- Flexible traffic classification based on MAC, IP, port, VLAN, CoS, DSCP, etc.
- Traffic policing with color-aware and color-blind mode, two-rate three-color marker
- Hierarchical CAR
- 8 local priority, 8 queues per port
- WRED
- Traffic shaping per queue/port
- SP/WRR/SP+WRR queue scheduling

Reliability

- IEEE802.1ax Link aggregation group, manual, LACP
- MC-LAG
- Switchport backup
- STP, RSTP, MSTP, MRSTP
- ITU-T G.8032 ERPS based on port or CFM, switchover time less than 50ms
- Port/VLAN-based Ethernet loop detection

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- Ethernet fault propagation, MPLS PW fault propagation
- ULDP
- IPv4/v6 ECMP
- Static/dynamic IPv4/v6 FRR, TE/LDP/VPN FRR
- VRRP
- MPLS PW redundancy, MPLS TE redundancy, MPLS TE hot-standby

OAM

- IEEE 802.3ah EFM-OAM
- IEEE 802.1ag/ITU-T Y.1731 CFM
- ITU-T Y.1731 performance monitoring (LM, DM) for Ethernet and MPLS L2VPN
- RFC2544 for Ethernet and MPLS L2VPN, Y.1564 for Ethernet, IP, MPLS L2VPN, MPLS L3VPN
- 10G throughput test
- TWAMP-Lite for Ethernet, IP, MPLS L3VPN
- Layer 2 loopback with MAC swap
- MPLS ping and traceroute
- BFD for interface, static routing, RIP, OSPF, ISIS, BGP, LDP, LSP, CR-LSP, PW, MS-PW, VRRP, FRR, PIM
- L2/L3 Dying Gasp in case of power failure

Security

- CPU CAR
- CPU anti-attack for Land, Ping of death, ICMP unreachable/redirecting/forward, Tear drop, Smurf, Fraggle, WinNuke, TCP malformed
- DHCPv4/v6 Snooping
- ARP filter
- IPv4/v6 IPSG
- ACL based on VLAN, CoS, MAC, Ethernet Type, IP or user-define
- RADIUS, TACACS+
- Storm control (broadcast, multicast, DLF)
- Port-security MAC

Maintenance and Management

- Zero-touch provisioning based on standard DHCP
- SNMP v1/v2/v3 based GUI management
- CLI management by local CONSOLE, Telnet and SSHv2
- KeepAlive, RMON, LLDP, Syslog
- SFP digital diagnostic management (DDM)
- CPU, memory monitoring
- Voltage and temperature monitoring

Synchronization

- NTP, SNTP
- SyncE
- IEEE1588 v2 TC, BC/OC*

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Specifications >>

Performance	Switching capacity: 300Gbps
Physical Interface	iTN8800-E-NXU 1 x CONSOLE (USB); 1 x NEG management port (RJ-45) 1 x EXT management cascade port (RJ-45) 2 x 1PPS+TOD I/O ports (RJ-45) 1 x 2Mbps/2MHz clock I/O port (RJ-45) Service Interface Cards: Up to 2 x 100G or 8 x 25G Up to 32 x 10G Up to 48 x 1G
Power Supply	Dual, hot-swappable DC DC: -48V, -40~-57V Power Consumption: ≤ 390 (full load)
Environmental	Operating: Temperature: -5~45°C Humidity: 10~90% non-condensing Storage and Transportation: Temperature: -25~60°C
Dimensions	444(W)mm x 220(D)mm x 133.5(H)mm
Weight	21.3Kg (fully equipped)

Compliances >>

Standards & protocols	CE, UL, FCC compliance EMC Class A RoHS compliance IEEE802.3, 802.3u, 802.3z, 802.3-2008 IEEE802.1D, 802.1Q, 802.1p, 802.1ad IEEE802.1ax, ITU-T G.8031, G.8032 IEEE802.3ah, 802.1ag, ITU-T Y.1731 RFC5357 IEEE802.1AB MEF6, 9, 10, 11, 13, 14, 16, 17, 20, 31, 36 MEF CE2.0 Compliance RFC826, 768, 793 RFC792, 4443 RFC2131, 2132, 3046, 3315, 4649 RFC2328, 3630, 5187, 3101, 3137, 3623 RFC1195,2966, 3567, 3277, 2763 RFC1771, 1772, 1997, 2439, 3065, 4271, 4273, 4760, 4893, 5575 RFC3031, 3032, 3034, 3035, 3036, 3037, 4182, 5036, 5462 RFC3209, 3473, 6511 RFC4447, 4448, 4761, 4762, 5659 RFC4090, 5286, 5883, 7130 RFC4377, 4378, 4379 RFC1112, 2236, 3376, 4605, 3618, 2362, 2710, 4541 IEEE1588v2 ITU-T G.8261, G.8262, G.8264
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Ordering Information >>

Part No.	Description
iTN8800-E-DC	Standard 19", 3U-high chassis with 2 redundant hot-swappable power supply modules, 1 intelligent hot-swappable fan module, 2 slots for main control cards, and 10 slots for service interface cards
iTN8800-E-NXU	Main control cards for iTN8800-E-DC, providing 1 x CONSOLE interface (USB), 1 x management interface (RJ-45), 2 x 1PPS+TOD I/O interfaces and 1 x 2Mbps/2MHz clock I/O interface
iTN8800-A-RC1	100G service interface card, providing 1 x 100G interface (QSFP28)
iTN8800-A-RK4	25G service interface card, providing 4 x 25G interfaces (SFP28)
iTN8800-A-RX4	10G service interface card, providing 4 x 10G interfaces (SFP+)
iTN8800-A-RG8	1G service interface card, providing 8 x 1G interfaces (SFP)

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