CiTRANS 690 Large Capacity Converged Packet Transport Platform

CiTRANS 690 Large Capacity Converged Packet Transport Platform (hereinafter referred to as "CiTRANS 690") is a large capacity intelligent packet transport device based on unified switching system launched by FiberHome Telecommunication Technologies Co., Ltd. (hereinafter referred to as "FiberHome Telecommunication"). This chapter introduces the product positioning, external view and functional characteristics of CiTRANS 690.

1.1   Product Positioning

CiTRANS 690 series products are metro transport device for packet transport introduced by FiberHome Telecommunication, which are mainly used in metro aggregation layer to realize multi-service carrying by end-to-end networking with PTN of metro core layer and metro access layer, and can also be applied to metro core layer to realize flat networking according to service and networking requirements.

Product Profile

With the large-scale deployment of LTE network and the promotion of full-service development strategy, various emerging IP-based service applications have increasingly higher requirements for the bandwidth, scheduling flexibility and service quality of the carrying network.

CiTRANS 690 series products adopt unified cell switching, which is flexible in scheduling, and can realize unified transport of packet,

TDM and other services. The products include CiTRANS690U10, CiTRANS 690U20, CiTRANS 690

U30, providing solutions from low-end to high-end devices, and the product external view is shown in Figure 1-1, Figure 1-2 and Figure 1-3 respectively.

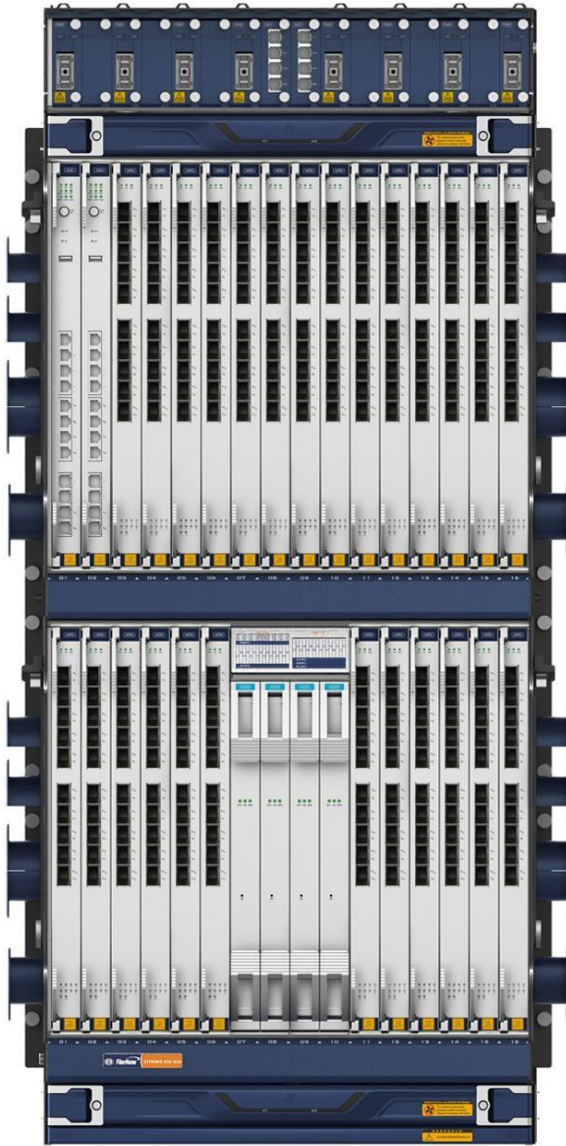Figure 1-1 External view of CiTRANS 690 U10
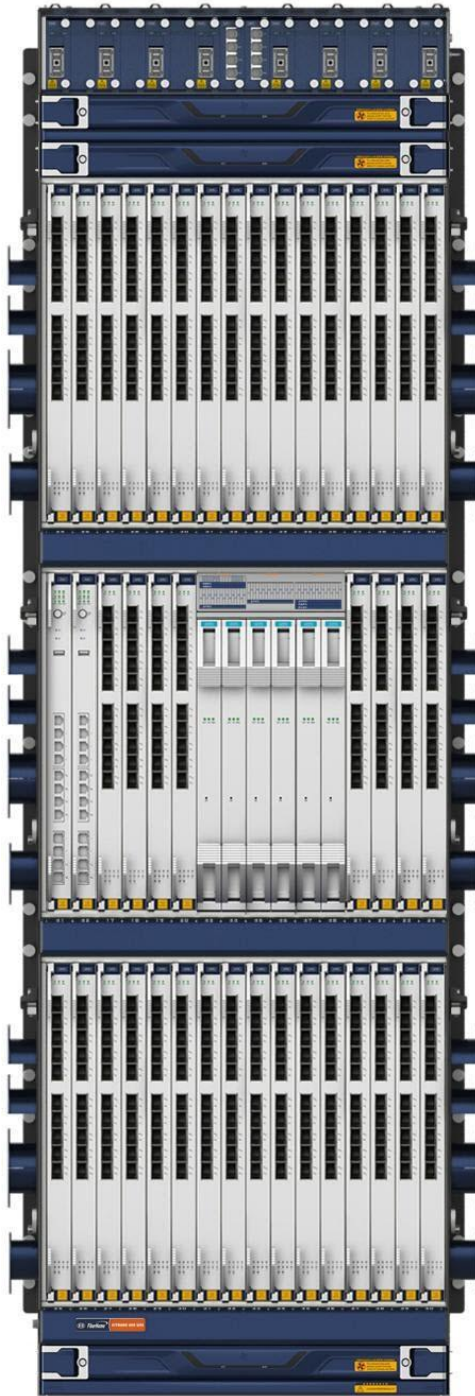
Figure 1-2 External View of CiTRANS 690U20

Figure 1-3 External View of CiTRANS 690U30

Network Application

CiTRANS 690 series products are mainly used in the aggregation layer and core layer of metro transport network, responsible for transport of packet service in the network, and aggregate the service to IP/MPLS backbone network.

The application of CiTRANS 690 series products in network is as shown in Figure 1-4.
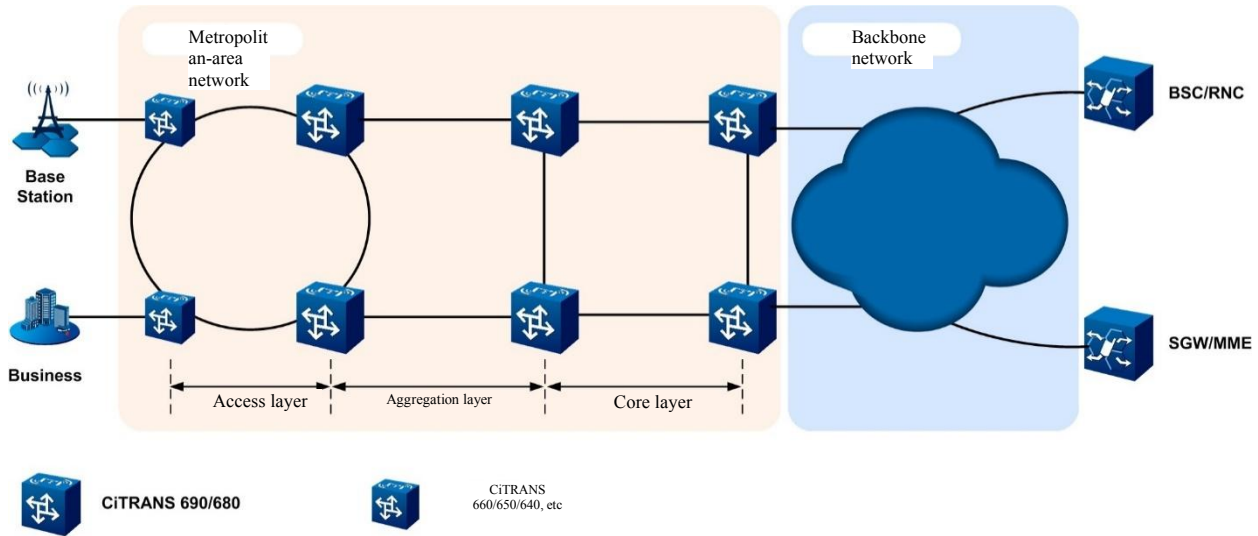

Figure 1-4 Application of CiTRANS 690 in network

1.2 Product Highlights

The CiTRANS 690 features powerful processing capability and rich functions.

Large capacity, full scenario coverage

◆ The single subframe has a maximum switching capacity of 12.8 Tbit/s and a maximum access capacity of 4Tbit/s (CiTRANS 690 U30), which is suitable for metro aggregation, metro core and provincial trunk PTN.
◆ It supports any combination of service carrying schemes, including L2VPN, L3VPN and L2VPN/L3VPN bridging services, to realize full-service scenario coverage of 2G/3G/LTE/major customer dedicated line.
◆ Support full MPLS features, including MS PW, MPLS-TP, etc.
◆ Support IPv4/IPv6 dual stack, MPLS 6VPE, BFD for IPv6, IPv6 L2/L3 service scenario, IPv6 service protection function, etc.

Rich business interfaces

◆ Support FE/GE/10GE/40GE/100GE, E1, STM-1 and other multi-type business interfaces to meet the needs of multi-domain service applications.
◆ Support CES mode of E1 and STM-1, and support all CES services.
◆ 100GE interface supports 10KM, 40KM and 80KM transmission.

Perfect protection

◆ Provide perfect network-level protection, support LSP APS, PW APS, Bypass dual homing, IP FRR, VPN FRR and other protection, support superposition with the ring network, and fully guarantee the availability of the network.

◆ Provide abundant device-level protection, support main control unit protection, cross control unit protection and power unit protection.

◆ Support OLP optical line protection and protection superposition.

◆ Support L3 networking and adopt LAG mechanism.

Rich operation and maintenance functions

◆ Support rich OAM functions to improve network operation and maintenance capabilities, quickly locate faults, and reduce operation and maintenance costs.

◆ Support SQM-related service measurement functions, monitor the connectivity, delay, jitter, packet loss rate and other service quality of end-to-end L2+L3 services, and provide data support for failure maintenance and quality evaluation of various services and network devices.

Green energy-saving design

◆ Effectively control the overall power consumption by adopting industry-leading high-end IC technology, mature thermal design technology and continuously optimized management software, to significantly reduce the operating cost.

◆ With excellent hardware and structural design, it can effectively reduce power consumption, and the energy efficiency ratio is as low as 2W/Gbps.

◆ Support "sectional power supply" and "power supply on demand", and support the flexible introduction of 2, 4 and 8-circuit power supplies.