



Huawei IP PBX eSpace U2990

Overview

Functioning as a unified gateway, the eSpace U2990 is the core device of the UC solution. With a professional hardware and software structure, the eSpace U2990 provides services with high performance and reliability for enterprises. The eSpace U2990 has the following functions:

- Enables IPT subscribers to manage subscriber registration and triggering services.
- Provides IPT subscribers with voice conference resources.
- Offers gateways to connect IPT subscriber calls to the current voice system.

The eSpace U2990 is a flagship platform in Huawei voice communication domain. This platform enables broadband and narrowband integration access and provides powerful and flexible networking capabilities. The eSpace U2990 is designed based on the mTCA architecture. Compared with universal servers, the eSpace U2990 provides a larger capacity and higher security and reliability. A fully configured system (seven frames cascading) supports a maximum of 300,000 subscribers.



Front view of frame



Rear view of frame

Features

Service Access and Media Resource Capability

- Functioning as a unified service access platform, the eSpace U2990 improves solution integration, facilitates service management, and reduces costs for enterprises.
- Provide voice playing, digit collection, voice recording, fax, conference functions and so on, and 28 slots, which can be configured flexibly according to the service requirement.
- Unified message features, including fax and voice message leaving, receiving and sending, and enabling users to avoid missing important calls and guarantee the call reach ability.

Powerful and Flexible Networking Capabilities

- Support E1/T1 (ITU-T standard) trunk, include ISUP/TUP/PRI etc., which can connect to the traditional PBX and PSTN network.
- Support SIP trunk and VoIP functions.
- Support centralized and distributed networking to improve resource distribution flexibility.

High Reliability

- Hardware reliability: To ensure the reliability of the hardware system, the eSpace U2990 adopts the reliability design measures such as adopting a distributed hardware structure, active and standby boards, and load sharing, and adopts strictly-selected components that have passed burn-in tests.
- Software reliability: By adopting a hierarchical and modularized structure, the eSpace U2990 provides the functions such as protection performance, error tolerance, and fault detection and handling in software design.
- System overload control: The eSpace U2990 provides the overload control mechanisms such as 4-level overload restriction, and CPU flow control to ensure system reliability.

High Security

- With an excellent security design, the eSpace U2990 can protect the network and all the valid subscribers from the illegal operations such as malicious network attacks, illegal registration, anonymous calls, and wiretap.
- Support TLS for signaling encryption and SRTP for media encryption.
- The eSpace U2990 provides strict data protection mechanisms and hierarchical user authority management.

Smooth Expansion

- The requirement for capacity expansion has been taken into account in designing the hardware and system processing capability of the eSpace U2990. In this way, the eSpace U2990 features a capability of smooth capacity expansion. A single frame can support 30,000 subscribers, and the whole system (7 frames cascading) can support 300,000 subscribers.



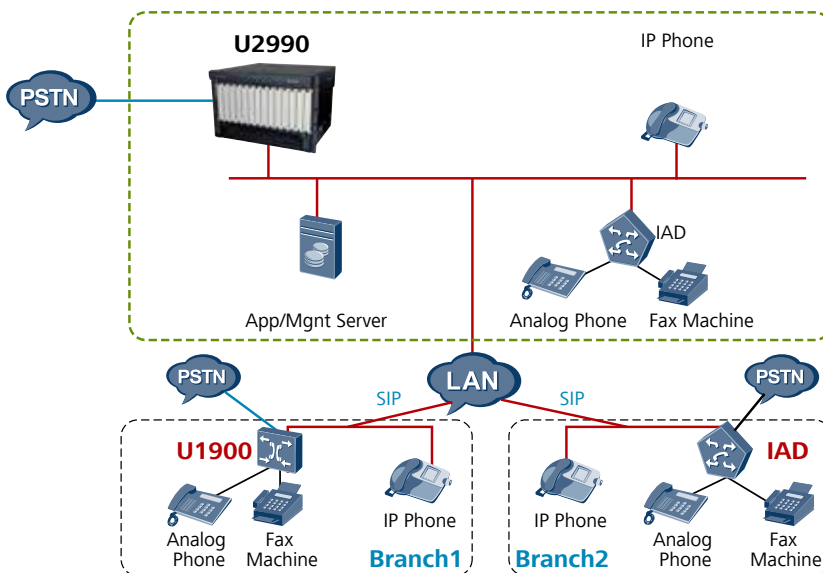
Application Scenarios

U2990 Single-Site Networking

eSpace U2990 supports Single-Site centralized networking, which is applicable to large and medium sized enterprises with several branches. U2990 can be deployed at the headquarter, and connects to the carrier's networks like PSTN through E1 or T1 interfaces. The application and management servers can also be deployed if necessary. Users can adopt various types of terminals like analog phones and IP phones to enjoy the communication services.

For large and medium sized branch, the eSpace U1900 series gateway can be deployed to implement incoming and outgoing call with PSTN locally, and also can the U1900 series gateway can work as local generation gateway while the U2990 in headquarter is down.

For the small sized branch, the IAD and EGW are suggested to be deployed. IAD supports local switch of analog phones and EGW supports local generation for the branch phones.

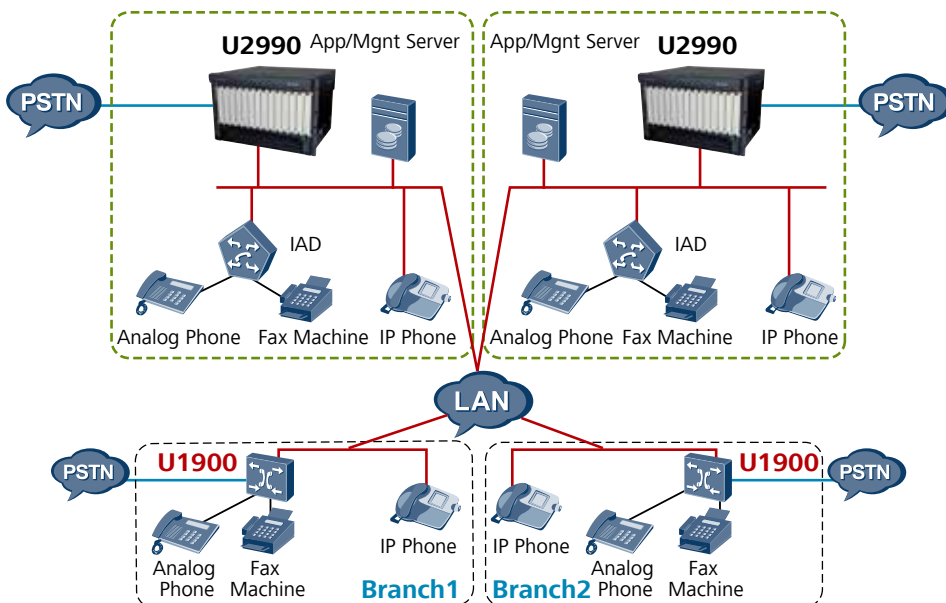


U2990 Dual-Sites Networking


eSpace U2990 also supports Dual-Sites centralized networking for higher reliability. The two sites work in Active-Active mode to implement the geographical redundancy. The terminals register to one site in normal situation, while one of the sites is down, the other site will take over all the users, and provides services to the users.

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Technical Specifications

Parameter		Functionalities and Specifications
Appearance		
Maximum Number of Users		30,000 subscribers for single frame, and maximum of 300,000 subscribers by 7 frames cascading
Trunk interfaces		128E1/T1 for single frame
Signaling Protocol		E1/ISUP, E1/TUP, E1/PRI, T1/PRI(ITU-T standard), SIP
Codec		G.711, G.729, G.722, G.722.1, G.722.2, G.723, iLBC, AMR/EVRC
Number of Meeting Channels		480 participants for each meeting hall
BHCC		180K (single frame)/1800K(7 frames cascading)
Power Supply		DC: -57V~-40V, Standard: -48V Power supply redundancy(totally 2 pairs of power modules, and each pair supply power for half of the frame)
Maximum Power Consumption		1250W(fully configured)
Dimensions		7U frame Height:312mm, Width:442mm, Depth:409mm
Weight		35KG(fully configured)
Environment	Temperature	5°C ~ 45°C
	Humidity	5% ~ 85% RH, no condensing
	Air Pressure	70 ~ 106KPa
	Seismic Performance	Resist 7 ~ 9 level on the Richter earthquake
System Reliability		99.999%
Maintainability		Remote maintenance, log collection,and hot patch
Manageability		Centralized/Remote equipment management, signaling tracing, resource tracing, and alarm management

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