
Alcatel 7310

Loop Voice Gateway

New opportunities with voice over digital subscriber line (VoDSL) technology. Simply providing network connections is no longer enough. Service providers must also deliver those value-added services that will lead to fast revenue generation. Digital subscriber line (DSL) is the most cost-effective solution for delivering value-added applications over the last mile to end customers.

VoDSL technology offers service providers new revenue opportunities they can easily and cost-effectively deploy using their existing DSL infrastructure. With VoDSL, providers can take advantage of new opportunities while maintaining the same high service quality and reliability their customers have come to expect.

VoDSL solutions prioritize, multiplex, and transport multiple voice and data channels over a DSL connection to a gateway interface that provides connectivity between a data network and the public switched telephone network (PSTN).

Alcatel offers a cost-effective, flexible architecture that easily scales to meet the demands of a mass market DSL services rollout. Alcatel takes an end-to-end systems approach to DSL with proven solutions. Alcatel's DSL solutions allow for the introduction of new network services with a competitive edge.

The Alcatel 7310 Loop Voice Gateway

With a platform based on the award-winning Alcatel 7300 ASAM DSL Subscriber Access Platform (ASAM), the Alcatel 7310 Loop Voice Gateway (LVG) is a key network element in realizing the best VoDSL solution in the DSL market. With its carrier grade reliability and high scalability, the 7310 LVG is an ideal solution for bundled voice and high speed data services.

Converging voice and data

The 7310 LVG is at the heart of a converged voice and data world. Together with an integrated access for data and voice (IAD) - such as the Alcatel Speed Touch Integrated Access for Data and Voice (IAD) - the 7310 LVG merges a quality of service (QoS)-based broadband data access network with voice networking.

QoS for VoDSL

The 7310 LVG allows providers to implement extensive QoS for VoDSL telephone services. The 7310 LVG supports QoS for multiple virtual circuits (VCs) and classes of service over a DSL local loop, making it possible to provision voice alongside data traffic. QoS capabilities inherent in the 7310 LVG allow providers to manage circuit characteristics that impact voice quality, such as delay, jitter, and cell throughput.

Supporting multiple ATM classes of service, including constant bit rate (CBR) and variable bit rate real time (VBR-rt),

with full QoS for each class, the 7310 LVG uses CBR or VBR service to guarantee bandwidth for delay-sensitive voice solutions. Since the VCs are CBR and VBR-rt connections, the 7310 LVG guarantees bandwidth for each voice call to ensure full QoS.

Bundled, cost-effective service offerings

The 7310 LVG allows providers to deliver bundled local, long distance, or multi-line telephone services with Internet access to a variety of customers from small- and medium-sized businesses to residential users over a single copper pair. The 7310 LVG leverages the investments already made in local exchanges, ATM switches and DSLAMs - without the need to change the end user equipment already in place. With Alcatel's VoDSL solution, a carrier can provide a business with ten toll quality telephone lines, and high speed Internet access, over one DSL line. An added benefit is that dynamic bandwidth allocation automatically increases the amount of bandwidth available for data applications when end users are not using bandwidth for voice calls.

Scalability

Alcatel's VoDSL technology offers providers scalability while minimizing their incremental investment. The scalable hardware architecture of the 7310 LVG allows providers to envisage a "pay as you grow" strategy. A single gateway card handles eight E1 interfaces or 240 simultaneous calls toward a local exchange. Providers can extend the system to eight cards or 64 E1/1,920 active calls allowing them to connect up to 8,000 business phones (1 to 4) or 20,000 residential phones (1 to 10). Embedded digital signaling processors (DSPs) implement voice compression for optimal bandwidth usage, allowing providers to grow their network seamlessly and cost-effectively.

True circuit-switched voice quality

Calls made using VoDSL technology are indistinguishable from traditional circuit-switched telephone calls in terms of voice quality. From a user perspective, there is no difference between a voice call over the traditional PSTN and a voice call over a DSL access network compliant with ATM forum loop emulation service (LES) using ATM Adaptation Layer 2 (AAL2).

Designed to ITU-T (Telecommunication Standardization Sector, International Telecommunication Union) and ATM Forum AAL2 standards, the 7310 LVG guarantees true transparent PSTN (analog voice, digital voice, fax, and modem) and ISDN services for the end user while offering high quality voice services and value-added local exchange features. Users can experience true circuit switched voice quality and continue to receive the reliability they have come to expect.

Alcatel, your partner for VoDSL solutions

Alcatel is the right partner in the design and implementation of a VoDSL network. Alcatel is the only company in the industry with extensive experience in the deployment of both voice and DSL access networks. Designed to meet the reliability, availability, and scalability of carrier class telephone equipment, Alcatel's VoDSL solutions allow for the introduction of new network services with a competitive edge - exactly what service providers are looking to offer.

