

1460 - Carrier Grade

Introduction

The VoIP/MoIP market has matured in terms of user demand and service provider needs. True carrier-grade session control is now both essential and a top priority. Service providers' standards for session control now map more stringently to PSTN-calibre requirements for:

- ♦ Reliability: Device, switching fabric, power source redundancy; geographic service resilience.
- ♦ Scalability: Call capacity, system and device upgradeability, addition of new functions, features, link aggregation.
- ♦ Predictable quality: SLA compliance, bandwidth policing, session control.
- ♦ Lifecycle costs: Lifespan, maintenance requirements, upgradeability, need for supplemental offerings.

The Newport 1460 has the capacity and performance to meet the most aggressive growth expectations of the service provider market (up to 1,000,000 end-users per 1460) making it the industry's only future proof product on the market today.

Reliability: Resilience and Redundancy

In order to meet the carrier class criteria of 99.999% availability, the 1460 has been designed with redundancy across all primary systems. The 1460 can protect all processor intensive functions by distributing them in active/standby pairs.

The 1460 chassis is supplied from two independent Power Distribution Units.

All traffic flowing into and out of the 1460 is protect through the use of 802.3-2002 Link Aggregation allowing up to 8 physical ports to be combined into one logical entity.

The 1460 also features dual switching fabrics, dual disk sub-systems, redundant management connections and redundant fan systems.

Scalability: Architecting for Growth and Performance

Newport Networks 1460 scales from of 5,000 to 100,000+ simultaneous calls per chassis with call setup rate of up to 750 calls per second.

The 1460 helps VoIP service providers to meet the increasingly stringent regulatory requirements placed on them such as CALEA and E911.

Flexible design allows the 1460 to grow to meet evolving service demands. With the ability to add processing cards and line interface cards independently, the 1460 can expand to accommodate processor intensive applications, bandwidth intensive application or both.

Predictable Performance and Quality

As IP services gain momentum and subscriber uptake occurs rapidly, service quality can degrade as a direct result of success, simply because the users consume all the available bandwidth in the access network.

The 1460 addresses these issues through admission control, and policing to overcome the 'best effort' nature of IP networking.

Session Admission Control allows very granular control of customers' quality of service. It allows bandwidth and session type limits to be set for groups and individual users. It performs call-by-call policing of service levels and port-based admission control to minimize the impact of over-subscription.

Media policing ensures that sessions in progress do not exceed negotiated bandwidth levels, so that individual users cannot prevent others getting the performance they have paid for. Signalling policing provides protection from Denial of Service attacks on the signalling path.

Total Cost of Ownership

Total Cost of Ownership takes into account a product's entire lifecycle - initial purchase price, upgrades, maintenance, sparring, product life and environmental requirements like power and real estate.

The Newport Networks 1460 is designed with a ten year plus life cycle in mind, thus reducing the long term cost of frequent upgrades and replacements. The flexible approach to adding processing power means that additional requirements such as CALEA or E911 compliance, call control, etc. can be performed directly on the box. Along with keeping capital investment low, the 1460 single-box solution eliminates numerous points of failure and the number of devices per location requiring ongoing maintenance, power, real estate, service contracts, etc.

The 1460's slot based architecture allows any interface or processing card to be deployed in any slot for the greatest flexibility. As new or additional cards are required they can be added to the existing chassis without fork-lift upgrades. This approach avoids potential ROI compromises that occur when devices must be fork-lifted, or even temporarily brought down, to effect upgrades.