

BigBand vIP PASS™ Video IP Delivery

A BigBand innovation that provides an elegant migration solution to deliver quality video to “three screens” at significantly less than a CMTS-based strategy.

As subscriber viewing habits evolve and demand for HD explodes, cable operators have an opportunity to provide competitive differentiation against a new generation of service providers, protect customer retention, and generate new revenue streams by delivering video to PCs, mobile devices, IP-enabled TVs, and other devices besides set-top boxes. Recent spikes in both online and mobile video consumption – driven primarily by hardware and software innovations which make “anywhere, anytime” video viewing possible and practical – have created an opportunity for service providers to offer an integrated three-screen video service.

Extending its track record of innovation in digital video networking, BigBand has designed vIP PASS™ to enable cable operators to offer a rich array of linear and on-demand video IP services at a fraction of the cost of CMTS-based delivery without compromising the customer viewing experience. The BigBand vIP PASS solution enables cable operators to compete and monetize game changing video IP delivery.

Furthermore, vIP PASS provides cable operators with new revenue opportunities by making it possible to economically deliver video over IP to universities, hospitals and enterprises. Many of these potential customers have facilities equipped with IP networks – but not coaxial cable – and therefore an IPTV initiative has the added benefit of opening up new business segments.

A DOCSIS® CMTS (Cable Modem Termination System) is often assumed to be the choice for video IP delivery. Optimized for data and digital voice services, a CMTS has many drawbacks for video including port cost, video capabilities, and lack of operational support. CMTS offerings were primarily designed for data and adapted for voice, and are neither economically nor technically optimized for IP video delivery. BigBand vIP PASS is designed to deliver quality video streams to subscriber cable modems without transiting a CMTS, thereby avoiding expenses associated with growing CMTS port capacity.

With BigBand vIP PASS, the cable modem delivers all of the existing CMTS services - high speed data (including DOCSIS 3.0 tiers), digital voice, and business services while simultaneously delivering cost-effective video IP services. This innovative solution leverages our proven digital video networking platforms and leverages existing network infrastructures. BigBand vIP Pass allows cable operators to offer personalized, high-margin quality SD and HD IPTV to a wide array of consumer IP devices.

vIP PASS is compatible with DOCSIS 1.1, 2.0 and 3.0 CMTS platforms and can be deployed now. Getting to market quickly with both an economical and technically proven video IP solution will allow cable services to stem competitive pressures and reach new types of customer devices, including PCs and other consumer electronics IP devices.

BigBand vIP PASS helps cable operators succeed in the ultimate IPTV end game - efficient management

Summary

- “Least cost” video IP routing solution.
- Video IP delivery solution that scales for huge market demand for video, increases competitiveness, and boosts customer satisfaction and retention.
- Purpose built video delivery: IPTV is inherently video, not data. vIP PASS is designed with video networking in mind.
- vIP PASS bypasses the CMTS for video delivery and thereby saves the industry up to \$2.5 billion in capital expenditures.
- vIP PASS has no impact to existing CMTS-based services. In fact, vIP Pass facilitates DOCSIS 3.0 deployments focused on high speed data services.
- M-CMTS (Modular-CMTS) does not specifically address IPTV; M-CMTS was designed for high bandwidth data services, not IPTV.
- Leverages existing video networking solutions where both operational and diagnostic tools are readily available.
- Protects current revenue and capital investment.
- More scalable solution at a lower cost and provides a better experience to customers.

Matching Programming to Subscribers' Choices



BigBand vIP PASS™ Video IP Delivery

of bandwidth, increased competitiveness, boosting revenue by providing an enhanced subscriber experience, more content, programming choices and interactivity and improved customer retention.

Since BigBand vIP PASS is based on our proven digital video networking platform, it is fully operationalized which will simplify deployment providing faster service turn up and lower operational costs with integrated management of video processing, bulk provisioning functions and quick troubleshooting and maintenance for an IPTV service. Operations support for CMTS-based IPTV solutions are very immature at best, so cable operators must look to solutions where video tools and diagnostics already exist.

Attempting video IP delivery using a CMTS platform has other risks. Data engineers have critical broadband delivery priorities and can ill-afford implementations that impact existing CMTS-based services such as digital voice and business services and their associated revenues.

BigBand vIP PASS is differentiated from other non-CMTS IPTV offerings by its simplicity, robustness, scalability and vision toward developing a next-generation, video networking framework that delivers a lower total cost of ownership. Other ad hoc offerings for video IP delivery will ultimately result in higher CapEx and OpEx as compared to BigBand vIP PASS and could suffer from the same customer quality video experience and operational concerns as CMTS-based IPTV offerings.

Designed to provide massive scalability with the highest levels of reliability and the most open platform for third party interoperability, BigBand digital video networking solutions provide cable operators with

tools to increase competitive service differentiation, improve subscriber satisfaction and maximize profitability.

BigBand provides a comprehensive end-to-end advanced video IP delivery solution. Listed below are some of the components that comprise aspects of the BigBand vIP PASS ecosystem.

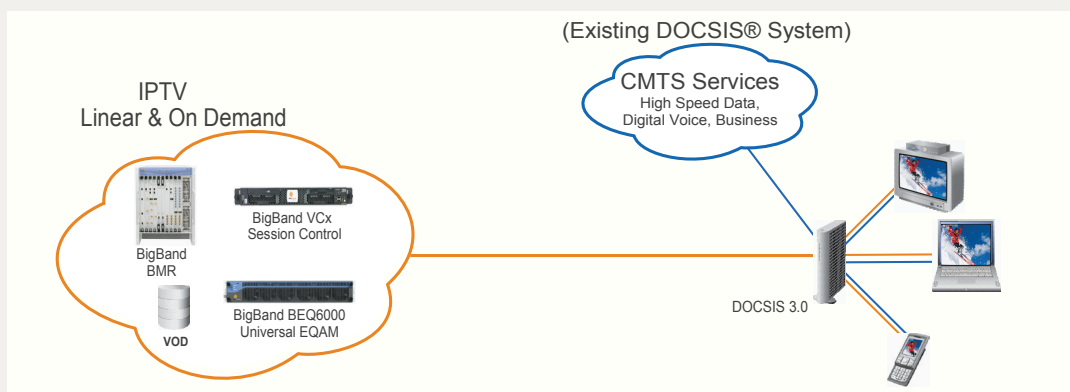
BEQ6000 Universal Modular Edge QAM – The BigBand Networks edge QAM has many unique advantages including the ability to deliver IPTV and industry-leading Modulation Error Ratio (MER).

BigBand BMR – The BigBand BMR® (Broadband Multimedia Service Router) is the recognized benchmark platform for the acquisition and delivery of video services. It is a versatile platform for a broad range of solutions, built on the most powerful media processing and routing engines available in the industry.

BigBand VCx Video Networking Control Plane – Provides the flexible and feature-rich control plane for the vIP PASS system and can deliver either managed services or Internet streams to subscribers based on the service requested with reliable quality of service.

The ability to deliver IPTV with a better subscriber Quality of Experience can not only help boost operators revenue streams, but can also transform TV distribution from a broadcast model towards a more competitive personalized delivery model while embracing a new CPE paradigm for subscribers.

vIP PASS™ Comprehensive End-to-End Solution for IPTV



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