



AVIAT NETWORKS

ECLIPSE PACKET NODE

ANSI



TRANSFORMING NETWORKS TO ALL-IP

4G WIRELESS BACKHAUL FOR 4G/LTE NETWORKS



4G/LTE READY WIRELESS BACKHAUL

ENABLING THE MOBILE BROADBAND FUTURE

The explosive demand for the next-generation mobile user experience is forcing operators to quickly implement data-intensive, packet-based services, which now threaten networks with a potential capacity crunch.

Mobile operators who are planning to roll out LTE or WiMAX-based 4G networks can avoid the backhaul bottleneck and meet growing demand by evolving their current backhaul networks to support high speed IP. However, they lack the ability to add more capacity to their network without the risk of disrupting existing services, while at the same time lowering their overall operational costs.

Aviat Networks is the wireless expert in Advanced IP Network Migration and a global leader in microwave transmission technology. Our Eclipse Packet Node platform is a transformational high-speed wireless transmission solution that provides the intelligence and efficiency to gradually migrate networks to 4G/LTE, while preserving investment in existing 2G/3G infrastructure to protect current revenue streams and paving the way to the future.

READY FOR THE NEXT GENERATION

Eclipse Packet Node uniquely combines high speed native IP transport with advanced convergence features, providing operators with an 'LTE-ready' solution that also supports a smooth transition from their existing network infrastructure.



CAPACITY

Scalable, Gigabit wireless IP transport with efficient use of valuable and scarce frequency spectrum.

- Adaptive Coding and Modulation boosts capacity for new IP data by up to 500 percent
- Co-channel operation with XPIC for double density links in a single frequency channel
- Aggregation of multiple radio paths into a single virtual Gigabit transmission pipe
- Advanced packet processing to increase Ethernet throughput by up to 50 percent
- End-to-end QoS, enhanced MEF Certified Carrier Ethernet features and OAM support

Significantly improve the dollar/Mbit/MHz backhaul equation.

CONVERGENCE

A smooth evolutionary path without forklift upgrades, lowers operational costs and reduces the risk of stranded investments.

- Hybrid native mixed-mode operation supports both new IP and existing TDM services
- Aviat's Super-PDH™ technology provides advanced support for legacy TDM traffic
- Adaptive Optimization™ enables bandwidth recovery and frees capacity for new packet data
- Integrated network synchronization, including IEEE 1588v2 and Synchronous Ethernet

Build upon existing investments for an evolved approach to deploying and migrating to all-IP.

MULTI-SERVICE HYBRID PLATFORM

Eclipse Packet Node provides high speed IP transport, multi-service convergence and aggregation for wireless backhaul networks.



4TH GENERATION MICROWAVE TRANSPORT

Eclipse Packet Node represents the very latest generation in microwave transport technology, deployment ready for North America operators to meet the needs of 4G/LTE mobile broadband networks.

ECLIPSE PACKET NODE TRANSPORT PLATFORM

- A single microwave platform for all wireless backhaul needs
- Deployment options in an ultra compact form
- Optimized for performance and maximum expansion flexibility
- Support for all-IP, all-TDM, or hybrid combination of both transport
- Highly scalable throughput with low latency
- Strong security features

SIMPLIFYING OPERATIONAL COMPLEXITIES

Built-in Layer 2 intelligence and MEF Certified Carrier Ethernet features.

- Advanced QoS features, including traffic differentiation and prioritization
- All-IP network synchronization with Synchronous Ethernet and IEEE 1588v2 support
- IEEE 802.3ag/ah enabled on board to provide end-to-end OAM
- RWPR™ (Resilient Wireless Packet Ring) supports Ethernet ring network protection
- Ethernet diagnostics, including RMON performance data, history and dashboards

MULTI-SERVICE ARCHITECTURE

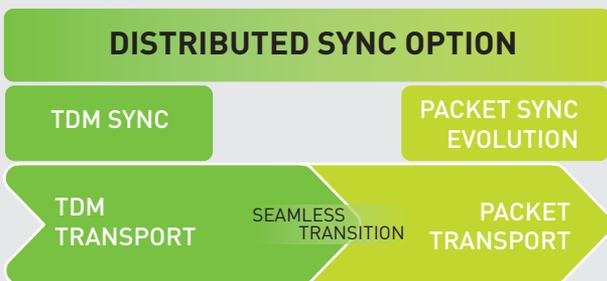
A modular design enables simple link and network expansion, with multi-service traffic interfaces.

- Hybrid support for both native TDM and IP over the same radio path
- Support for NxDS1, NxDS3 and NxOC-3 traffic, with or without IP
- Up to 300 Mbit/s of TDM traffic processed using an independent backplane
- All IP traffic routed through new high speed Packet Plane
- Comprehensive convergence platform with cell site gateway features

4TH GENERATION MICROWAVE PLATFORM FEATURES

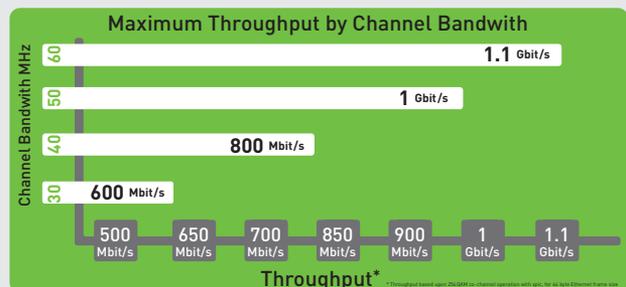
Eclipse Packet Node supports a number of compelling features that dramatically increase the efficiency and flexibility of backhaul networks, with integrated transport intelligence that enables maximum utilization of available resources.

NETWORK SYNCHRONIZATION



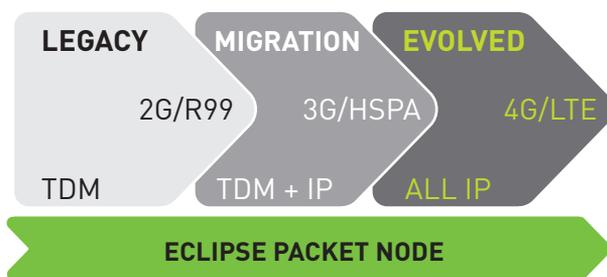
- Synchronization is a major challenge in migrating to all-IP networks
- Hybrid design supports trusted TDM sync, even in all-IP networks
- Distributed Sync™ minimizes network capacity burden
- IEEE 1588v2 and Synchronous Ethernet options

GIGABIT IP TRANSPORT SPEEDS



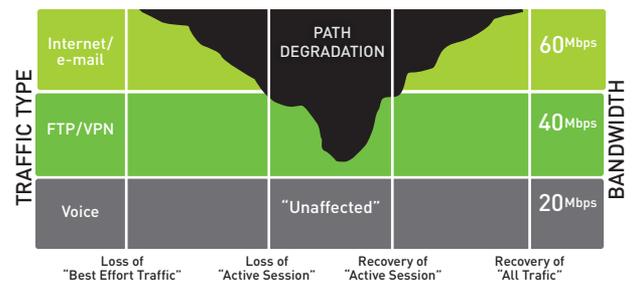
- Leap ahead to avoid the 4G backhaul capacity crunch
- Maximize bandwidth utilization with Adaptive Coding and Modulation (ACM)
- Double frequency efficiency using Co-channel operation with XPIC
- Enhance link throughput using advanced packet processing

HYBRID NETWORK MIGRATION

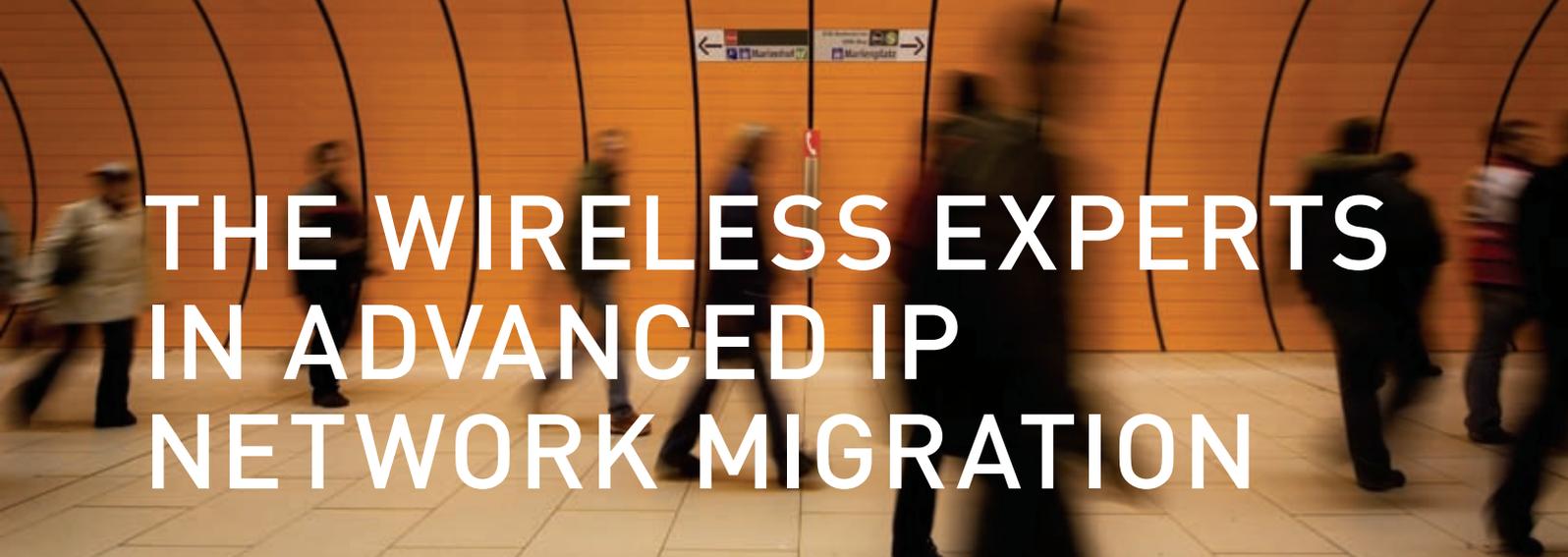


- Existing TDM traffic requirements will not go away any time soon
- Minimize migration cost and risk with hybrid IP+TDM transport
- Efficient multi-service traffic support without encapsulation or emulation

ADAPTIVE OPTIMIZATION™



- Novel combination of ACM and intelligent pseudowires
- Optimize existing TDM backhaul traffic to unlock underused bandwidth
- Optimize frequency resources and enable new packet-based services
- Create more high availability throughput for priority IP traffic



THE WIRELESS EXPERTS IN ADVANCED IP NETWORK MIGRATION

MEETING THE BACKHAUL CHALLENGE

Whether you call it the backhaul bottleneck, a capacity crunch or the mobile Internet tsunami, there are many ways of describing the same problem now being driven by the explosion in bandwidth demand as a result of the introduction of new smart devices and the evolution of networks to LTE.

This is now driving a new sense of urgency among operators to invest in their network to meet these challenges. At the same time they also need to address the so-called “Revenue Gap”—the widening divergence between increasing network operational costs and flat subscriber revenue.

With the most comprehensive IP transport features of any wireless backhaul solution in its class, Eclipse Packet Node gives operators the peace of mind that the solution that they deploy today will provide a smooth migration path to all-IP networks needed tomorrow, instead of having to make a risky early leap to all-IP.

And once the migration challenges are addressed operators can rely on Eclipse Packet Node to support all their backhaul needs all the way to LTE and beyond.

THE WIRELESS MIGRATION EXPERTS

We understand how mobile networks operate, having supplied turnkey wireless solutions for the past 50 years. Our products are deployed in mobile networks around the globe, and our qualified teams of local migration experts have a relentless focus on customer satisfaction to enable smooth IP transformation and high service assurance, all while protecting your existing investments and revenue streams.

Aviat is known for its highly personalized services, which net better results. This is based on our best-of-breed portfolio and our global reach with a strong local presence, which allow telecommunications operators to quickly and cost effectively seize new market and service opportunities, while managing the complex migration path.

In contrast, monolithic telecommunications vendors subscribe to a “one size fits all” approach to serving operators, both large and small, where they run the risk of being locked into compromised and proprietary solutions.

The migration path to next generation mobile broadband is not straightforward, and there are many paths for an operator to choose from. With Aviat Networks, operators can be sure that they have an agile and adaptive partner who will be by their side to help create, expand and manage the best networks for their markets and their bottom lines.

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