Native Packet Transport (NPT) for Packet Transport Networks (PTN)

- Carrier class converged multiservice packet transport
- Lowest TCO throughout the network transition from TDM to packet
- True and independent native packet and TDM processing
- Minimized OPEX by keeping the same working procedures
- Minimized risks by gradual and controlled transition
- Transport grade QoS, resiliency, OAM, and synchronization
- Integrated optics
- Minimal power consumption and footprint
- Unified multi-layer management
Native at the Fore

NPT is a family of future-proof and carrier-class converged multiservice packet transport platforms optimized for metro packet transport networks. NPT offers unique convergence of Carrier Ethernet, MPLS-TP, SDH, TDM, and WDM OTN on a single platform. As a carrier-class packet transport, it combines transport networks reliability and ease of management with packet efficiency.

Seamless and cost-effective transition from TDM to packet is gained through an All-Native architecture, processing both packet and TDM traffic natively but also supporting Ethernet/MPLS-TP over TDM (EoS/MoT) and TDM over Ethernet (CES). The All-Native architecture provides cost-effective support for mixed packet and TDM traffic while preserving existing network structure and working procedures.

The NPT product line supports a full set of Carrier Ethernet services and features, including QoS, protection, OAM, and synchronization to assure undisrupted service delivery. Integrated WDM OTN allows seamless integration with next-generation optical networks.

By supporting the most advanced carrier-class Ethernet-based services (L1, L2, MPLS-TP), the NPT is well positioned to realize cellular backhaul transition/migration plans from TDM to Ethernet and for new build-outs of LTE and 4G networks. The NPT product line supports full triple play services for residential NGN applications. The rugged design of NPT access products and their unique support of utility targeted interfaces make them ideal for utility NG transport networks.

As with all ECI’s transport products, the NPT family of products is managed by the LightSoft® NMS.
Applications – Case by Case

As the shift from TDM to packet is common in various applications, use cases for NPT can be found in all major applications, bringing specific added value to each of them.

Wireless Backhaul

Due to the need to support multiple wireless generations, wireless backhaul is a classic mixed TDM and packet environment. NPT tackles mixed environment challenges, but also provides a future-proof solution supporting next-generation LTE requirements. These include:

- High packet capacity
- Packet synchronization
- Highly secured links
- MP2MP x 2 interface support
- Extensive OAM
- Cost-effective multi-generation support (2G, 3G, LTE)
Utilities

Being responsible for mission critical applications makes reliability and service availability a top priority for utility companies. Since utilities use unique equipment that still comprises TDM interfaces, reliable cost effective support for legacy services must be available. In parallel, a future proof network that can scale and support a shift from utility to Utelco (using its infrastructure to offer additional services) must be supported. All these challenges are addressed by NPT.

NPT offers utility grade transport, assuring service availability for mission critical applications, including:

- Full redundancy
- Extensive resiliency schemes for both Ethernet and TDM
- Hard QoS - guaranteed jitter and latency
- Reliable and cost effective support for all legacy services
Triple Play

Operators providing triple play services face the strongest push to shift from TDM to packet. Simultaneously, they are also expected to maintain TDM transport reliability and predictability, especially for business customers. The equipment that allows them to build a packet based network while delivering native TDM services wherever required, is NPT.

NPT supports triple play services by supplying:
- High packet capacity
- Packet synchronization
- Highly secured links
- Video distribution support - P2MP multicast, star VPLS, IGMP snooping
- Extensive OAM
- Cost-effective support of both new and legacy services
Fits Like a Glove

The broad range of NPT products enables you to find the best cost/performance offering.

The following product map and table present the NPT product portfolio, highlighting key features and capabilities to help you select the best model for your particular requirements.

<table>
<thead>
<tr>
<th>NPT-1010</th>
<th>NPT-1020</th>
<th>NPT-1200</th>
<th>NPT-1600/1600C</th>
<th>NPT-1800</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packet throughput [Gbps]</td>
<td>5</td>
<td>10/50</td>
<td>70/140</td>
<td>240</td>
</tr>
</tbody>
</table>

(*) 1Tb ready
1Net is ECI’s framework for addressing your pain points and needs in your daily operations and strategic planning. What’s keeping you up at night? Whether it’s reducing time to market for new services, mitigating risk, improving performance or protecting investments, we’re here as your true partner, to take your business to the next level together.