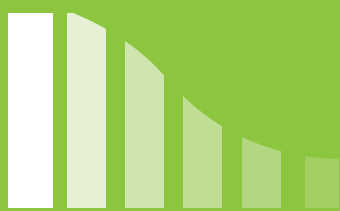


LOW POWER DESIGN



With energy savings of up to 80% compared to similar solutions, Transmode Low Power Design helps our customers keep OPEX down and profits up. That's positive for both the bottom line and the environment.



As IPTV and other broadband services over DSL, cable, mobile and FTTx networks are moving mainstream, keeping OPEX down is vital for an operator's or service provider's bottom line. And as the backhaul infrastructure needed for these new services is consuming more and more energy, Transmode's Low Power Design is growing in importance.



A healthy business in a healthy environment

With the typical power consumption in Gigabit Ethernet Backhaul solutions as low as less than 7W per Gigabit Ethernet and less than 10W per 10 Gigabit Ethernet, Transmode's Low Power Design provide both an immediate and long-time benefit. And in the light of rising energy costs, it's an advantage that will increase with time.

No less important is the reduction of greenhouse gas emissions connected to an operator's power use. This will also have a positive overall impact on the environment.

Energy savings with a bonus

The direct savings that come from the low energy consumption of Transmode Low Power Design solutions is just the beginning.

For every 10W you save, you can also lower air conditioning requirements by 5W, providing an additional 50% saving on energy costs.

The low power consumption also makes it possible to serve more customers per cabinet. Take for example a UK operator served by ntl: Telewest Business. The low power backhaul allowed more power to go to the

Let's look at an example of a triple play broadband backhaul for an operator that wanted a solution for Ethernet transport. The configuration is a Transmode TM-Series solution with a TM-101 chassis (1u high) equipped with a Dual 10G Lite Transponder with CWDM optics providing 2x 10G from the node. With a power consumption of less than 20W for the node, it offers a savings of 80W compared to other common solutions.



As this operator is accessing 200 exchanges, the savings of 80W becomes 16,000W or 140 MWh over a year. With the average price of electricity in Europe at 88.33€/MWh (2007), the savings for this operator are 12,380€ annually. At the same time, this solution will reduce the amount of produced CO₂ by up to 136 tons a year – depending on the energy source used.

The reduced need for cooling then increased the financial savings to 18,570€ annually – and the possible CO₂ emissions reduction to 204 tons a year.

With a 10 year network lifespan, the savings could be 185,705€ (at 2007's energy prices) and a reduction of 2037 tons of CO₂ over the entire life of the network.

DSLAM, enabling an additional 50 broadband customers to be connected at each of more than 100 sites. This resulted in over 5000 extra customers connected at no extra cost.

Power efficiency is part of the design

Transmode's in-depth knowledge of optical networks, coupled with a consistent focus on low-power hardware design, means our solutions are designed with energy efficiency and a small footprint right from the start.

Part of the solution is avoiding unnecessarily compli-

cated backplanes on the chassis and providing single board solutions. Our multi-service muxponder and high-density transponders 2x10G, 4x2.5G and 4x4G are just some examples. It's also important to use the right transport protocols. Transmode's iWDM (Intelligent WDM) formats allow us to provide relevant functionality using less complex circuitry and that directly translates into lower power consumption.

Transmode is a leading provider of optical networking solutions for the transport of data, voice and video traffic. Our solutions, based on WDM-technology (Wavelength Division Multiplexing), boost the capacity and flexibility of regional, metro and metro-access networks. They also cut costs, simplify deployment and operations and enable new Ethernet-based services.

Together with our global organization and a network of partners, we help our customers radically improve their service levels and competitiveness. Today, our customer base consists of more than 200 network operators, service providers, large enterprises and public institutions across Europe, Asia and the Americas.