

Customer

The customer is a Tier 1 Network Equipment Manufacturer (NEM) that is a world leader in packet optical switches, optical transport solutions and SDN networking software.



Customer Objectives

To provide a continuity of support for TDM circuit emulation, a new module for multiport T1/E1 module was required. This new module would replace an older version. Overall the module needed to meet the following objectives:

- > Lower the cost of goods (components)
- > At a minimum, provide the same functionality & meet the same standards as the previous version.
- > Be 100% plug & play compatible with the product chassis and platform.
- > To add integrated APIs in order to enable network management support for this module.

AimValley Solution

Hardware Design

AimValley was engaged to design a field replaceable unit with 16x T1/E1 ports, including the building of prototypes and providing system verification and test.

Software Development

We also provided one our software products, called Titan, which provides software control of the module/ports through a common API.

Timing modes

One key aspect of the design was to ensure that synchronization, timing, re-timing and loop timing was provided through Digital Clock Recovery (DCR) and Analog Clock Recovery (ACR).

Key Technologies

- > AimValley IP for circuit emulation services.
- > Fully proven T1/E1 circuitry and protocols.
- > CES, SAToP and CESoPSN.
- > Synchronization.
- > Titan API.

Results and Added Value

Efficient

Re-use of AimValley CES IP to reduce time-to-market and development cost. Application of Titan API software, common to several integrations.



Partnership

Titan API integration, integrated with customer host software. Hardware design in close collaboration with customer's platform.

Successful

Working hardware design and multiple software/feature releases, each adding value.

Innovation

Cost reduction through clever design, including replacement of 4x ASICs with 1x FPGA. Power reduction versus previous module.