



PRODUCT ENGINEERING SOLUTIONS



VLSI/System Design

Development of an ATM network processor board and software

The challenge

The challenge was to design a board targeted for portable test equipment

CLIENT

A leading US based network test equipment manufacturer specializing in the optical networking market.

The challenge

The challenge was to design a board targeted for portable test equipment having stringent size and interface constraints and implementation of various ATM standards in FPGA .



HOW WIPRO HELPED



Wipro developed an OC-12 rate ATM protocol processor board as well as ATM protocol processor software. The entire system was a portable network test equipment, a fact that placed major restrictions on dimensions of the board. The Wipro designed ATM processor board interfaced to an SDH/SONET board, sending and receiving ATM traffic from it, as well as performing ATM traffic analysis.

Key aspects of the design included

- Various ATM standards implementation in FPGA logic such as I432 for HEC, PRBS/User defined traffic generation and detection, PLCP framing, AAL1/5, Cell Delay Variation, ATM header and payload error generation/detection, O.191, Utopia interface, PCI interface .etc.
- MPC860 micro processor, Segmentation And Re-assembly Processor
- Application software running on VxWorks managing the ATM protocol processor board having ATM traffic with AAL0/1/5 protocols for profiles such as CBR/VBR/UBR/ABR
- GUI application for user interaction having interface to the board via Ethernet

Business Benefit



The on-time, on-budget execution of the ATM processor board enabled yet another of Wipro's customers to realize the true value of outsourcing to a reliable and quality design service provider. The successful implementation of the project, mainly from offshore, once again demonstrated Wipro's capabilities in professional project management of a complex hardware project.

For further information, please contact:

Wipro Technologies
Visit us at <http://www.wipro.com/vlsi>
Copyright © 2006 Wipro Technologies
All rights reserved.