



WiMax Development

Benefits

Calsoft helped the customer:

- Accelerate development of their product with skilled engineers
- Reduce time to market with proven processes and methodologies
- Achieve their overall objective at a lower cost thereby increasing margins/profits

The Client

The Client is a wireless and broadband access company with focus on new photonics-based applications for the telecommunications and consumer industries.

The Challenge

The client wanted to re-engineer their existing WiMax Base Band Board and add new features to it.

The Solution

Calsoft Labs solution to the client had both hardware and software components.

The Hardware solution comprised of complete Hardware Design, Board Design and Prototype Development.

The base band card is designed around the PowerQuicc (MPC8555E) processor with Fujitsu WiMax 802.16 SOC (MB87M3400) and Broadcom GMII (BCM5482) interface for 1GB Ethernet interface.

The board has both RF and IF interfaces along with PCI interface so that it can be used in stand-alone mode or with the host processor card in a cPCI chassis of CPE. The key features of the hardware design are:

- MPC8555E processor with 64Mbyte of Flash, 512Mbyte of DDR2 SDRAM
- Varying processor speeds in the same design
- 8 layer small form factor board with Mezzanine SOC card for FDI mode of operation

The software solution comprised of the basic board support package to work under MonteVista Linux. Features of the BSP include:

- Memory check for both SDRAM and Flash
- Interface check for the SOC as a memory device
- Interface check for the Ethernet port
- Loop back verification test for the Ethernet port.

Technology and Resources

- **Hardware Modules:**
 - **CPU:** FreeScale PowerQuic MPC8555E
 - **Interfaces:** PCI, Ethernet
 - **Controllers:** WiMAX SOC – (Fujitsu MB87M3400) – 2 numbers. (1 for Transmit, 1 for Receive)
 - **Memory:** DDRAM, NOR Flash
- **Software Modules Ported:**
 - **Bootloader:** UBoot-1.1.5
 - **OS / Toolchain:** Montavista Linux PRO 3.1
- **Tools used:** BDI 2000 JTAG ICE

Board



If you wish to know more about Calsoft Labs and its offerings, please feel free to mail us at info@calsoftlabs.com

About Calsoft Labs

Calsoft Labs provides specialized concept to market Product Engineering and embedded design and engineering services in select market segments – ISVs, New Media Companies, Networking and Datacom OEMs, computer hardware manufacturers, semiconductor companies and consumer electronics companies.

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