ITeX ARCHITECTS OF ADSL TECHNOLOGY

SAM 3 ADSL Modem Chipset — Solution Summary

Integrated Telecom Express is a leading innovator and manufacturer of Asymmetric Digital Subscriber Line (ADSL) OEM chips and software.

Interoperable ITeX products adhere to all ANSI and ITU specifications. ITeX's participation in all the major standards groups, including DSL Forum, ISWG and UNH-IOL offers assured interoperability worldwide.

Compatible with Microsoft Windows 98, 2000, Millenium.

Plug-n-play install Wizard and graphical user interface makes ITeX solutions easy to install and use.

Scalable ADSL Modem

- ITeX's **Scalable ADSL Modem** chipset or **SAM**™ is the first optimized CPE host-based ATU-R solution that leverages the computing power from a PC's host processor to provide a scalable data rate for ADSL applications. Using a DMT line code and ITeX's patented implementation, SAM provides a high-performance low-cost solution.
- SAM achieves transmission rates of up to 8 Mbps downstream and 768 Kbps upstream over existing copper wire. This rate is more than 140 times faster than a 56K analog modem.
- SAM is designed to meet ANSI T1.413 Issue 2, ITU G.dmt and G.lite requirements with both splitter and splitterless operations. In addition, SAM is interoperable with all major central office DSLAMs. It's software offers maximum implementation flexibility, management, and diagnosis capabilities.

Protocols

- ✓ Compliant with ANSI T1.413 i2, ITU G.992.1 (G.dmt), G.992.2 (G.lite), and G.994.1 (G.hs) in ADSL layer
- ✓ Compliant with ITU-I.432 and ITU-I.363 in ATM TC, SAR and AAL5 layers
- ✓ Supports RFC2364 (PPPoA), RFC2516 (PPPoE), RFC1483 and RFC1577 over ATM

Performance

- ✓ Scalable data rates up to 8 Mbps downstream and 768 Kbps upstream (Subject to DSLAM configuration)
- ✓ Scalable CPU utilization

Features

- ✓ Configures CPE line rates in 32Kbps steps
- ✓ Multi-mode Auto Detection
- ✓ Simple intuitive management & diagnostic API
- ✓ Supports Splitter and Splitterless with fast retrain

Systems

- ✓ Supports Win 98, 2000, Millenium
- ✓ Supports NDIS4, NDIS5, and NDISWAN Miniport Drivers
- ✓ Supports multiple PVC
- ✓ Standard Windows Wizard driver installation
- ✓ Integrated 32-bit 33MHz PCI 2.1 bus master
- ✓ AFE with 13-bit ADC, 12-bit DAC, and 8.8 MHz sampling rate over 1.1MHz signal bandwidth

Minimal chipset cost and power consumption

With host computing, the computing requirement on the chip is minimized and the power consumption is greatly reduced.

Maximum programming flexibility

With partial functions and system routines performed by the host, programming can be developed, tuned, updated, and maintained easily.

Cost Effective PCI Design

SAM is designed for use as a PC systems internal PCI modem card. Plug-and-play intuitive graphical user interface and support for all the major operating systems make SAM the ideal solution for low cost high bandwidth Internet access.

SAM Chipset and Software

The SAM solution consists of a digital chip (i90816), an analog front-end (i80234), and specially designed software.

SAM Digital Chip

The SAM digital chip (i90816) is based on a patented scalable architecture that provides a low-cost solution to enable ADSL access. i90816 includes three major blocks: a PCI core, an execution engine, and an AFE interface. The SAM digital chip has a built-in PCI 2.1 bus master interface for use as an internal PC modem.

SAM Analog Front End (AFE)

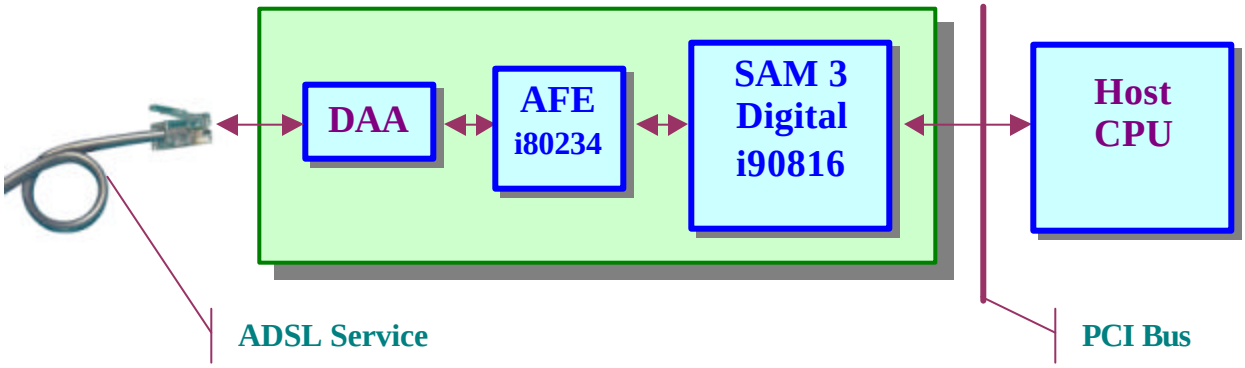
The SAM AFE (i80234) contains one 12-bit DAC and one 13-bit ADC, each with an 8.8 MHz sampling rate. The SAM AFE only dissipates 0.7 watts in full operation and includes a power down mode for standby.

SAM Software

The SAM driver software is based on the various NDIS network miniport driver models for various Microsoft Windows OS platforms. It consists of ADSL TC, ADSL PMD, ADSL handshaking, ATM TC, SAR, AAL layer, mini-port driver and H/W chipset interface. The ADSL portion is based on scalable architecture that adapts the data rate performance flexibly according to the host processor utilization. Furthermore, SAM supports management API for the developer and OEM's flexibility.

Package

- SAM digital controller i90816 - 160-pin PQFP.
- SAM AFE i80234 - 64-pin LQFP.



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