

Fusiv®

Vx160–IKF6836

ADSL2+ Gateway Processor for Customer Premises Equipment



Target Markets

- ADSL2+ Residential Gateway
- CPE Equipment for Video, Data and Voice Service

Target Applications

- ADSL2+ Router
- ADSL2+ Residential Gateway

Fusiv Vx160-IKF6836

- Built-in Voice Engine with support for Wide-band CODECs
- 2 x MII Interfaces
- Utopia Interface
- PCI Interface
- USB 2.0 High Speed Host
- 32 GPIOs
- 2 x UART Supports Bluetooth for Fixed Mobile Convergence
- ADSL2+ Datapump
- DDR Controller

Software

- FusivWare™ advanced Linux-based operating software
- Full-Chain Voice Processing
- Network Management
- IP Middleware
- Routing/Switching

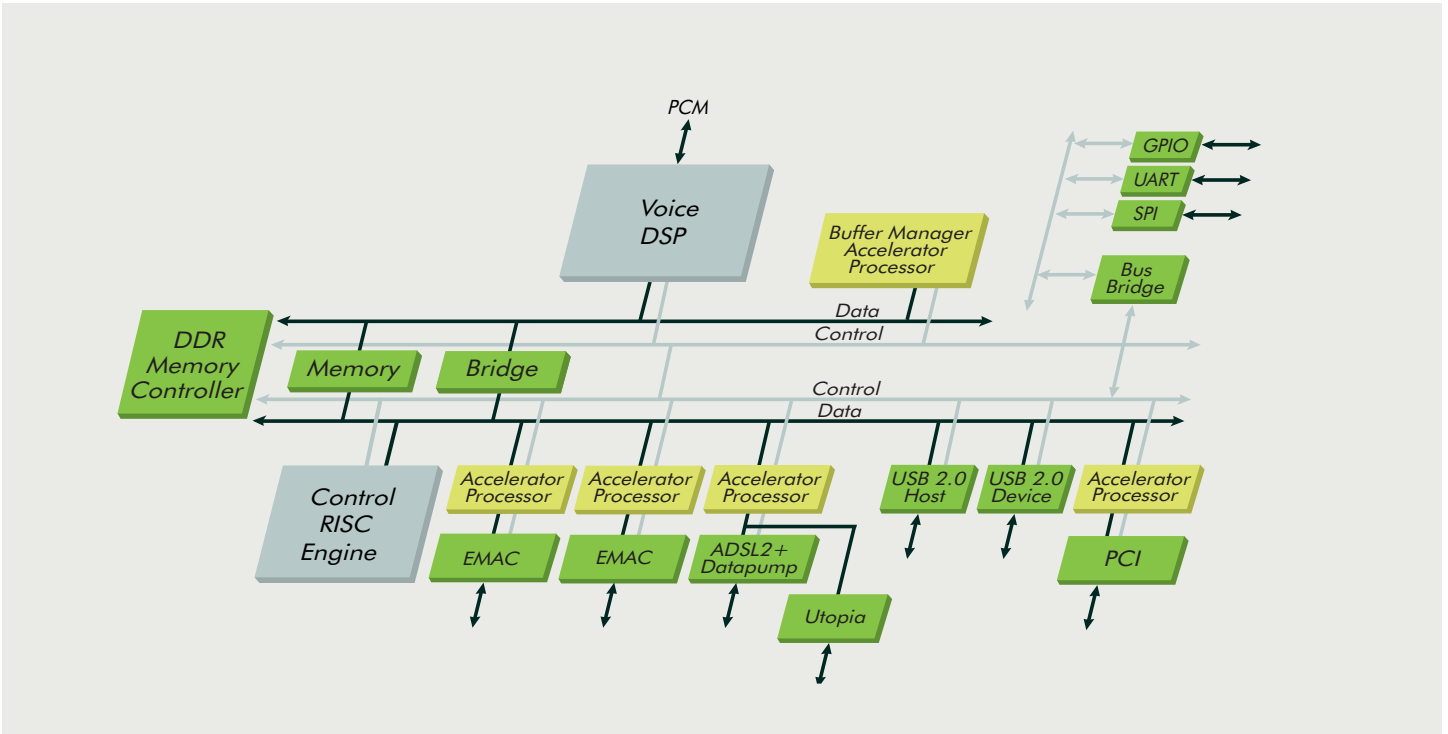
Ikanos' Fusiv® Vx160, IKF6836 processor is one among a family of high performance, highly integrated and cost effective series of Fusiv gateway processors with the addition of ADSL/ADSL2/ADSL2+ physical layer data pumps.

The Vx160 provides an unparalleled integration of full chain voice processing and signaling and network protocol processing on a single chip for developing quadruple play gateways. The Vx160 can be used as the ADSL2+ residential gateway processor.

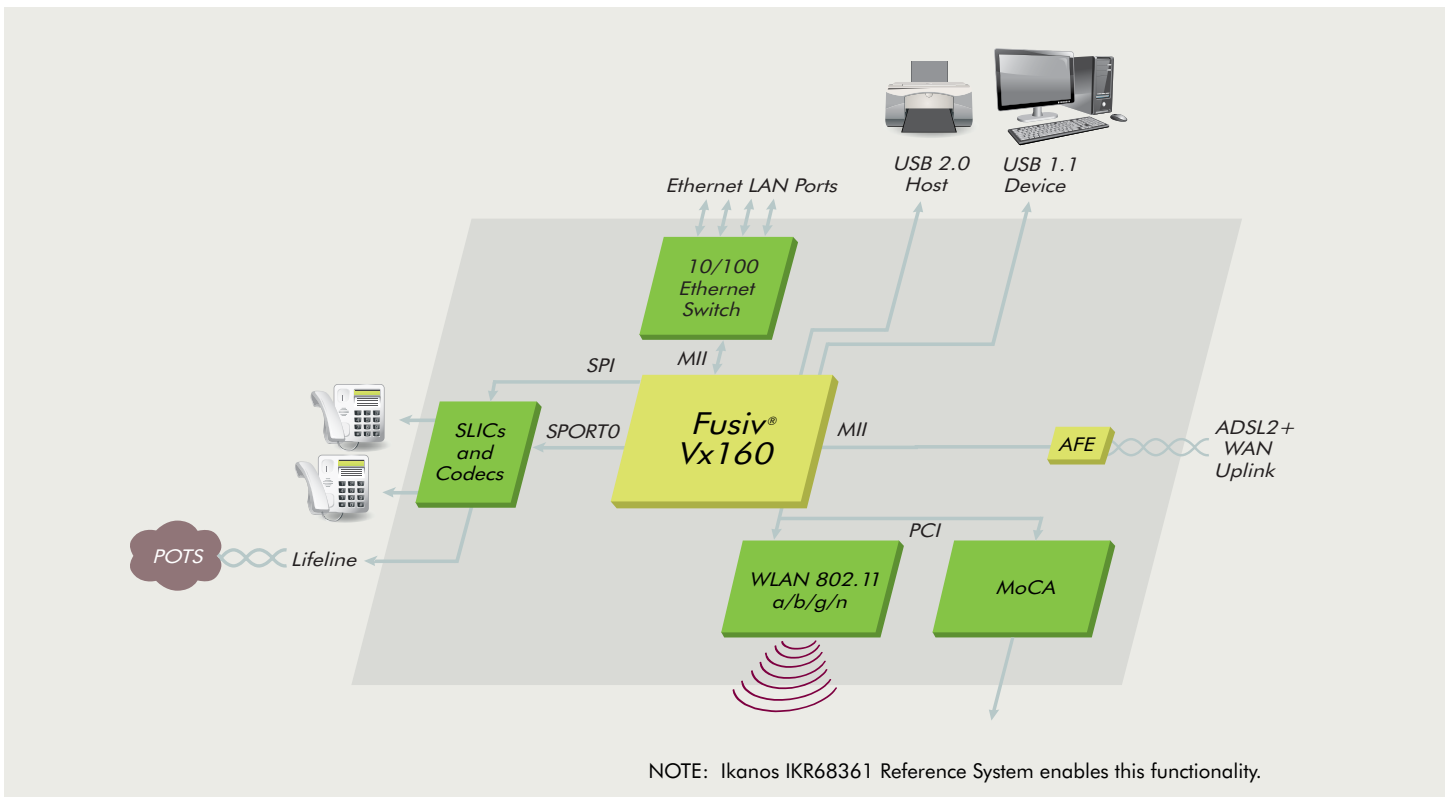
The Fusiv Vx160 has an on chip DSP/Voice Engine for handling up to 4 channels of full-chain VoIP. It also integrates a general purpose RISC host processor and several proprietary accelerator processors (APU) to create a high performance distributed processor architecture with superior ADSL2/ADSL2+ connectivity. For customers wishing to develop a full featured

residential gateway, the Vx160 adds a PCI interface to enable WLAN 802.11a/b/g/n connectivity. Besides a PCI interface, it provides extra connectivity to meet expanding needs in the form of two MII ports that can be used to support either a home networking technology, like HomePlug A/V, HPNA, or MoCa or a DMZ network interface. A USB 2.0 Host port is provided to interface to printers, disk drives (NAS), WLAN or home networking technologies. A USB 2.0 device is also included to connect to a PC. An extra UART port is also provided on Vx160 to support Bluetooth® connectivity for fixed mobile convergence (FMC) applications.

Fusiv® Vx160 System Architecture



Fusiv® Vx160 VDSL2 Residential Gateway



Key Features

- Highly integrated 200 MHz 32-bit RISC host processor
- Enables manufacturers to build cost-effective residential gateways and integrated access devices
- Low BoM cost
- Enables carriers to offer voice, data, video, and fixed mobile convergence (FMC) services over twisted pair copper ADSL2+
- Integrated ADSL2+ datapump
 - Lowers BoM cost
- Dedicated voice processing engine
 - No external DSP engine required to process voice chain
 - Lowers BoM cost
- 2 x UART interfaces
 - Supports external Bluetooth® peripherals for fixed mobile convergence applications
- Wire speed packet processing
 - Can support high bandwidth intensive applications — 300,000 packets per second of performance with NAT/FW/routing software all running at the same time
- Accelerator processing engines — 5 x 200 MHz
 - Wire speed Ethernet and ATM processing
 - Highly scalable system — AP engines handle data path tasks leaving main CPU to handle control system tasks
 - Highly flexible system — future proof gateway design with 1.4 Giga-MIPS of programmable processing capability
- DDR Interface
 - Minimizes memory bottlenecks
- USB 2.0 Host
 - Connects printer, USB HDD, digital camera, etc.

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