

Fusiv®

Vx155-IKF6835

For Customer Premises Equipment



Target Markets

- Multi-dwelling, Multi-tenant Units (MxU)
- FTTx Units
- CPE Equipment for Video, Data and Voice Service

Target Applications

- Residential Quadruple Play Gateway
- DSL/FTTx Residential Gateway

Fusiv Vx155-IKF6835

- 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 GPIO's
- 2 x UART Supports Bluetooth for Fixed Mobile Convergence
- DDR Controller

Software

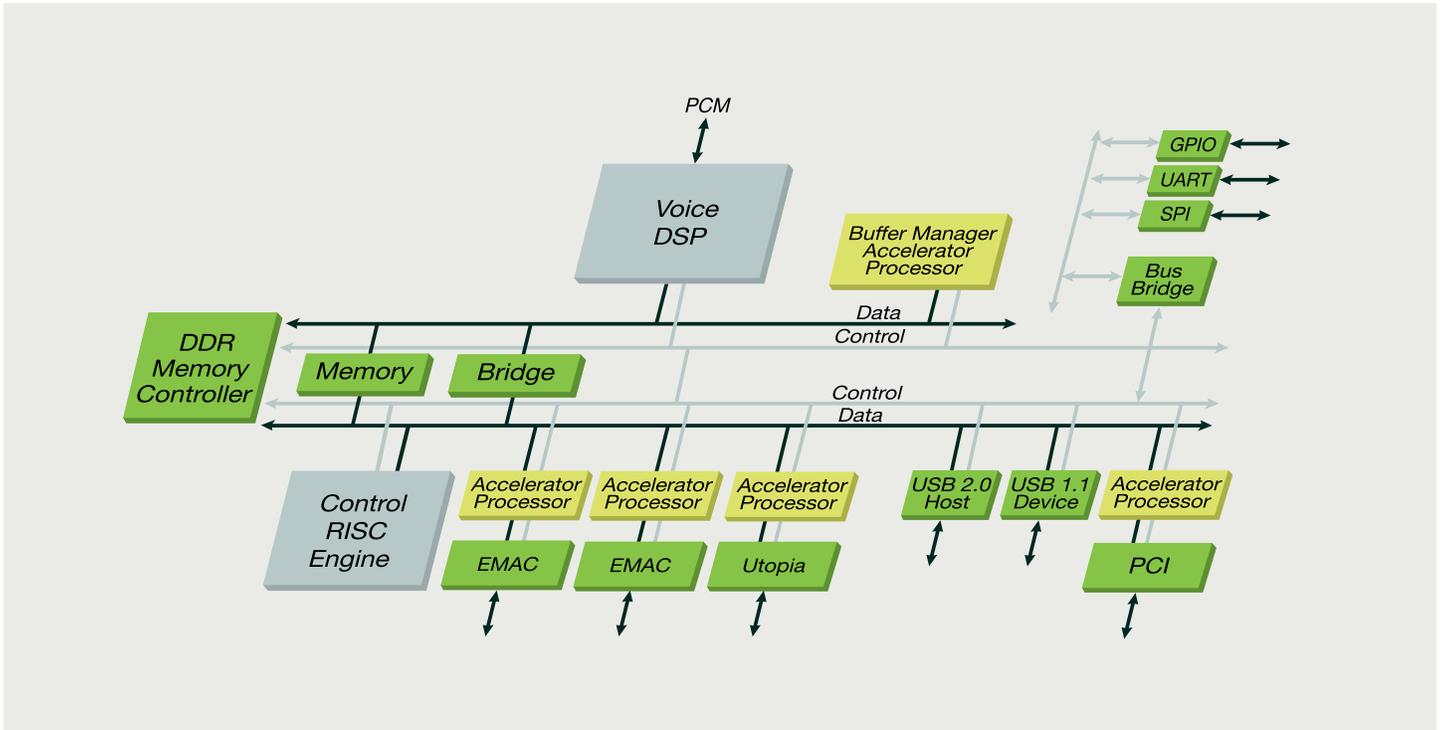
- FusivWare™ advanced Linux-based operating software
- Full-Chain Voice Processing
- Network Management
- IP Middleware
- Routing/Switching

Ikanos' Fusiv® Vx155, IKF6835 processor is one among a family of high performance, highly integrated and cost-effective series of Fusiv gateway processors.

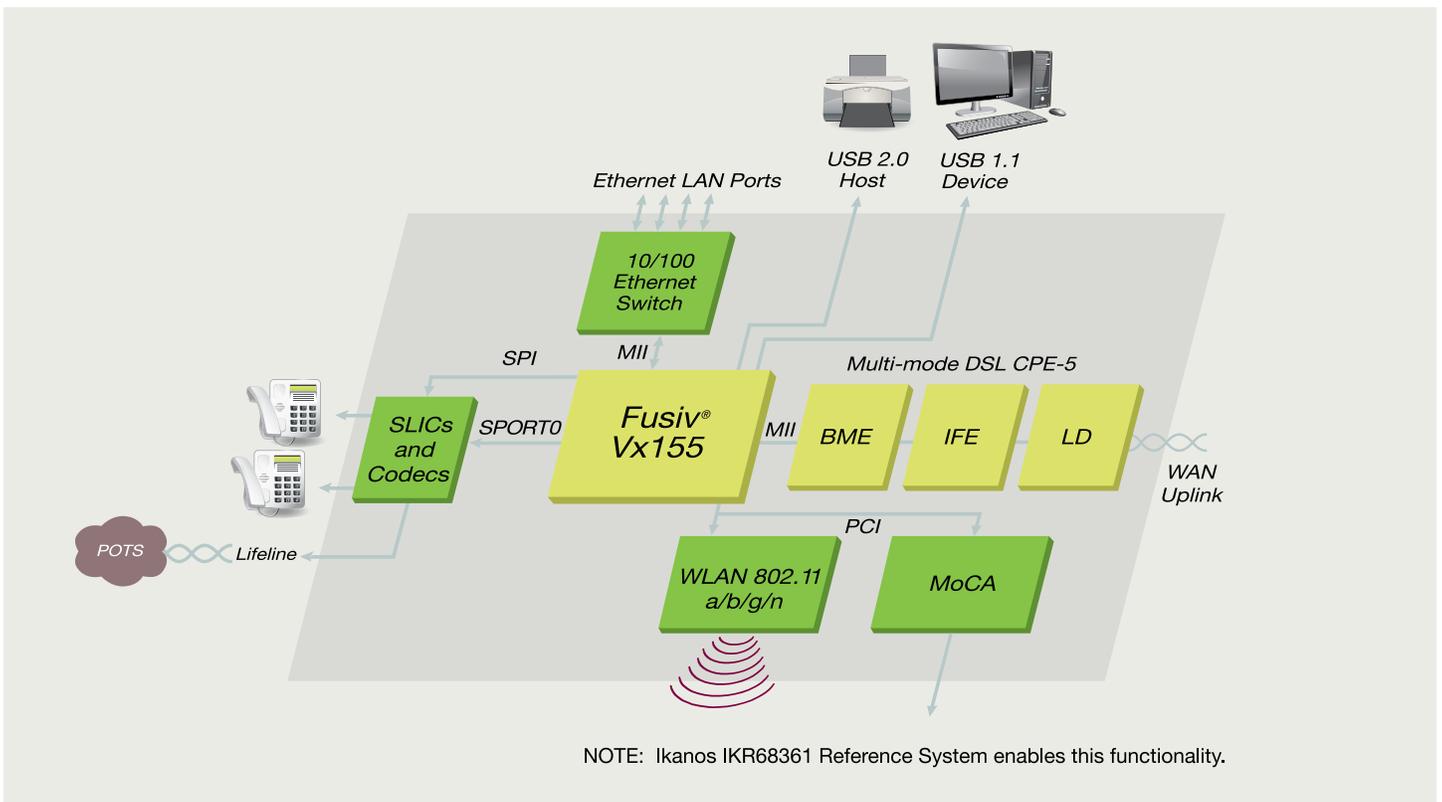
The Vx155 provides an unparalleled integration of full chain voice processing and signaling and network protocol processing on a single chip for developing quadruple play gateways. The Vx155 can be used in a variety of WAN topologies such as PON, DSL, WiMAX or Ethernet via one of the MII ports on the processor. The Fusiv Vx155 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.

For customers wishing to develop a full featured residential gateway, the Vx155 adds a PCI interface to enable WLAN 802.11 a/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 1.1 device is also included to connect to a PC. An extra UART port is also provided on Vx155 to support Bluetooth® connectivity for fixed mobile convergence (FMC) applications.

Fusiv® Vx155 System Architecture



Fusiv® Vx155 and VDSL2 CPE-5 Residential Gateway



Key Features

- Highly integrated processor
 - 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, PON, fiber, wireless broadband (WiMAX), or Ethernet
- Dedicated voice Processing Engine
 - No external DSP engine required to process voice chain
 - Lowers BoM cost
- 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.
- 2 x UART interfaces
 - Supports external Bluetooth® peripherals for fixed mobile convergence applications

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