

Fusiv®

Vx170-IKF6860

FTTH Gateway Processor for Customer Premises Equipment

Target Markets

- FTTx Units
- CPE Equipment for Video, Data and Voice Service
- Enterprise VPN and Firewall Appliances

Target Applications

- FTTH VoIP Gateways
- Wireless Routers
- Triple Play Gateways
- Security Gateways

Fusiv Vx170

- Integrated Dedicated Voice Processing Engine
- Integrated Accelerator Processors
- 2x GMII/MII/RMII Interfaces
- PCI Interface
- 2 x USB 2.0 High Speed Host
- 32 GPIOs
- DDR Controller

Software

- FusivWare™ advanced Linux-based operating software
- Full-Chain Voice Processing
- Network Management
- IP Middleware
- Wire speed Routing & Switching with QoS
- IPSec VPN



Ikanos' Fusiv® Vx170 is a member of the high performance, highly integrated and cost-effective series of Fusiv gateway processors.

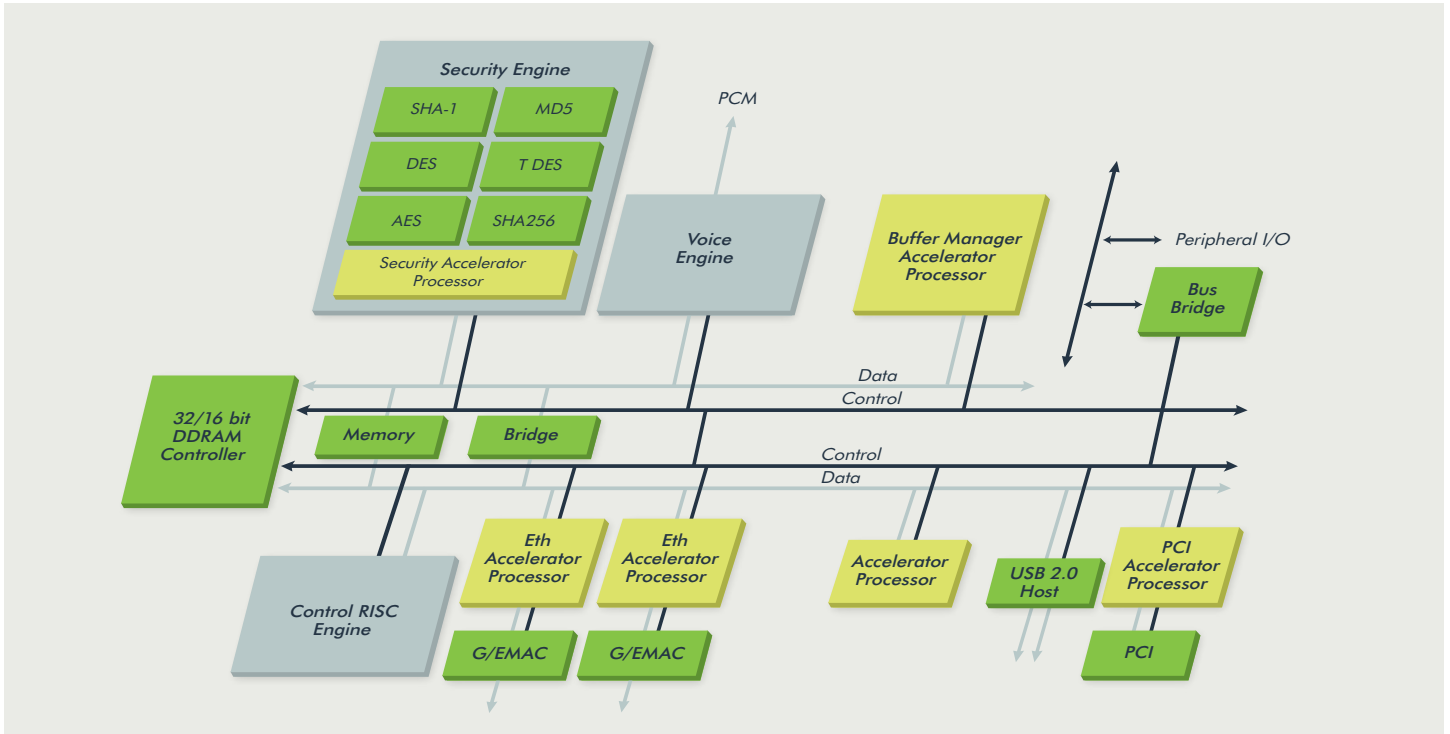
The Fusiv Vx170 is a Fiber-to-the-Home (FTTH) gateway processor that offers an array of superior quadruple play bundled services such as voice, video, data, and fixed mobile convergence (FMC). This FTTH gateway processor is a system-on-chip, which integrates a control processor, DSP subsystem, security engine, Accelerator Processors, and two gigabit Ethernet MAC with GMII interfaces to provide astonishingly fast broadband connectivity.

Ideal for a wide variety of WAN topologies such as PON, WiMAX or Ethernet, the Vx170 allows equipment vendors and users to easily and quickly build applications such as VoIP gateways, VPN Gateways, wireless routers, and triple play Gateways.

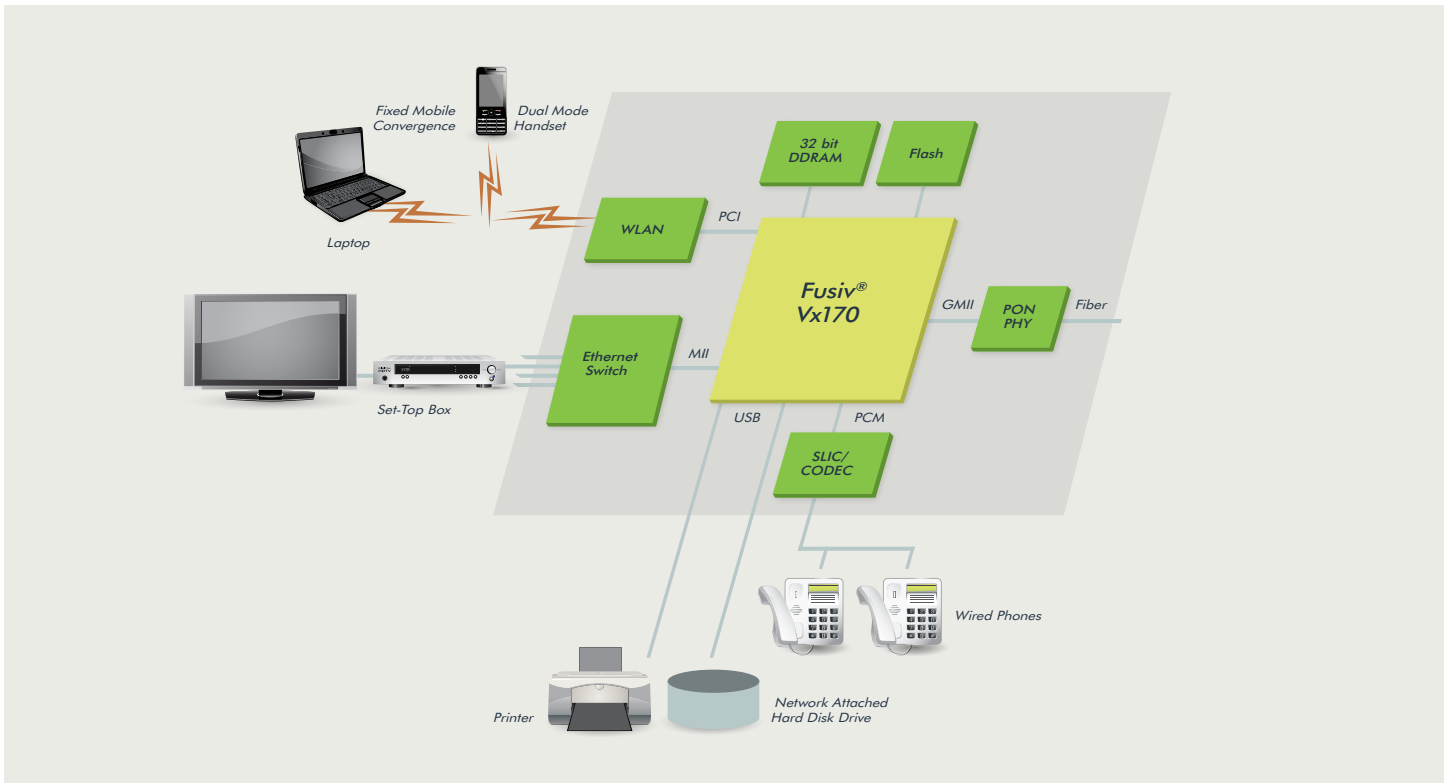
The benefits of the Vx170 are numerous. The Vx170 significantly reduces time-to-market and development costs by providing a single, full-featured, integrated gateway solution and offering gigabit performance. Based on wire speed processing the Vx170 provides consumers unsurpassed broadband experience. The Vx170 is a highly scalable solution with integrated software to leverage the existing hardware for delivery over the next generation of broadband networks. Through techniques such as on-chip classification, queuing and scheduling, the Vx170 enhances quality of service over WAN and over in home network connectivity. The Vx170 offers a distributed architecture that is extremely flexible to accommodate application specific customization. Ikanos' rigorous quality standards ensure consistent product performance and reliability.

EN-Genius Network Product of the Year – Best LAN Product

Fusiv® Vx170 System Architecture



Vx170 Based – Quadruple Play FTTH Gateway



Key Features

- Highly integrated processor with field-proven Fusiv architecture:
 - 500 MHz 32-bit MIPS-based™ host processor
 - Dedicated voice processing engine (DSP subsystems)
 - 6x 333 MHz Accelerator Processors for microcoded data path computing
- 32 KB local buffer and table memory
- Multiple on-chip buses to exploit the full bandwidth of the 333 MHz/32-bit DDR SDRAM memory
- Interfaces:
 - Two 10/100/1000 gigabit Ethernet interfaces (GMII/MII/RMII)
 - 66 MHz 32-bit PCI 2.2 interface, which works in host and satellite modes
 - Two USB 2.0 HS/FS/LS host with UTMI-PHY
 - Two asynchronous serial UART ports
 - Serial peripheral interface (SPI)
 - Two SPORT (TDM) interfaces for the VoIP DSP subsystem
 - 32 general purpose IOs (GPIOs)
- General purpose timers
- On-chip asynchronous memory controller for asynchronous RAM, FLASH and external devices
- On-chip DDR controller for 32-bit DDR of 333 MHz
- IEEE 1149.1 compliant JTAG interface
- Software features:
 - Software drivers such as Linux board support package and voice framework
 - Network software for TCP/IP, routing protocols and network management
 - IP services/QoS software for QoS/bandwidth management and firewall applications
 - Security modules such as VPN, IPSEC, SSL, etc.
 - VoIP software for voice compression, echo cancellation, CNG, PLC, DTMF detection and generation, call progress tone generation, FSK caller ID generation, country-specific tones, and fax pass through



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