



LAN9132



High-Performance Network Multimedia Processing Engine, supporting a PCI-based interface and featuring RipStream™ Technology

Industry's first high-performance, wired 10/100 network multimedia processing engine solely supporting a PCI-based interface and employing RipStream technology, which combines support for multiple high-definition (HD) streams, software protocol stack management and security.

Highlights

- RipStream technology supporting DLNA guidelines
 - Supports multiple HD video streams
 - Built-in UPnP, HTTP, TCP/IP protocol stacks
 - Integrated 128-bit AES encryption/decryption for Digital Rights Management (DRM)
 - Supports Windows® Media DRM10 (WMDRM 10)
 - Supports Digital Transmission Content Protection over Internet Protocol (DTCP-IP)
 - Fast DTCP-IP AKE key exchange time (0.6 sec.)
- Two Transport Stream Interfaces (TSIs) to MPEG encoder/decoder SoCs
 - Either interface can be used in server or rendering applications
- Integrated ARM926™ core
- TCP/UDP checksum offload
- PCI-based Interface
 - PCI Local Bus Specification revision 3.0 compliant
 - 32-bit/33-MHz PCI bus
 - Supports device and host modes of operation
 - In host mode it supports up to four external PCI devices
 - PCI Power management support D0, D1, D2, D3cold and D3hot
 - DMA-based high speed transfers
- Video codec agnostic
 - Supports MPEG2, MPEG4, WMV9/VC-1, H.264/AVC
- Network agnostic platform allowing for integration of future advanced standards
- Integrated 10/100 MAC/PHY with HP Auto-MDIX support and multiple power management modes

Target Applications

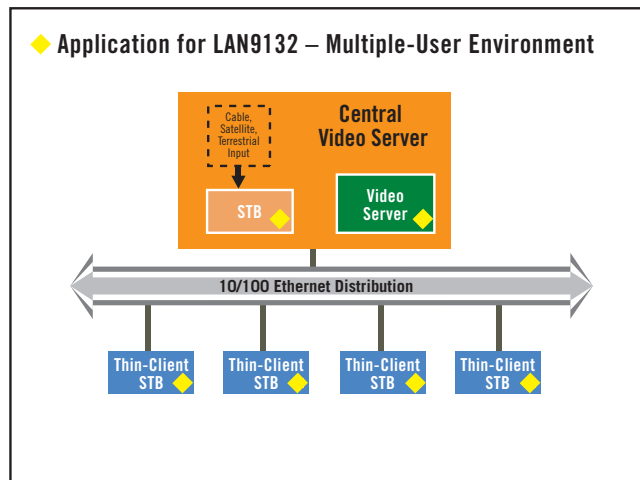
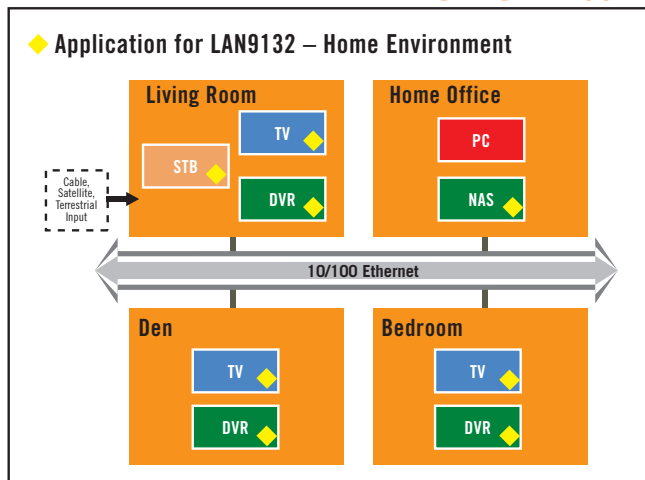
- Ethernet-based Video/Media Distribution Systems
- Digital Video Recorders
- High-definition Televisions
- Video Servers
- Network Attached Storage (NAS)
- Thin Client Set-top Boxes
- Digital Media Clients/Servers
- Home Gateways
- Wireless Multimedia Streaming

Features and Benefits

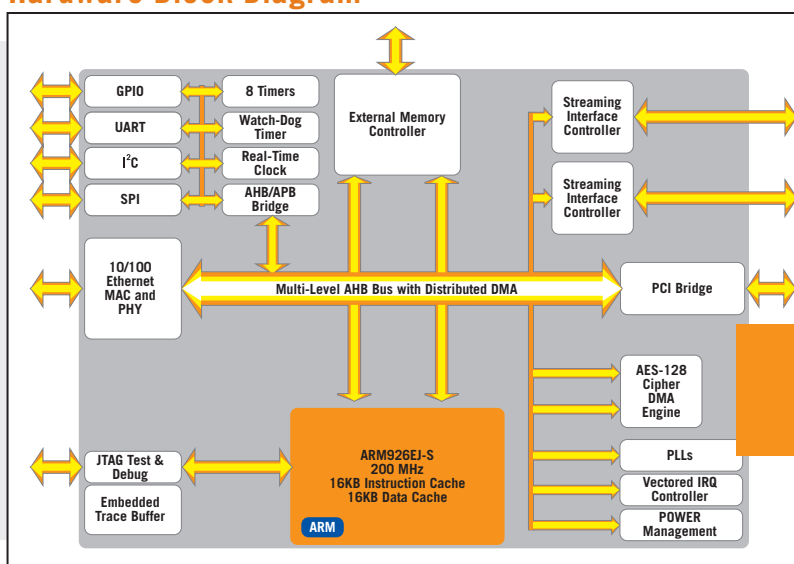
FEATURES	BENEFITS
RipStream technology combines support of multiple HD streams, software protocol stack management and security	High throughput; two HD MPEG2 or multiple MPEG4 streams
Two bidirectional TSI ports which directly interface to video processing functions	Handles multiple HD streams concurrently
Supports PCI-based interface	Offers design flexibility and the option to use existing PCI-based designs
Integrated 10/100 MAC/PHY with HP Auto-MDIX	Complete networking solution that eliminates the need for special "crossover" cables when connecting LAN devices together
Crypto block supports both DTCP-IP and WMDRM 10	Provides DRM copyright protection. Flexible support for major industry standards; eliminates need for separate crypto device
Video codec agnostic	Handles any video codec (MPEG2, MPEG4, WMV9/VC-1, H.264/AVC)
Can boot from Flash memory or host processor	Reduces need for additional components
Integrated DLNA, UPnP and TCP/IP stacks	Consumer Electronics interoperability; ability to recognize other UPnP devices and offload host TCP/IP implementation
Highly flexible software architecture; customer can decide whether LAN9132 or host runs UPnP stack	Allows ease of integration to various architectures; allows system designer to optimize the architecture to application needs

* Playing/viewing of content which is streamed or transferred between networked DLNA Certified devices depends on the media format supported by the DLNA Certified devices.

Network Multimedia Processing Engine Applications



Hardware Block Diagram



Feature- and Performance-Rich

- 128-bit AES encryption/decryption
- RipStream technology provides the high-performance Ethernet data rates required to enable multiple HD streams
- TSI port can be used in server and rendering applications
- Interoperability with other devices supporting UPnP and DLNA
- Integrated 802.3 (10/100) Ethernet MAC/PHY with HP Auto-MDIX support
- 324-pin LFBGA package with other options
- Supports DRM technology - DTCP/IP and WMDRM 10

Ease of Integration/Minimized Design Time and Risk

- Interfaces to any video codec/decoder via TSI
- Minimal host/SoC overhead
- Integrated TCP/IP stack
- Minimal software development required
- Integrated DLNA Stack

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