

Introduction

Gemini™ is a product family of network processors that integrates a dual CPU core, dual gigabit Ethernet MAC, dual IDE channel with single PATA and dual SATA interfaces, dual USB2.0, a wide range of peripheral device interfaces for multimedia applications and an extensive array of hardware acceleration that enhances the network throughput, file transfer and RAID performance. There are three devices in the Gemini Product Family.

- SL3518, Dual CPU Core in 400-pin FBGA
- SL3516, Single CPU Core in 400-pin FBGA
- SL3512, Single CPU Core in 324-pin FBGA

The Gemini™ Gigabit Storage Router Gateway Design is based on SL3516. The Reference Design SDK provides network equipment manufacturers a comprehensive platform to develop a highly integrated multi-function system.



- 17.0 cm x 15 cm
- 6.8" x 6.0"
- Complete board circuit schematics
- Complete Bill of Material (BOM)
- Board layout file in Gerber format
- SL3516 Data Sheet
- SL93516R Complete Software Package
- SL93516R Software Programmer's Guide
- SL93516R Reference Design User Guide

SDK Components

- 6-layer printed circuit board (PCB)

Hardware Features

- Processor
 - SL3516 Gemini Network Processor
- WAN Interface
 - Gigabit Ethernet
- LAN Interfaces:
 - 5-port Gigabit Ethernet Layer2 Switch
 - USB2.0 Host
 - USB2.0 Device
- MiniPCI Connector
 - V2.2 66 MHz PCI

Solution Benefits

- Very low BOM cost and ready for manufacturing
- Complete development environment and tools
- Open software architecture based on standard Linux for adding functional features
- DDR SDRAM
 - Two 32 Mb x 16 333 MHz DDR
- Flash:
 - 16MByte Parallel NOR Flash
- Hard Drive Interface
 - 2 x SATA
- Serial Port
- 12 V External PC Power Supply
- JTAG Debugger and Emulator Interface

Software Features

- Operating System
 - Linux 2.6.15
- WAN and LAN Interfaces
 - WAN interface: Ethernet
 - MAC cloning
 - LAN interface: Ethernet
 - 802.11a/b/g Access Point
 - 802.11n Access Point and Client
- IP Support
 - TCP
 - UDP
 - ICMP
 - ARP
 - RARP
- Networking Applications
 - DHCP Server
 - DHCP Client
 - Dynamic DNS
 - TFTP client
- IP Routing and Bridging
 - Static routing
 - Routing table control
 - WAN-LAN transparent bridging
 - WiFi to wired LAN bridging
- NAT
 - Software NAT
 - Hardware NAT enabled by Gemini NAT Engine
 - NAT-NAPT, RFCs 3022
 - Static NAT
 - Static NAPT
- Applications
 - FTP server
 - NFS server
 - WINS Client
 - UPnP
- Application Level Gateway (ALGs) Modules
 - Special applications rule assisted by the Gemini hardware packet parser engine
 - PPTP/IPSec/L2TP pass-through
 - FTP
 - NetMeeting
- Internet Protocols Support
 - PPPoE
 - MTU
- File Server
 - CIFS Protocol
 - One IDE or SATA, or Two SATA Hard Drives with XFS, NTFS, EXT2, EXT3, and FAT32 File Systems
 - USB1.1 or USB2.0 Hard Drives with NTFS, EXT2, EXT3 and FAT32 File Systems
- NAS Management Features
 - Local Access List
 - NetBios Protocol
 - Configuration Backup
 - Disk Quota
 - Group Control
 - File Sharing
 - Domain/workgroup join and un-join
 - Hard Disk Health Details, S.M.A.R.T. Support
 - Hard Disk Data Encryption with EXT2, EXT3 and XFS support, assisted by HW Crypto Engine
- RAID Management
 - RAID build/format percentage status
 - HDD rebuild in RAID5 system after insertion
 - Hot Swap
- Media Transfer Protocol
 - With or without HDD
- JBOD
- Single Button Backup
- Printer Server
- System Management
 - Remote Upgrade
 - Web Interface Management
 - Notification
 - Monitoring Task
 - System Reset and Factory Reset
 - Statistics Information
 - Software Reset
 - Check Hard Disk
 - Format Hard Disk
 - Windows Setup Utility
 - Email Alert
 - Email log, redirect syslog to a user defined IP address
 - Boot from Hard Drive
 - LED Indicator for Boot Complete
- Apple Bonjour Support
- RAID 0/1/5
 - RAID5 assisted by hardware RAID5 engine
- Apple Bonjour Support
- Bit Torrent

Ordering Information

- Part number: SL93516R