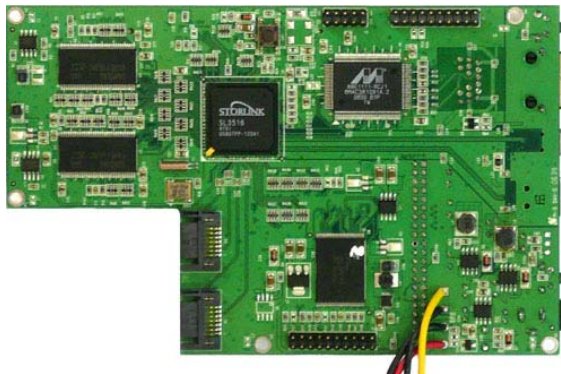## Introduction

Gemini™ is a product family of network processor 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 NAS Design is based on SL3516. The Reference Design SDK provides network attached storage system manufacturers a comprehensive platform to develop a highly integrated multi-function system.

- 6-layer printed circuit board (PCB)

- 16.0cm x 10cm

- 6.25″ x 4.00″

- Complete board circuit schematics

- Complete Bill of Material (BOM)

- Board layout file in Gerber format

- SL3516 Data Sheet

- SL93516N Complete Software Package

- SL93516N Software Programmer's Guide

- SL93516N Reference Board User's Manual

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

Hardware Features

- Processor
  - SL3516 Gemini Network Processor

- LAN Interfaces:
  - 10/100/1000 Ethernet
  - USB2.0 Host
  - USB2.0 Device

- DDR SDRAM:
  - Two 32 Mb x 16 333 MHz DDR

- Flash
  - 16MByte Parallel NOR Flash

- Hard Drive Interface
  - 1 x IDE
  - 2 x SATA

- Serial Ports

- 12V External Power Supply

- JTAG Debugger and Emulator Interface

Software Features

- Operating System
  - Linux 2.6.15
- Networking and Routing
  - WAN interface: Ethernet
  - LAN interface: Ethernet
  - DHCP Server
  - DHCP Client
  - TFTP client
  - NTP Client
- Wireless Ethernet
  - 802.11a/b/g Access Point
  - 802.11n Access Point and Client
- IP Support
  - TCP
  - UDP
  - ICMP
  - ARP
  - RARP
- 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 EXT2, EXT3 and FAT32 File Systems
- Applications
  - FTP server
  - NFS server
  - WINS Client
  - UPnP
- 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
- 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
- Bit Torrent

Ordering Information

Part Number	SL93516N