

Product Specification

8-Port 10/100/1000Mbps Gigabit Ethernet Switch

GSD-804

Version 7.0

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Change History:

Revision	Date	Author	Change List
Version 6.0	2012/1/13	Bryant Wu	Initial Release
Version 7.0	2014/4/22	Marc Liao	Initial Release Chipset replacement from RTL8370 to RTL8370N.

Author:	Marc Liao	Editor:	Marc Liao
Reviewed By:	Kent Kang	Approved By:	Tom Shih

1. PRODUCT DESCRIPTION



Optimal Solution for Energy Saving and Gigabit High Performance

PLANET Green Networking Switch-GSD-804 is an ideal solution in line with the energy-saving trend worldwide. The GSD-804 is an 8-port Gigabit Ethernet Switch, bringing both benefits of energy saving and Gigabit wire speed performance. It is specially designed for home networking, SOHOs and enterprises.

Energy Saving

The GSD-804 uses new engine that provides power saving up to 40% less energy but maintains high performance efficiently. It incorporates two advanced Green Networking technologies:

- **Hibernation Link Down power saving**
- **Intelligent scales power based on cable length**

The **Hibernation Link Down power saving** goes beyond IEEE specifications to automatically lower power for a given port when it is not linked. With the Hibernation Link Down power saving technology, the GSD-804 will automatically adjust power usage of the ports that are shut down or not connected to network device.

Intelligent scales power, the other technology adopted, is an intelligent algorithm that actively determines the appropriate power level based on cable length. When the GSD-804 is connected with Ethernet cable shorter than 20m, a device can obtain maximum power saving because the GSD-804 would automatically detect the Ethernet cable length and diminish power usage. The connected device can substantially reduce the overall power consumption, which makes a significant contribution to energy saving.

Leading Home, SOHO and Workgroup Users to High-speed Networking Generation

The GSD-804 is designed with modern plastic compact housing and easy to deploy high speed Gigabit networking in home or SOHO applications. Providing 16Gbps internal switching fabric, the GSD-804 can handle an extremely large amount of data in a secure topology linking to a backbone or high capacity servers. The GSD-804 provides 8K MAC address table and wire-speed packet transfer performance without risk of packet loss. The high data throughput of the device makes it ideal for most Gigabit environments, especially for the network to be upgraded to a Gigabit environment.

Plug & Play

All RJ-45 copper interfaces of the GSD-804 support 10/100/1000Mbps auto-negotiation for optimal speed detection through RJ-45 Category 5, 5e or 6 cables. They support standard auto-MDI/MDI-X feature which can detect the type of connection to any Ethernet device without requiring special straight or crossover cables.

2. PRODUCT FEATURES

RJ-45 Interface

- Eight 10/100/1000Mbps Gigabit Ethernet ports
- Complies with IEEE 802.3, 10Base-T, IEEE 802.3u 100Base-TX, IEEE 802.3ab 1000Base-T
- Supports auto MDI/MDI-X function

Switching

- Hardware-based 10/100Mbps, half / full duplex and 1000Mbps full duplex mode, flow control and auto-negotiation
- Features Store-and-Forward mode with wire-speed filtering and forwarding rates
- IEEE 802.3x flow control for full duplex operation and back pressure for half duplex operation
- Integrated address look-up engine, supporting 8K absolute MAC addresses
- 9K Jumbo packet size
- Power saving ability for Green networking
- Automatic address learning and address aging
- Supports CSMA/CD protocol

Hardware

- Made from plastic, desktop size and wall-mount design
- LED indicators for system power, per port Link / Act
- 5V DC, 1A external power adapter
- FCC, CE Class B compliant

3. PRODUCT SPECIFICATION

3.1 MAIN COMPONENT

Switch ASIC: Realtek 8370N x1

3.2 FUNCTION SPECIFICATION

Product	GSD-804
Hardware Specifications	
Hardware Version	7
10/100/1000Base-T Ports	8 auto MDI/MDIX ports
LED Display	One for Power, One for Link / Act per port
Enclosure	Plastic
Switch Specifications	
Switch Processing Scheme	Store-and-Forward
Address Table	8K
Flow Control	Back pressure half duplex, IEEE 802.3x pause frame full duplex
Switch Fabric	16Gbps
Throughput (packet per second)	11.9Mpps
Jumbo packet size	9K
Standards Conformance	
Standards Compliance	IEEE 802.3 (Ethernet) IEEE 802.3u (Fast Ethernet) IEEE 802.3ab (Gigabit Ethernet) IEEE 802.3x (Full-duplex Flow Control) IEEE 802.3az Energy Efficient Ethernet (EEE)

3.3 PHYSICAL SPECIFICATION

Dimensions:

168 x 100 x 29 mm (W x D x H)

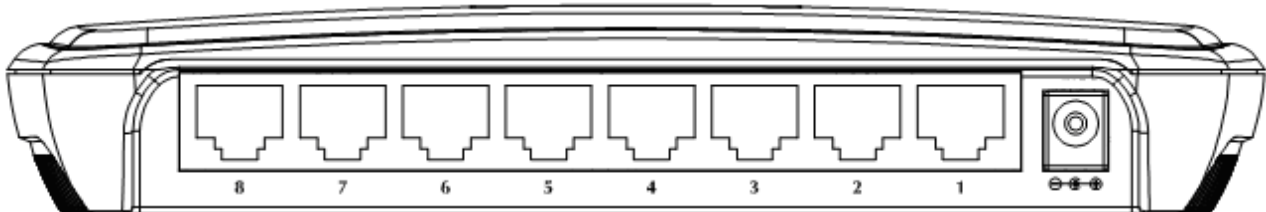
Weight:

175g

Front panel



Real panel



LED Definition

System

LED	Color	Function
PWR	Green	Lights to indicate that the Switch has power. Lights off to indicate that the Switch has no power.

Per 10/100/1000Mbps port

LED	Color	Function
LNK/ACT	Green	Lights to indicate the link through that port is successfully established at 10/100/1000Mbps. Blink: indicate that the Switch is actively sending or receiving data over that port.

3.4 ENVIRONMENTAL SPECIFICATION

Operating:

- Temperature:** 0°C ~ 50 degrees C
- Relative Humidity:** 5% ~ 95% (non-condensing)

Storage:

- Temperature:** -10°C ~ 70 degrees C
- Relative Humidity:** 5% ~ 95% (non-condensing)

3.5 ELECTRICAL SPECIFICATION

Input Voltage:

External Power Adapter: DC 5V / 1A

Power consumption:

- System on without any devices attached

Input Voltage	110V / 60Hz	220V / 50Hz
Amp	0.017	0.012
Watt	0.9W	1.3W
BTU	3.0BTU	4.4BTU

- System on and with Full Load

Input Voltage	110V / 60Hz	220V / 50Hz
Amp	0.023	0.015
Watt	1.2W	1.7W
BTU	4.0BTU	5.8BTU

- System on and with Full Load Operating

Input Voltage	110V / 60Hz	220V / 50Hz
Amp	0.059	0.038
Watt	3.7W	4.0W
BTU	12BTU	13BTU

3.6 REGULATORY COMPLIANCE

FCC Part 15 Class B, CE

3.7 RELIABILITY

MTBF > 50,000 hrs @ 25 degrees C

3.8 BASIC PACKAGING

- GSD-804 x 1
- User's Manual x 1
- DC 5V 1A Power Adapter x 1

3.9 PACKAGING INFORMATION

Dimension: 192mm x 142mm x 85mm (W x D x H)

Weight: TBD

Unit per carton: 15pcs in one carton