SK506

PCIe/104(StackPC) Ethernet Module

Safety information

Electrical safety

- To prevent electrical shock hazard, disconnect the power cable from the electrical outlet before relocating the system.
- When adding or removing devices to or from the system, ensure that the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before you add a device.
- Before connecting or removing signal cables from the motherboard, ensure that all power cables are unplugged.
- Seek professional assistance before using an adapter or extension cord. These devices could interrupt the grounding circuit.
- Make sure that your power supply is set to the correct voltage in your area.
- If you are not sure about the voltage of the electrical outlet you are using, contact your local power company.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your local distributor.

Operation safety

- Before installing the motherboard and adding devices on it, carefully read all the manuals that came with the package.
- Before using the product, make sure all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets and circuitry.
- Avoid dust, humidity, and temperature extremes. Do not place the product in any area where it may become wet.
- Place the product on a stable surface.
- If you encounter any technical problems with the product, contact your local distributor

Statement

Revision History

Revision	Date (dd.mm.yyyy)	Changes
Version 1.0	20.06.2016	Initial release

Packing list

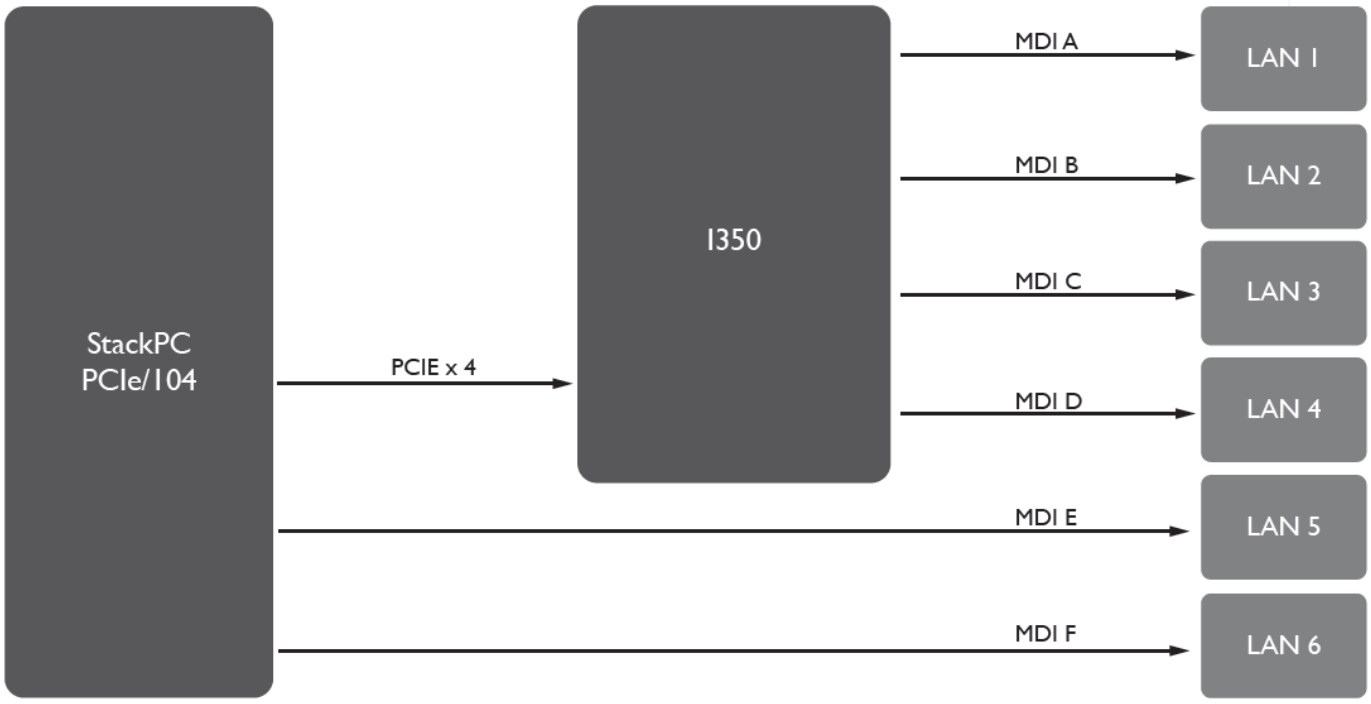
- ☐ SK506R
- ☐ SK506P
- ☐ CD (Driver + user's manual)

If any of the above items is damaged or missing, please contact your local distributor.

Table of content

Chapter 1: Product Information

1.1 Block Diagram

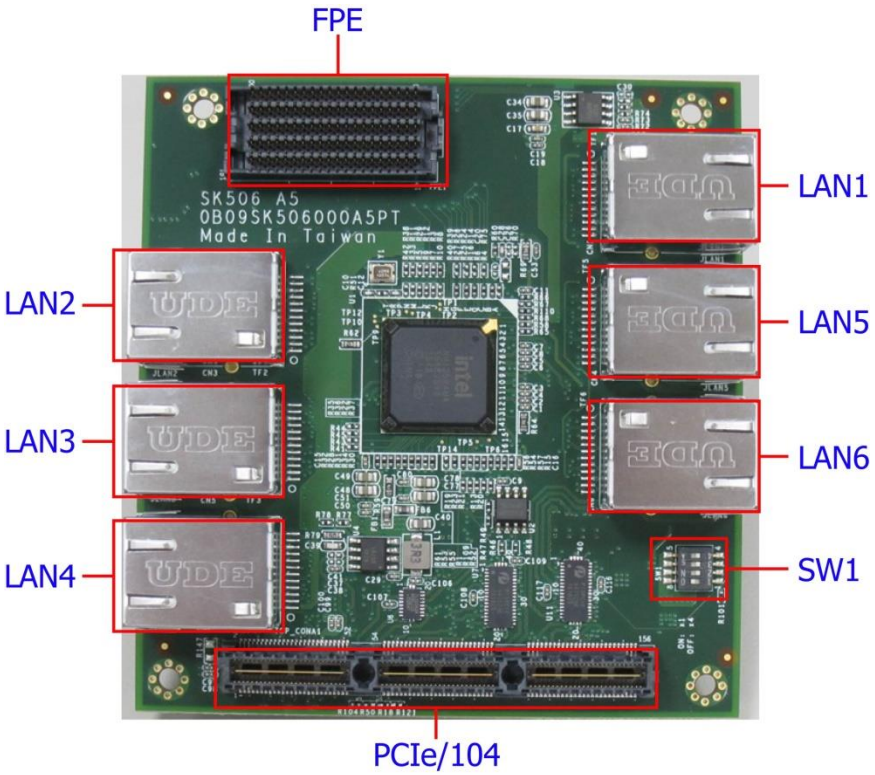


1.2 Key Features

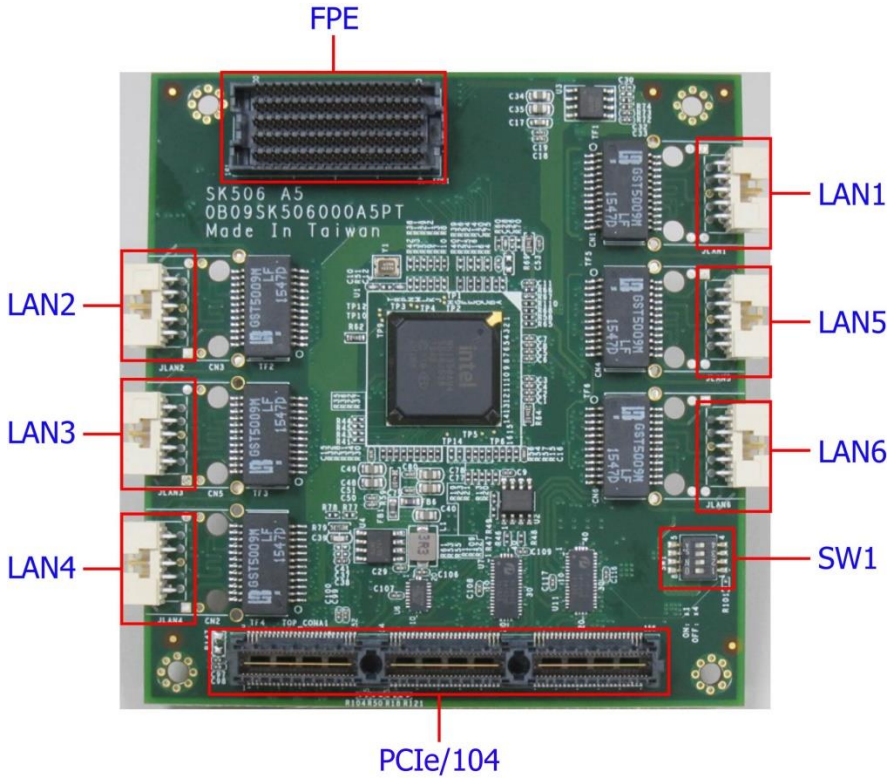
Specification	
Function	Total 6 x 10/100/100 mbps Ethernet connections
Network controller	Intel i350-AM4 network controller *Max TDP 4W *EEE802.3/10BASE-T, 100BASE-TX, 1000BASE-T *Interrupt levels: INTA, INTB, INTC, INTD, MSI, MSI-X *Supports Jumbo Frames *Supports IEEE1588 *Supports Intel Data Direct I/O Technology *Innovative power management features including Energy Efficient Ethernet (EEE) and DDMA Coalescing for increased efficiency and reduced power consumption
Host Interface	PCIe x4 Interface to CPU through PCIe/104 bus StackPC compliant with PCIe/104 Type1 and Type2 buses
Physical connectors	4 independent LAN connections (from Intel i350-AM4) plus 2 independent LAN interface (from CPU host board) Type R: 6 x RJ45 jacks (10/100/1000 Mbps) Type P: 6 x FCI connectors (5 x 2 pin, 10/100/1000 Mbps)
Special Features	Intel Virtualization Technology for connectivity *Supports on-chip QoS and Traffic management *Supports Virtual Device Queues (VMDq) *Supports PCI-SIG* SR-IOV capable
Operating Temperature	Extended Temperature -40 to 85°C
Dimension	95 x 90 mm

1.3 Board Placement

1.3.1 SK506R



1.3.2 SK506P

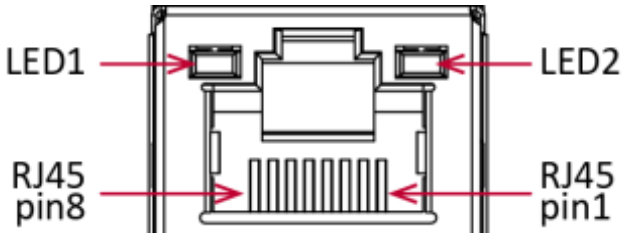


Chapter 2: Onboard Connector and Switch

2.1 Connector

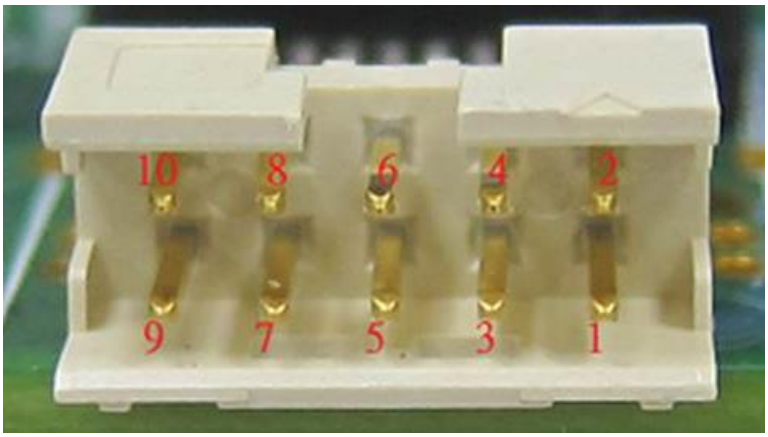
2.1.1 SK506R LAN Connector (RJ45)

LAN	
Pin	Definition
1	D0+
2	D0-
3	D1+
4	D1-
5	D2+
6	D2-
7	D3+
8	D3-



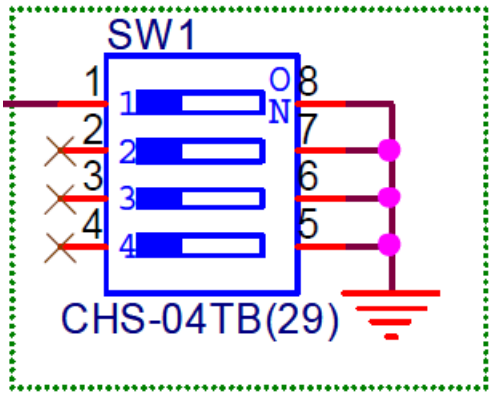
2.1.2 SK506P LAN Connector (FCI 98464-G61-10_LF; 2x5 pin, Pitch=2.0mm)

LAN	
Pin	Definition
1	MIDP0
2	MIDP2
3	MIDN0
4	MIDN2
5	GND
6	GND
7	MIDP1
8	MIDP3
9	MIDN1
10	MIDN3



2.2 Switch

2.2.1 SW1



SW1 #1	I350 Quad GbE PCIe x1/x4	TOP ConnA PCIe x1 #3	TOP ConnA PCIe x4
OFF (Default)	PCIe x4	PCIe x1 #0	NC
ON	PCIe x1	NC	PCIe x4