



WHLE-LS1 - SINGLE BOARD COMPUTER

High performance Single Board Computer with extensive connectivity features.

- **Small form factor, perfect for custom routers and firewalls**
- **Featuring NXP Layerscape® processors based on Arm® Cortex®-A53 and Cortex®-A72.**
- **Hardware network traffic processing engine**
- **Easy to expand thanks to PCIe M.2 connectors**

Capable of delivering over 45,000 CoreMark® with SmartNIC features.

Utilize the full power of WHLE's Layerscape® processor for all your packet analysis needs with DPAA or DPAA2 support, lifting the limits of the operating system's kernel.

Processor with up to 8 cores, up to 1.8 GHz per core. Capable of real-time computation. Comes in two variants - the powerful LS1026/46 with DPAA, or the energy efficient LS1048/88 with DPAA2.

Dimensions:




- 130mm x 130mm

Software support:

- Linux 4.14 to 5.16 and newer
- Ubuntu 20.04 LTS
- U-Boot
- UEFI EDK2
- Buildroot
- Yocto and other distributions on request
- FreeBSD 13 on request

Applicable for:

- Embedded systems with advanced I/O needs
- Power-constrained networking and Packet Analysis
- Wired and Wireless Routing
- Virtualized Networks
- Industrial applications
- Smart Factory
- Automotive and Machine Control
- Edge Compute nodes

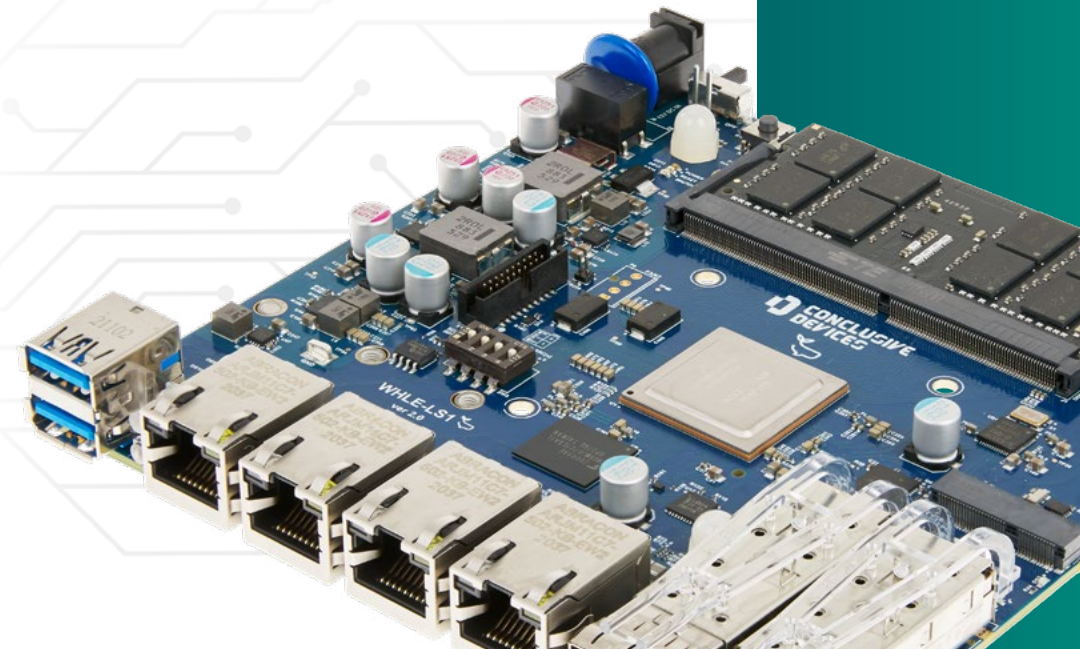
-  conclusive.pl
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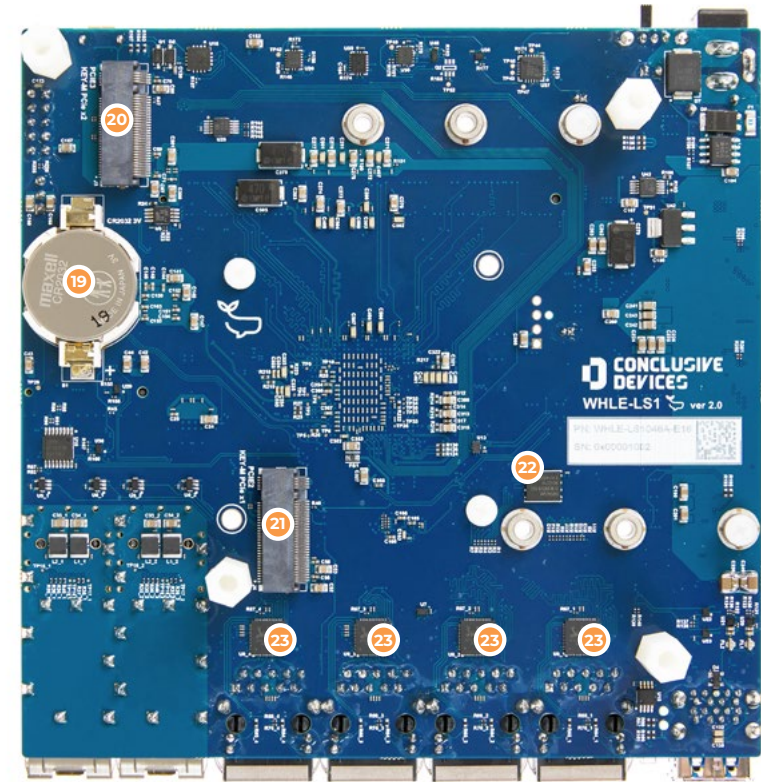
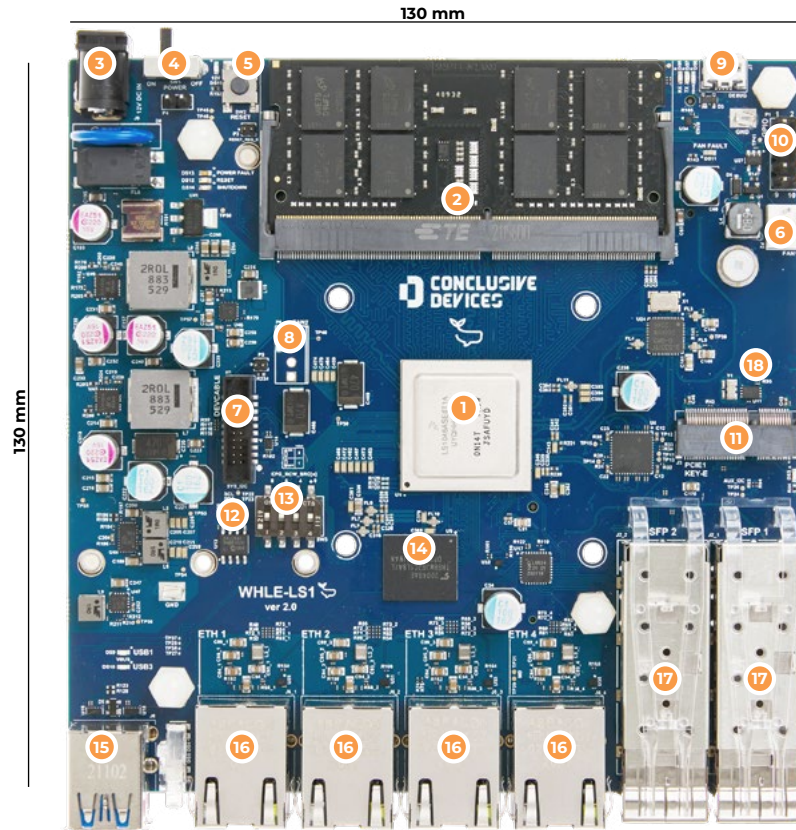
High Performance
Single Board Computer



WHALE WHLE-LS1



CONCLUSIVE
DEVICES



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| <p>1 System on Chip</p> <ul style="list-style-type: none"> • NXP Layerscape® LS1 • up to 8 cores • up to 1.8 Ghz • DPAA or DPAA2 <p>2 RAM socket</p> <ul style="list-style-type: none"> • 1x SO-DIMM • supports DDR4 • up to 2100 MT/s <p>3 Power input</p> <ul style="list-style-type: none"> • 2.5 x 5.5 mm jack • 12V DC <p>4 Power switch</p> <p>5 Reset button</p> | <p>6 Fan connector</p> <ul style="list-style-type: none"> • 3 pin <p>7 Conclusive Developer Cable connector</p> <ul style="list-style-type: none"> • 1.27 mm pitch 20-pin connector • Provides access to: <ul style="list-style-type: none"> • System UART • JTAG port • System I²C bus <p>8 Fan connector</p> <ul style="list-style-type: none"> • 4 pin <p>9 USB Micro-B connector</p> <ul style="list-style-type: none"> • USB 2.0 • Console port <p>10 GPIO connector</p> | <p>11 M.2 Key-E</p> <ul style="list-style-type: none"> • PCIe 3.0 x1 • USB 2.0 • UART • I²C <p>12 EEPROM</p> <ul style="list-style-type: none"> • 8 KB • Available via I²C • Pre-programmed with MAC address and unique serial number <p>13 Boot source selector</p> <ul style="list-style-type: none"> • 4 position DIP switch • QSPI Flash or eMMC selection | <p>14 eMMC memory</p> <ul style="list-style-type: none"> • 4 GB to 64 GB <p>15 USB Type-A connector</p> <ul style="list-style-type: none"> • USB 3.0 (host mode) • single or dual connector <p>16 Ethernet connectors</p> <ul style="list-style-type: none"> • 4x 1 Gbit/s RJ45 <p>17 SFP+ connectors</p> <ul style="list-style-type: none"> • 2x 10 Gbit/s <p>18 Real-time clock</p> <ul style="list-style-type: none"> • Available via I²C • 125 B EEPROM • 64 B SRAM |
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| <p>19 Battery slot</p> <ul style="list-style-type: none"> • CR2032 • RTC clock upkeep <p>20 M.2 Key-M</p> <ul style="list-style-type: none"> • PCIe 3.0 x2 | <p>21 M.2 Key-M</p> <ul style="list-style-type: none"> • PCIe 3.0 x1 <p>22 QSPI NOR Flash</p> <ul style="list-style-type: none"> • 16 MB | <p>23 Ethernet PHYs</p> <ul style="list-style-type: none"> • 4x 1 Gbit/s |
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