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RYZEN LLM1v8SQ Quad-Core Simply NUC User Manual

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Flexible Customization

The Simply NUC LLM1v8SQ (code named Sequoia) is a mini computer built with an AMD® Ryzen™ V1807B processor, delivering innovation in a small space for embedded solutions. A wireless-AC card can be installed into

one of three M.2 slots, leaving another key B slot available for an LTE modem or NVMe SSD, and the final available slot for a lightning fast NVMe or SATA SSD. The bottom of the chassis is designed to accommodate mounting options including DIN rail and VESA plate. Finally, whether it's Windows® 10, Linux, or another OS, these systems are verified to run a wide range of operating systems so you can build the exact solution your clients want.

Rugged Features

Sequoia is a mini computer that's small in size but not on toughness or reliability. Engineered and manufactured in Germany, it supports an automotive-grade power supply range (8 to 32Vdc) with locking connector, provides locking video port connectors, and withstands a maximum relative humidity of 95% @ 40C and a wide operational temperature range of 0 to 60C. Sequoia also features a built-in health monitoring system which includes controllable fan, hardware monitoring and a watchdog timer. When it comes to rugged environments, Sequoia is built to last.

Build Embedded Solutions

Sequoia has several features that make it optimal for your embedded solutions. Built to stand the test of time, Simply NUC is committed to supporting the manufacture and sales of Sequoia in the same form, fit, and function for seven years from launch (Nov 2019). This work horse includes an M.2 key B slot that will accommodate an LTE modem for remote usage. Sequoia also features two serial ports, two gigabit Ethernet ports, two locking mini Display Ports, and wi-fi and cellular options to accommodate a plethora of embedded usages including AI, robotics, industrial computer, and POS.

Highlighted features

- AMD® Ryzen™ V1807B
- AMD® Radeon™ Vega 11 Graphics
- M.2 slot supports SATA or NVMe SSDs
- Two DDR4 SO-DIMM Sockets
- M.2 slot for LTE modem or NVMe SSD
- M.2 slot for Wi-Fi/ Bluetooth antenna
- RP-SMA Dual-Band Antennas
- MicroSD Card Reader
- Two mDP++ (4K 60Hz, HDR)
- wo Intel® Gigabit LAN
- Three USB 3.1 ports

- Security cover for SIM card
- One Serial RS-232
- One Serial RS-485 w/ RS-232 …capability
- 0-60° C operating temperature
- 9V DC 90W power supply adapter
- DIN Mount or VESA Mounting plate
- 7 year supply (from Nov 2019)
- Extended service warranty options (1, 3, 5-years)

Customization

- Supports DDR4-2666 Ram 4GB-64GB
- Supports M.2 SSD SATA 128GB- …512GB or NVMe 256/512GB SSD
- Supports M.2 for LTE or 256/512GB …NVMe SSD
- Supports M.2 SSD for WiFi/ Bluetooth
- Extended Temp ratings available

Technical Specifications

Processor

- AMD® Ryzen™ V1807B CPU (3.35GHz, 3.8GHz Turbo, 4C/8T, 35W.)

Storage Capabilities

- M.2 22×42 key M slot for SATA SSD (up to 512GB) or NVMe SSD (256 or 512GB)
- M.2 22×42 key B slot for LTE modem or NVMe SSD (256 or 512GB)
- MicroSD Card Reader

Audio

- Up to 7.1 surround audio via mDP Hardware Management Features
- Controlled FAN (PWM + Tacho), ..hardware monitoring and ..watchdog

Graphics

- • AMD® Radeon™ Vega 11 Graphics, up to 1.3 GHz
  - • Two mini-DP++ (4K, 60Hz, HDR) – option for using locking connectors

Peripheral Connectivity

- 2x Intel® i219 10/100/1000 Mbps RJ45 Ethernet
- Three Super-Speed USB 3.1 ports (1x front and 2x rear USB 3.1 gen 1 type ports)
- M.2 22×30 key E slot for Wi-Fi/ ..Bluetooth antenna
- (Optional) Intel® Dual Band Wireless-AC 8265 (802.11ac), 2×2, up to 867 Mbps
- (Optional) Dual Mode Bluetooth 5
- (Optional) LTE / 4G EMEA, APAC /Diversity / GNSS
- Wireless 802.11ac + BT 5 Radio is Removable or Disableable for security Baseboard Power Requirements
- 19VDC 90W power supply adapter with detachable power cord.
- 8 – 32V DC power supply range with locking connector (automotive grade)
- US Cord included, others available

System Memory

- Two DDR4 2400 SO DIMM sockets, 64GB Max, 1.2V Front Panel Header
- Reset, HDD LED, Power LEDs,power on/off

Front Panel Header

- Reset, HDD LED, Power LEDs, power on/off

Service Features

- 7 year supply (from November 2019)
- TAA compliant

Mechanical Chassis Information

- 4.5″ x 4.6″ x 1.8″ (116.4x 46.5 x 119.2 mm)
- VESA/DIN Mount Kit (Plate and Screws)
- 0.7kg (1.5lbs) Fully-Assembled with Antennas (no power adapter)

Certification and Regulations

Product Safety Regulations and Standards

- IEC 62368
- EN 62368
- CAN/CSA 62368

Environment Operating Temp

- iTemp : 0 C to +60 C
- Option for extended temp range of 40 C to +85 C
- Non condensing Humidity Storage Temperature
- 20 C to +70 C

EMC/RF Regulations and Standards (Class B)

- FCC CFR Title 47, Chapter I, Part 15, Subparts. B
- EN 55024
- EN 55032
- EN 55035
- CISPR 32
- ICES 003
- ETSI EN.301 489
- ETSI EN.301 489 17
- CNS 15458

Environmental Regulations

- RoHS Compliant
- REACH Compliant

Certified Operating Systems

- Windows 10 64 bit (Pro & Home)
- Windows 10 IoT Enterprise
- Windows Server 2019
- Certified with Ubuntu 18.04 LTS; compatible with various Linux distros. (Contact Simply NUC for specifics)

Documents / Resources

RYZEN LLM1v8SQ Quad-Core Simply NUC [pdf] User Manual
LLM1v8SQ Quad-Core Simply NUC, LLM1v8SQ, Quad-Core Simply NUC, Simply NUC, NUC