

VNX ANSI/VITA 74.0 - SMALL FORM FACTOR COMPUTER AND SYSTEMS

General

- VITA-74 NanoRock
- Electrical per VITA-65 OpenVPX
- Electrical per VITA-74 SpaceVPX
- BP Connectors per VITA-57 FMC

CHASSIS

- 4 Slot + Storage
- Conduction cooled with Fins
- Conduction cooling per VITA-48.2
- Dimensions (W x H x D) :
123.5mm x 104.5mm x 111.5mm
- 4.89 lbs (average)

CPU AND MEMORY

- IMX.8 @ 1.8 GHz
- DDR4 4GB @ 1.6 GHz

POWER SUPPLY

- +28 VDC (Range: +18 VDC to +36 VDC)

SPECIFICATIONS

- MIL-STD-810G MIL-STD-461F
- ECSS-E-ST-20-07C, ECSS-E-ST-20C, ECSS-Q-HB-70-23A, ECSS-E-ST-50-12C
- ANSI/VITA

NanoRock from LaRocheNoire Technology

The NanoRock system offers a perfect solution for challenging commercial, aerospace and military field use due to its compact size, lightweight design, and impressive capabilities. This rugged, stand-alone computer is well-equipped to endure harsh environments. Adhering to the VITA-74 standard, the NanoRock accommodates various field applications, such as mission computing, payload management, real-time control, data storage, communication systems, and mobile robotics.

The NanoRock system comes with a completely enclosed and conduction-cooled chassis, boasting two 19 mm and two 12.5 mm payload slots, along with a storage slot and a dedicated connector panel-PSU slot. Despite its compact and lightweight design, this system optimizes size, weight, power, and cooling. For added versatility, the front panel can be fitted with either circular MIL or standard rectangular connectors.

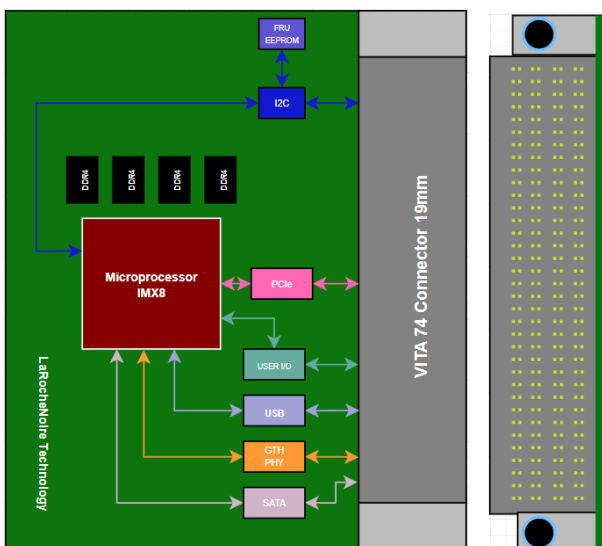


Figure 2: Payload - Single Board Unit (Left : Top view; Right: Connector side view)

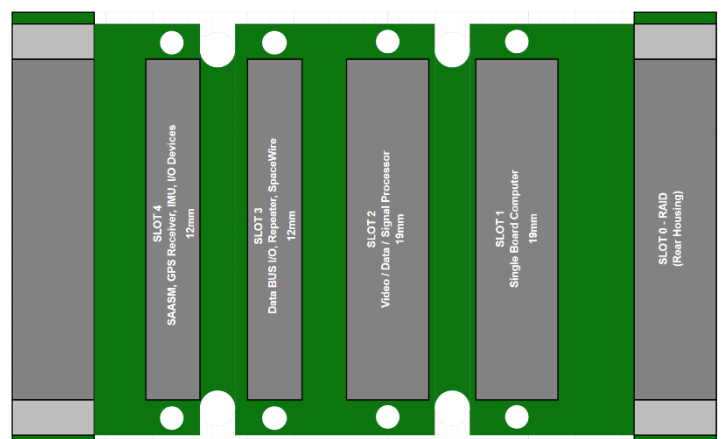


Figure 1: VNX Backplane board

Technical Specification

Power Supply

Parameters	Description
Input Voltage	28 VDC
Typical System Power	25 Watt
Maximum System Power	55 Watt (Without optional boards)

Nano Modules

Nano modules are a crucial component of the NanoRock systems. Besides the modules mentioned earlier, there are exciting new modules on the horizon, such as the SuperPC, ARM processors, multi-channel MIL-STD-1553, ARINC-429 modules, and storage units with data encryption. For more detailed information about these upcoming modules and their features, it is recommended to reach out to LaRocheNoire Technology SaS directly. They will be able to provide you with additional details and answer any specific questions you may have.

Parameters	Description
ANSI/VITA 74.0 Single Board Computer Module	The CPU module with IMX.8 processor with up 4GB SDRAM, 2GB Flash, PCI express, SATA, USB, I2C, GPIO, GTH and conduction cooling.
I/O Module with SpaceWire, MIL-STD-1553 and CAN	ANSI/VITA high-density, GPIO module with differential discrete and analog I/O, MIL-STD-1553 and CAN Bus
Signal and Data Processing Module	ANSI/VITA 74.0 Xilinx FPGA with Signal and Data processing IPs
High-Speed Serial Module	ANSI/VITA 74.0 High-Speed Serial module, configurable to RS-232, RS-422/485 and MIL-STD-188-114A
Global Positioning System Receiver	ANSI/VITA 74.0 Dual-Frequency GPS/GNSS receiver module.

LaRocheNoire Technology Nano Small Form Factor Solutions

The NanoRock systems are self-contained, standalone computer systems explicitly designed to function in rugged environments, including unmanned vehicles, ground vehicles, man-wearable devices, shipboard installations, and other similar settings where limited space, weight, power, and cost are crucial considerations. These systems offer a wide range of standard PC interfaces, along with additional ones like MIL-STD-1553, CAN Bus, Discretes, and others.

For more details and inquiries about the NanoRock systems, you can get in touch with LaRocheNoire Technology SaS directly. They provide Drivers and Board Support Packages for both Linux® and Windows® operating systems. Moreover, if you are interested in using other Real-Time Operating Systems such as, FreeRTOS®, RTEMS®, VxWorks®, Integrity®, and LynxOS®, LaRocheNoire Technology SaS can also provide information and support in that regard.

LaRocheNoire Technology Values

LaRocheNoire Technology SaS is dedicated to offering cutting-edge and top-quality computing resources to both systems manufacturers and end-users. They provide a wide range of options, from compact embedded servers to bladed servers, ensuring that their solutions cater to various needs.

LaRocheNoire Technology SaS takes a customer-centric approach, actively listening to and understanding the requirements of their clients. By doing so, they can tailor and optimize computing solutions that are easy to integrate, cost-effective to own and operate, and strike the perfect balance between standard commercial technology, environmental durability, and efficient use of space, weight, and performance.

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