NanoPAK i7
SMALL FORM FACTOR COMPUTER DATA SHEET

THEMIS

Product representation.
Actual product depends on configuration

OVERVIEW

The NanoPAK™ i7 computer system packs an embedded **Intel® 6th generation Core™ i7** (Skylake) processor, **32GB DDR4** memory, and **1TB FLASH storage** in a small and light-weight rugged form factor

MAXIMUM FLEXIBILITY

Multiple I/O configurations such as USB, VGA**, dual ethernet, GPIO, serial, power, and other custom interfaces allow users maximum flexibility and compatibility.

ROBUST PERFORMANCE

The Nanopak i7 supports **AVX 2.0** instruction, enabling fast fused multiply-add operations for better performance on signal processing, media and floating point computations, face recognition, compression, and encryption.

Designed for unmanned vehicle, ground vehicle, man-wearable, and shipboard applications, the Nanopak i7 **minimizes SWaP-C** (size, weight, power, and cooling) and boasts a hardened-aluminum **conduction cooled** chassis which survives environmental extremes.

THEMIS VALUE

Trusted worldwide, Themis has a **30-year track record** of providing enhanced-reliability computing platforms for mission-critical applications. Our robust product lines are known for their long life cycles, high performance, thermal resiliency, compatibility, and SWaP optimization. We listen, understand, and work closely with our customers to design computing solutions that are easy to integrate, inexpensive to own and operate, and reliable for years to come.

CPU architecture and Memory

- Intel® 6th Generation Core i7 (Skylake) Processor
- Linux® or Microsoft Windows® or virtualized environment
- Local or Network PXE boot
- Up to 32 GB System Memory
- Customizable I/O

Environmental

- Passive Cooling
- Operational Temperature: -40° C to 50° C *

Mechanical

- Dimensions (W x H x D): 174 mm X 33 mm X 114 mm
- Weight (typical): 1.6 lbs (.725kg)

Applications

- Stand Alone Computer
- Real Time Control
- Data Recorders
- Small Storage and Communications Systems
- Mobile Robotics

Markings and MIL Specifications

- MIL-STD-461F (Ground Mobile),
- IP67 Sealed
- CE Marking

* Themis designs all products to meet or exceed listed data sheet specifications. Some specifications are configuration dependent.

** For DisplayPort/HDMI options, consult with a Themis sales representative.
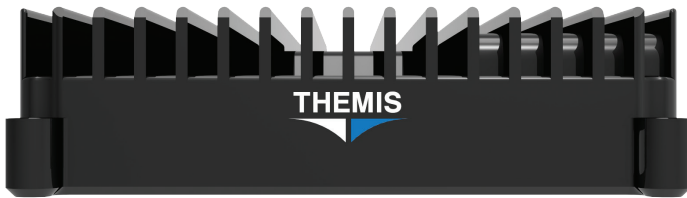
PROCESSOR, MEMORY

Parameter	Description
Architecture	Architecture Intel 6th Generation Core i7 Mobile
Processor	i7-6600U (Skylake)
CPU clock	2.6Ghz (up to 3.4 Ghz in Turbo mode)
Cache memory	4 MB, SmartCache
Number of cores	2 cores, 4 threads
Instruction set	64-bit, AVX 2.0, SSE 4.1/2.3
CPU power (TDP)	7.5W (TDP-down) 15W (TDP-normal) 25W (TDP-up)
System memory	32 GB
Memory type	DDR4-2133
Memory data path	64-bit

ENVIRONMENTAL

Parameter	Description
Cooling method	Conduction Cooled, Passive Convection Cooled
Operational temperature	-40°C / +50°C
Storage temperature	-40°C / +90°C
EMI	CE Marking
Shock	50G @ 25ms
Vibration (random)	10Hz-2000Hz; 5Grms
Humidity	95%
Altitude	15,000 feet

Notes

1. Temperature specifications are configuration dependent. Please contact Themis for details.

I/O

Parameter	Description
GPU	Intel® HD Graphics
VGA	Analog RGB with DDC (up to 1920x1200 @ 60Hz)
Ethernet	Dual Gigabit Ethernet
USB	(4) USB 2.0, (2) USB 3.0 additional ports available via mini PCIe
HD Audio	Line In (or MIC) / Line Out
GPIO	4 Lines
Serial Port	2 ports (RS232 with RTS/CTS or RS485)
Expansion Slot	Mini PCIe slot
Storage	Up to 1TB M.2 SATA
TPM 2.0	Yes
I/O connectors	Customizable
Input voltage	8 - 36V, optimized for 24V
Input power	20W (45W max)
Power Source	External, no internal battery
Wi-Fi	via optional M.2 (22x30)

MECHANICAL

Parameter	Description
Dimensions (W x H x D):	174 mm X 114 mm X 33 mm
Weight (typical)	1.6lbs (.725kg)

Corporate Headquarters
47200 Bayside Parkway
Fremont, CA 94538
Tel: 510-252-0870
Fax: 510-490-5529

European Sales Office
5 rue Irène Joliot-Curie
38320 Eybens, France
Tel: +33.476.14.77.86
Fax: +33.476.14.77.89

More Information
For any additional information,
go to themis.com.

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