ECRIN Systems

nanoONYX Family

More than a computer : the basis of your system.

With the nanoONYX range, ECRIN Systems delivers ultra-compact, modular and rugged embedded solutions, specifically designed to meet the unique constraints of each project, whether for aeronautical platforms, autonomous tactical systems or mission-critical industrial applications.

(2) With HoldUp module

(1) Without HoldUp module

intel.

- Intel® Atom™ or Intel® Core™ i7 processor
- up to 32GB DRR
- 1x DVI-D single link graphic output
- 2x GbE
- 2x RS-232, 2x RS-422 and 4x USB 2.0
- 4x AcroPack / mini PCIe expansion slots
- TPM 2.0
- 1x Internal M.2 SSD Slot
- 1x MVMe device on CPU board
- Fanless, MIL-DTL-38999 connectors

nanoONYX

+ up to 8 CAN Bus

nanoONYX-**CAN**

+ 1x Removable 2"5 SATA SSD

nanoONYX-**rd**

+ 2 USB3.0 Ports

nanoONYX-**USB3**

+2 HD-SDI interfaces

nanoONYX-**SDI**

FRENCH MANUFACTURER

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ENVIRONMENTAL QUALIFICATION TESTS

Operating temperature	-40°C to +55°C without external air flow +71°C depending on processor version and cTDP
Storage temperature	-40°C / +85°C
Ingress protection rating	IP67 (IP65 for nanoONYX-rd)
Altitude	Up to 116 mbar (50000ft); DO-160
Humidity	0%-95% @ 65°C and 0-85°C @ 38°C RH; DO-160
Salt fog	50% salt spray @ 96h; DO-160
Sand & Dust	Wind and fine dust particles; DO-160
Shock	40g@11ms ; DO-160, MIL-ST
Vibration	According to DO-160, Section 8, Category U

SOFTWARE – OPERATING SYSTEMS

- Windows 10 IOT LTSC,
- Windows 11 Pro
- Windows 11 IOT LTSC
- Linux 64-bit

OPTIONS VIA EXPANSION SLOTS

- AI coprocessor (Hailo 8-R)
- GigaEthernet interfaces
- Digital IOs
- RS232 / RS422 / RS485 ports
- MIL-STD-1553 Interfaces
- Arinc 429 / Arinc 417 interfaces
- Timing reference synchronized to GPS
- 2nd DVI-D or VGA interface

EMI / RFI - CE CERTIFICATION

According to DO-160 / MIL-STD-461	EN 55032: 2015 / A1 : 2019 Electromagnetic compatibility of multimedia equipment -Emission requirements	EN 55035:2017:Electromagnetic compatibility of multimedia equipment-Immunity requirements

	nanoONYX	nanoONYX-CAN	nanoONYX-rd	nanoONYX-USB3	nanoONYX-SDI
Size (including connectors)	(D) 205mm x (W) 140mm x (H) 67,5mm (1) (D) 205mm x (W) 140mm x (H) 78,9mm*	(D) 205mm x (W) 140mm x (H) 67,5mm	(D) 205mm x (W) 140mm x (H) 98,7mm	205mm (L) x 140 mm (W) x 90.2 mm (H)	205mm (L) x 140 mm (W) x 90.2 mm (H)
Weight	1,9kg (1) / 2,4kg*	1,9kg (1) / 2,4kg*	3,3kg	2,2kg	2,2kg
Architecture	COM-Express Type 10	COM-Express Type 10	COM-Express Type 10	COM-Express Type 10	COM-Express Type 10
Processor	Atom E3950 / Atom x6425RE / Core i7-8665UE / Core i7-1185GRE	Atom x6425RE / Core i7-1185GRE	Atom x6425RE / Core i7-1185GRE	Atom x6425RE / Core i7-1185GRE	Atom x6425RE / Core i7-1185GRE
RAM Capacity	8GBytes / 16GBytes	16GBytes	16GBytes	16GBytes	16GBytes
TPM	TPM 2.0	TPM 2.0	TPM2.0	TPM 2.0	TPM 2.0
Video output (CPU)	1x DVI-D	1x DVI-D	1x DVI-D	1x DVI-D	1x DVI-D
Video Input	No	No	No	No	2x HD-SDI input
GP-GPU device	Intel Integrated Graphic	Intel Integrated Graphic	Intel Integrated Graphic	Intel Integrated Graphic	Intel Integrated Graphic
Ethernet interfaces	2x 10/100/1000 BaseT	2x 10/100/1000 BaseT	2x 10/100/1000 BaseT	2x 10/100/1000 BaseT	2x 10/100/1000 BaseT
Serial ports	2x RS232 + 2x RS422	2x RS232 + 2x RS422 (Isolated)	2x RS232 + 2x RS422	2x RS232 + 2x RS422	2x RS232 + 2x RS422
Audio	1x Line In + 1x Line Out	No	1x Line In + 1x Line Out	1x Line In + 1x Line Out	1x Line In + 1x Line Out
GPIO/CAN	2x GP Inputs (LVTTL) 2x GP Outputs (LVTTL)	4x CAN Bus	2x GP Inputs (LVTTL) 2x GP Outputs (LVTTL)	2x GP Inputs (LVTTL) 2x GP Outputs (LVTTL)	2x GP Inputs (LVTTL)2x GP Outputs (LVTTL)
USB2.0	4x USB2.0	3x USB2.0	4x USB2.0	4x USB2.0	4x USB2.0
USB3.0	No	No	No	2x USB3.0 (USB-C connector)**	No
I/O Expansion slots	4x miniPCIe / Acropack slots	3x miniPCIe / Acropack slots Full I/O	4x miniPCIe / Acropack slots	3x miniPCIe / Acropack slots	2x miniPCIe / Acropack slots
Removable storage	No	No	1x 2"5 SSD	No	No
Internal storage	1x M.2 (S42)	1x M.2 (S42)	1x M.2 (S42)	1x M.2 (S42)	1x M.2 (S42)
Power consumption	Up to 30W	Up to 30W	Up to 30W	Up to 30W	Up to 30W
Power input	+28VDC (+14VDC / +36VDC)	+28VDC (+14VDC / +36VDC)	+28VDC (+14VDC / +36VDC)	+28VDC (+14VDC / +36VDC)	+28VDC (+14VDC / +36VDC)
Holdup capacitor	Optional (200ms)*	Optional (200ms)	No	No	Optional (200ms)

* for nanoONYX with HoldUp module
** 250MBytes/sec max per USB3.0 interfaces - Current limited to 0,8A per interface

ecrin SYSTEMS
143, rue Louis Neel
Parc Technologique du Pré Roux
38920 Crolles - France
Tel: +33 (0)4 76 92 20 01
sales@ecrin.com

Visit
www.ecrin.com

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