RUGGED COMPUTER Series

DESIGNED FOR CRITICAL ENVIRONMENTS

ecrin SYSTEMS

RUGGED COMPUTER Series

"Ready to application" embedded pre-qualified systems

Designed for "field" applications, particularly in the military, defense and security, aeronautics and aerospace sectors, embedded systems are often subjected to very severe environmental constraints that a conventional industrial PC such as a "PC Box" cannot meet.

Indeed, these extreme environments with, in particular, problems of extended temperatures (start-up & operation), high levels of shocks and vibrations, dust, humidity, salt spray, etc. often require much more resistant and reliable solutions that are commonly called "rugged embedded computer".

DESIGNED TO FIT THE MOST EXTREME NEEDS

Based on COM Express processors modules and qualified according to DO-160 and MIL-STD-810, the SWaP-C COTS and Modified COTS multi-mission computers **ONYX range** offers high flexibility in SWaP-C constraint environment and CPU/GPU/FPGA heterogeneous architecture for an optimised GFLOPS/Watt ratio.

On their side, the multi-slots conduction cooled 3U VPX computers in SFF chassis of the **TOPAZE range** address different types of Open VPX architectures to meet the needs of Radar, Sonar, EW, SIGINT, ELINT and SDR applications.

RELIABILITY AND RUGGEDNESS

- MIL-STD and DO-160 prequalified
- Fanless – Conduction cooled
- -40° C /+55° C (+71° C) operating temp
- Cable Free
- CE, RoHS, REACH compliant
- Based on a standard

DURABILITY

- Based on a standard form factors as COM Express or 3U VPX to facilitate long term replacement (maintenance, end of life, new developments...)
- Long life management : 15 years with revision control

CUSTOMER KEY BENEFITS

ALSO GOOD TO KNOW

- ITAR free without export constraint
- Designed and integrated in France

DEPENDABILITY AND SAFETY MANAGEMENT

- Hardware monitoring
- System diagnostic software
- Health monitoring

TIME TO MARKET

- COTS-MOTS Building Blocks

ADDITIONAL SERVICES

- Integration
- Adds-on (starter kits, breakout cables, laboratory cold plate...)
- Technical & long term support
- Support
- Obsolescence monitoring
- Live System Support...

MODULARITY AND FLEXIBILITY

- High flexibility to Modified COTS services
- Scalability for additional capabilities or functions
- Modular design
- Configurable front panel
- Customisation service according to customer specifications

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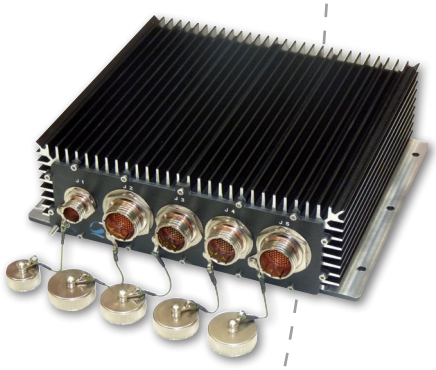
DESIGNED & PRODUCED
IN FRANCE

µTOPAZE

- 3U VPX Platform
- Intel® Xeon + NVIDIA GP-GPU + FPGA
- 10 Kg / 5.9 L / Up to 200 W
- *Situation Awareness, C4ISR, EW, Vision, GPU*

ONYX

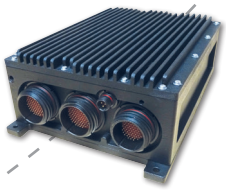


- COM-Express type 6 platform
- Intel® Xeon or Core i7 + NVIDIA GP-GPU + I/O expansion slots
- 7 Kg / 6 L / Up to 90 W
- *Situation Awareness; Vision, GPU, Aero/Mil and Homeland security*

µONYX

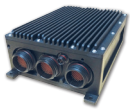
- Compact COM-Express type 6 platform
- Intel® 2/4-Core i7-U series + I/O expansion slots (Acropack/Mini PCIe)
- 3 Kg / 3 L / Up to 30 W
- *Small Form Factor for Aero/mil : UAV, GV, Robot*

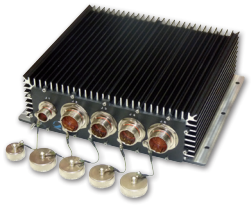
nanoONYX



- Mini COM-Express type 10 platform
- Intel® Atom™ or Core i7™ series + I/O expansion slots (Acropack/Mini PCIe)
- 1.9 Kg / 1.5 L / 15 W
- *Ultra Small Form Factor for Aero/UAV*

RUGGED COMPUTER Series






	nanoONYX	µONYX	ONYX	µTOPAZE
Size (including connectors) D x W x H	205 x 140 x 67,5 mm	181,1 x 208 x 107 mm	287 x 300 x 88 mm	244 x 255 x 139,6 mm
Weight	1,9 Kg	3,1 Kg	7,3 Kg	10 Kg
Architecture	COM-Express Type 10	COM-Express Compact size	COM-Express Basic size	3U VPX
Processor	Atom E3950 Core i7-8665UE	Core i7-8665UE	Xeon E-2276ML	Xeon E3-1505M v6
RAM capacity	8 Gbytes / 16 Gbytes	Up to 32 Gbytes	Up to 32 Gbytes	32 Gbytes
TPM	TPM 2.0 (Atom E3950) fTPM (Core i7-8665UE)	TPM 2.0	TPM 2.0	TPM 2.0
Graphic output (CPU)	1x DVI-D	1x DVI-D	1x DVI-D	1x DVI-D
Ethernet interfaces	2x 10/100/1000 Base T	2x 10/100/1000 Base T	3x 10/100/1000 Base T 1x 1000 Base-SX (on request)	2x 10/100/1000 Base T 1x 1000 GBase-LR (on request)
Serial ports	2x RS232 + 2x RS422	4x RS232 + 2x RS422	4x RS232 / RS422 / RS485	2x RS232 / RS422 / RS485
Audio	1x Line In + 1x Line Out	1x Line In + 1x Line Out	1x Line In + 1x Line Out	1x Line In + 1x Line Out
GPIO	2x GP Inputs (LVTTL) 2x GP Outputs (LVTTL)	8x isolated Inputs 8x isolated Outputs 4x GPIO (LVTTL)	8x GPIO LVTTL	2x GP Inputs (LVTTL) 2x GP Outputs (LVTTL)
USB 2.0	4x USB 2.0	4x USB 2.0	4x USB 2.0	4x USB 2.0
USB 3.0	No	1x USB 3.0 USB Field connector	1x USB 3.0 (optional) USB Field connector	No
GP-GPU expansion slots	No	No	1x MXM slot 2x DVI-D outputs	1x 3U VPX slot 4x HD-SDI in + 2x HD-SDI out
GP-GPU device	Intel Integrated Graphic	Intel Integrated Graphic	Intel Integrated Graphic + NVIDIA GPGPU (MXM expansion slot)	Intel Integrated Graphic + NVIDIA GPGPU (3U VPX expansion slot)
I/O expansion slots	4x miniPCIe / Acropack slots	1x PMC 1x miniPCIe + 1x miniPCIe/Acropack	1x PMC 1x miniPCIe	1x 3U VPX slot
Removable storage	No	2x 2"5 SSD (share with mSATA slot)	No	1x 2"5 SSD
Internat storage	1x M.2 (S42)	1x mSATA (share with one 2"5 SSD)	1x 2"5 SSD 1x cFAST slot	M.2 (S80) SAA slot #1: on SBC M.2 (S80) SAA slot #2: on filtering board
Power consumption	Up to 30 W	Up to 35 W	Up to 90 W	Up to 200 W
Power input	+28 VDC (+14 VDC / +36 VDC)	+28 VDC (+14 VDC / +36 VDC)	+28 VDC (+14 VDC / +36 VDC)	+28 VDC (+14 VDC / +36 VDC)
Holdup capacitor	None (on request)	None	Up to 120 ms	None

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