ECRIN Systems

OPALE V2 Compact

High-Performance Computing in a 2U Chassis

READY FOR OEM WITH MODIFIED COTS SERVICES

Ready for OEM integration with modified COTS services, the OPALE V2 Compact delivers high-end computing performance in a compact 2U chassis under 20″ (492 mm), fitting most standard 19″ rack spaces.

This system is ideal wherever footprint, performance, reliability, and longevity are non-negotiable: military base stations, rugged servers for harsh environments, simulators, telemetry systems, telecom, medical imaging, infotainment, command & control stations, test benches, or Internet appliances.

With our in-house design center, ECRIN Systems helps you customize your computer, providing a competitive advantage in industrial applications. We take full responsibility for end-to-end system development, even for small quantities, and guarantee long-term availability, letting you focus on your value-added services.

Customization options include:

- Mechanical and industrial design
- Front and remote user interfaces
- Custom LEDs and I/Oenhances your sales.

- Modified COTS with easy brand naming, configuration and customization for competition advantage
- Security with trusted boot
- Local and remote active management to detect errors before they occur
- Enhanced asset protection for continuous operation:
  - > Durable connectors: 15 microinch Gold/Metal plated connectors assure long term reliability
  - > Enhanced USB compatibility: USB power supply ensures stability (5V +/-5%)
  - > Rugged EMI construction: EN55032 Class B Radiation test, -10dB than competition Class A
- MIL-STD tests passed (for T°C, shocks & vibrations, humidity, noise)
- Efficient thermal concept to get higher MTBF
- Reduced TCO with reporting log file and downtime in harsh environments
- Energy efficient design / Low noise
- Long life management: up to 10 years with revision control
- Advanced Multi-Core "Alder Lake", "Raptor Lake" or "Meteor Lake" boosted computing performance with DDR5 speeds and timings
- Expandability with 4 full-height and full-length I/O cards into PICMG 1.3 butherfly backplane

FRENCH MANUFACTURER

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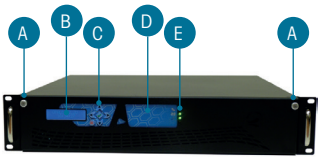
OPALE V2 Compact

RACK SPECIFICATIONS

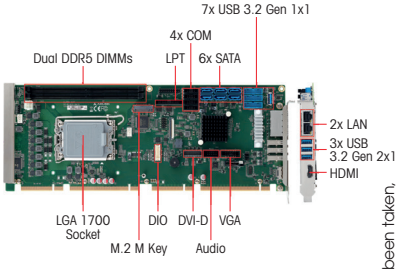
Construction	Anti-corrosion and long-term heavy-duty steel
Dimensions (W x H x D)	19" / 2U with 19.4-inch depth (483x88x492mm)
Weight	12.5 kg (standard configuration)
Color	Black
Cooling	Three 80mm ball bearing low noise fans Fan speed regulation and monitoring Top access for easy maintenance
Power supply	2U form factor, compliant with Mini Redundant PSU
Drive bays	One 5"1/4 front accessible drive bay (or Slim CD + 3"1/2) One 3"1/2 front accessible drive bay
Backplane configuration	2U butterfly form factor backplane 5 slots Full length board on every slot
Front panel	Front door for drives bays and USB access Mini-IHM, 4 LEDs with I/O capabilities Lexan for easy customization
Cards lock	Retaining bracket for cards Rugged holding parts for full length boards (SHB & PCI, PCI Express)
Carton Size (W x H x D)	580 x 260 x 680 mm



A: Single door with 2x Thumbscrews
B: LCD 2x16 characters
C: Keyboard (Power & Reset)
D: Lexan for easy customization
E: 4x tri-color LEDs
F: 2x USB
G: 3"1/2 drive bay
H: 5"1/4 drive bay

SHB SPECIFICATIONS

Form factor	PICMG 1.3 – Graphic Class / Server Class - PCI Express Gen 3
Processor	14/13/12th Gen Intel® Core™ i9/i7/i5/i3 Processor
Chipset	Intel® Q670E Express Chipset
Memory	Dual-channel Non-ECC DDR5 4800 MHz, up to 64 GB
Video	Integrated Intel® HD Graphics series 1x HDMI on rear I/O, DVI-D and VGA via on board pin header
Ethernet	LAN1: Intel® I226-V via RJ45 LAN2: Intel® I226-LM via RJ45
Disk	6x SATA 3.0 onboard with RAID support 1x M.2 M-Key, 2280, support PCIe Gen 4 x 4
Audio	Option via module DB-Audio2 (Realtek® ALC262)
USB	3x USB 3.2 Gen 2 x1 ports (10Gbps) on rear I/O 6x USB 3.2 Gen 1 x1 via onboard box headers 1x USB 3.2 Gen 1 x1 vertical type A port 4x USB 2.0 to backplane
Watchdog Timer	1~65535 sec software programmable, can generate system reset
Hardware Monitor	CPU/System temperature, CPU fan speed and onboard DC voltages
TPM	Infineon TPM SLB 9670XQ2.0 or 9670VQ2.0
I/O	Serial port (pin header): 2x RS-232/422/485 + 2x RS-232 DIO (pin header): 8-bit in and 8-bit out Parallel port (pin header) : 1x LPT port



BACKPLANE SPECIFICATIONS

EBP-D5E2	1xSHB / 1xPCIe x16 Gen3 / 1xPCIe x4 Gen2 / 2xPCI 4x USB 2.0
CI00192-A	1x SHB / 2xPCIe x8 Gen3 / 1xPCIe x4 - 2x SATA, 2x USB 2.0

ENVIRONMENTAL SPECIFICATIONS

Temperature	Operating: 0~50°C (MIL STD 810 G, method 502.5 / 501.5) - Storage: -20~80°C
Humidity	Operating : 5 à 90% non condensing
Altitude	0-3000m (0-10.000ft) operating
Shock & vibration	Operating: 15G, 11ms 6 axis (MIL STD 810 G, method. 516.6) - 5~100 Hz 0.8G (MIL STD 810 G, method. 514.5)
Noise	34.9 dBA (Iddle), 35.9 dBA (50%), 42 dBA (80%) – MIL-STD-740-1
CE certification	EMC : NF EN IEC 61000-3-2 :2019/A1 :2021/A2 :2024, NF EN 61000-3-3 :2014/A1 :2019/A2 :2021, NF EN IEC 61000-6-4 : 2019, NF EN 55032 :2015/A1 :2020, NF EN IEC 61000-6-2 :2019, NF EN 55035 : 2017/A11 : 2020. SAFETY : NF EN IEC 62368-1: 2024 / A11 :2024

SYSTEM MONITORING AND MANAGEMENT

- Intel® AMT for remote management
- Local control with embedded MMI (Windows & Linux services)
  - > FAN control & monitoring
  - > System & network information
  - > Watchdog & elapsed time counter
  - > Redundant P/S default
  - > Alarm (fan, temp., redundant P/S), Log file
  - > User script launch form menu entry
  - > Easy configuration with .TXT file

SERVICES

- Branding user's Lexan – Costless, NRE fees only
- Customization :
  - > Front panel design
  - > Specific I/O on front panel / rear panel
  - > Specific H/W configurations
  - > Specific S/W functionality

Call us for more information …

STANDARD CONFIGURATION

Power Supply Unit	ATX 12V – 500W – High Efficiency 80 Plus Gold 90 ~ 264 VAC full range / 47~63 Hz 5V@16A, 12V@41A, -12V@0.3A, 3.3V@14A, 5VSB@3A Option for 2x 500W Redundant 2U P/S High Efficiency (80+), 90-240VAC auto range /47-63Hz	**Processor**	• Core™ i9-14901E (8P+0E Cores, 2.8~5.6GHz, 36MB Cache, 65W TDP) • Core™ i7-14701E (8P+0E Cores, 2.6~5.4GHz., 33MB Cache, 65W TDP) • Core™ i5-14501E (6P+0E Cores, 3.3~5.2GHz, 24MB Cache, 65W TDP) • Core™ i9-13900E (8P+16E Cores, 5.2GHz max., 36MB Cache, 65W TDP) • Core™ i7-13700E (8P+6E Cores, 5.1GHz max., 30MB Cache, 65W TDP) • Core™ i5-13500E (6P+8E Cores, 4.6GHz max., 24MB Cache, 65W TDP)
Back plane	CI00192-A	**Memory**	DDR5-4800 : 8GB / 16GB / 32GG / 64GB
Drives	1 x 2"1/2 SATA Removable Drive Enclosure 1 x 3"1/2 front accessible drive bay free 1 x Slim CD drive bay free	**Disk**	• 2"1/2 7200 RPM Hard Drive (1TB ~ 4TB) • SLC & 3D TLC Solid State Drive (32 Go ~ 8TB) • Up to 6x hot swap 2"1/2 HDD/SSD with optional drive bay
Front I/O (behind door)	2 x USB 2.0		
Rear I/O	HDMI + 2x 2.5GbE + 3xUSB 3.2 + 2xCOM	**OS**	• Microsoft® Windows 11 64-bit • Linux (Kernel 5.8 and up)

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