

OPALE V2

Trusted and reliable embedded industrial PC's



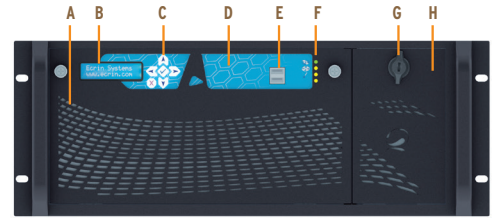
► Ready for OEM with Modified COST services

When generic doesn't fit, multi-Core OPALE V2 family, based on standard PICMG 1.3 form factor, offers flexibility to fit into many applications for OEM, System Integrators and Application Providers in a variety of domains: Test bench systems, FPGA/GPGPU intensive computing, rugged servers for harsh environments (Aero/Mil), high availability embedded computers for cybersecurity, vision, central data acquisition, control/command...

To precisely meet your requirements, even for small quantities, ECRIN Systems takes full system development responsibility and guarantee long term availability to allow you to concentrate on your added value and core business. From mechanical parts to industrial design, with front and remote user interfaces, user's LED's and I/O's, easy customized front and rear connectors fitting your activity, specific face-plate color and design, Lexan polycarbonate sheet with your logo and brand name, we will offer you a unique look that will shape your image and promote your sales.

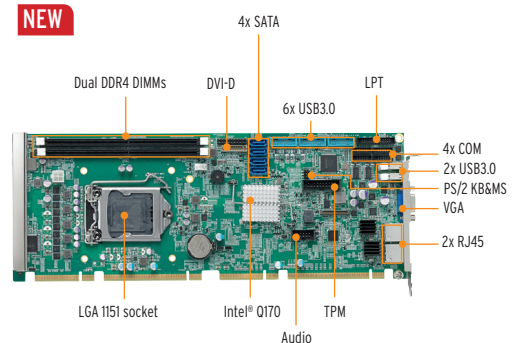
- > Modified COTS with easy brand naming, configuration and customization for competition advantage
- > Security with Trusted boot
- > Local and remote active management to detect errors before they occur
- > Enhanced asset protection for continuous operation:
 - Durable connectors: 15 microinch Gold/Metal plated connectors assure long term reliability
 - Enhanced USB compatibility: USB power supply ensures stability (5V +/-5%)
 - Rugged EMI construction: EN55022 Class B radiation test, -10dB than competition Class A
- > MIL-STD tests passed (for T°C, shocks & vibrations, humidity, noise)
- > Reduced TCO with reporting Log file and downtime in harsh environments
- > Green power / Low noise at 37dBA (equivalent to no risk)
- > Long life management: up to 10 years by contract
- > Advanced Multi-Core "Skylake" boosted computing performance with DDR4 speeds and timings
- > Flexible backplane options for PCIe configuration with dedicated bandwidth to accommodate GPGPU/FPGA intensive computing
- > Up to 14 full length cards / 451 mm depth only

Rack specifications	
Construction	Anti-corrosion and long term heavy-duty steel, black color
Dimensions (W x H x D)	19"/4U with 17.8 inch depth (483x177x451mm)
Weight	18 kg (standard configuration)
Color	Black
Cooling	Three 92mm ball bearing low noise fans with monitoring Front access for easy maintenance
Power supply	PS2 form factor, compliant with Mini Redundant PSU
Drive bays	Two 5.25" front accessible drive bay
Backplane configuration	14 slots backplane, all for full length I/O boards
Front panel	Front door with lock, two USB and drive bay access Front door for dust filter and fan maintenance Embedded MMI, 4 LEDs with I/O capabilities Lexan for easy customization
Cards lock	Adjustable hold down bar for cards Rugged front holding parts for full length CPU and I/O cards
Packaging (W x H x D)	600 mm x 345 mm x 640 mm



- A: Dust filter & Fan access door
- B: LCD 2x16 characters
- C: Keyboard (Power & Reset)
- D: Lexan for easy customization
- E: 2 x USB (optional)
- F: 4 x tri-color LEDs
- G: Key lock
- H: Drive bay door

SHB specifications	
Form factor	PICMG 1.3 - Graphic Class / Server Class - PCI Express Gen 3
Processor	LGA1151 socket - 6th Gen Intel® Core™ processor (codename Skylake)
Chipset	Intel® Q170 Express chipset supporting PCI Express 3.0
Memory	Dual-channel DDR4-2133 up to 32 GB (2* DIMM)
Video	Integrated Intel® HD Graphics (VGA and DVI-D internal)
BIOS	AMI® UEFI BIOS; 128 Mbit SPI Flash Memory
Ethernet	2 x GbE (Intel® I219LM + Intel® I211-AT) Intel® AMT and Wake On LAN support
Disk	4x SATA 6Gb/s ports Intel® Rapid Storage Technology, supports RAID 0/1/5/10
Audio Codec	High Definition Audio interface with DB-Audio2 (option)
USB	8x USB 3.0, 4x USB 2.0 (on backplane)
Watchdog timer	24~65535 sec software programmable, can generate system reset
Hardware monitoring	CPU & System temperature, fan speed and onboard DC voltages
Manageability	SEMA support with BMC, SEMA Cloud
SSI Trusted boot	1x box header for TPM module (optional) - Atmel AT97SC3204 TIS 1.2
I/O peripherals	Serial port : 2x RS-232, 2x RS-232/422/485 Parallel port : 1x LPT port via onboard box header KB/MS : 1x internal pin header for PS/2 keyboard/mouse



Backplane specifications	
WBP-13E4	1xSHB / 1xPCIe x8 / 3xPCIe x4 / 8xPCI
EBP-13E4	1xSHB / 1xPCIe x16 / 3xPCIe x4 / 7xPCI
EBP-13E2	1xSHB / 1xPCIe x16 / 1xPCIe x4 / 10xPCI
EBP-10E5	1xSHB / 1xPCIe x16 / 4xPCIe x1 / 4xPCI
BPG7087	1xSHB / 4xPCIe x16 / 5xPCIe x4



Environmental specifications	
Temperature	Operating : 0-50°C / Storage -20-80°C (MIL-STD-810F, method. 502.4 proc II)
Humidity	Operating : 5 à 95% non condensing
Altitude	0-3000m (0-10.000ft) operating
Shock & vibration	Operating: 15G, 11ms 6 axis (MIL STD 810 F, method. 516.5) - 5-100 Hz 0.8G (MIL STD 810 F, method. 514.5)
Noise	37 dBA (MIL-STD-740-1)
CE certification	EMC: 2014/30/UE ; EN 61000-6-2, EN55022, EN 55024 - SAFETY: 2014/35/UE ; EN60950-1 : 2006 2 nd edition A11 : 2009 + A1 : 2010 + A2 : 2011 + A2 : 2014

System monitoring and management	
<ul style="list-style-type: none"> > Intel® AMT for remote management > Local control with embedded MMI (Windows & Linux services) <ul style="list-style-type: none"> - FAN control & monitoring - System & network information - Watchdog & elapsed time counter - Redundant P/S default - Alarm (fan, temperature, redondant P/S), Log file - User script launch form menu entry - Easy configuration with .TXT file 	

OEM services	
<ul style="list-style-type: none"> > Branding user's Lexan - Costless, NRE fees only > Modified COTS customization: <ul style="list-style-type: none"> - Front panel design - Specific I/O on front panel / special connectors on rear panel - Specific H/W configurations - Specific S/W functionality <p style="text-align: right;">Call us for more information ...</p>	

Standard configuration			
Power Supply Unit	ATX 12V - 400W - High Efficiency 80+ 90 ~ 240 VAC full range / 47-63 Hz 5V@20A, 12V@30A, -12V@0.8A, 3.3V@20A, 5Vstb@3.5A Option for 2x 500W Redundant P/S 90-240VAC full range / 47-63Hz	Processor	<ul style="list-style-type: none"> - Intel® Core™ i7-6700 (4C/8T, 3.4 GHz, 8M Cache, 14nm, 65W TDP) - Intel® Core™ i7-6700TE (4C/8T, 2.4 GHz 8M Cache, 14nm, 35W TDP) - Intel® Core™ i5-6500 (4C/4T, 3.2 GHz, 6M Cache, 14nm, 65W TDP) - Intel® Core™ i5-6500TE (4C/4T, 2.3 GHz, 6M Cache, 14nm, 35W TDP) - Intel® Core™ i3-6100 (2C/4T, 3.7 GHz, 3M Cache, 14nm, 51W TDP) - Intel® Core™ i3-6100TE (2C/4T, 2.7 GHz, 4M Cache, 14nm, 35W TDP)
Backplane	WBP-13E4	Memory	DDR4-2133 : 4Go / 8Go / 16Go / 32Go
Drives	1 x Slim DVDRW 1 x 2.5" SATA Removable Drive 1 x 5.25" front accessible drive bay free (up to 4x removable 2.5" HD or SSD)	Disk	<ul style="list-style-type: none"> - 2.5" 7200 RPM Hard Drive (500Go ~ 1To) - SLC and/or MLC Solid State Drive (32 Go ~ 2To) - Up to 4x hot swap 2.5" HD/SSD with optional 4in1 drive bay
Front I/O (behind door)	2x USB 2.0	OS	<ul style="list-style-type: none"> - Microsoft® Windows® 7 32/64-bit, Windows 8.1 & 10 64-bit - Linux 32/64-bit
Rear I/O	VGA + 2xGbE + 4xUSB 3.0 + 2xCOM		

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