SRCS Small Rugged Computer System

Facts

- Intel Core Ultra® inside

- Convection and conduction cooled

- 5x5x2.5" ultra small form factor, only 1l volume

- -40°C .. +70°C operating temperature range

- Up to 40W power dissipation @ T_A = 55°C

- ITAR free, European manufacturing

The SRCS system designed by powerBridge Computer is a rugged high performance small form factor computer for tough environments. Requiring only 5"x5" base area the enclosure has the smallest possible footprint fitting perfectly into applications with limited space, but is also as a VITA 75 compliant version available. The SRCS system is intended for use in land, air and marine applications. The lightweight compact and fully sealed case operates fanless, resists contamination and humidity with its IP67 prevention and is shock and vibration protected up to 40G according to MIL-STD-810-G. The SRCS operates in a temperature range from -40 up to +70 °C allowing up to 45W power dissipation at 45°C. The power supply supports 18-32 V DC. The integrated power filter is according to MIL-STD 1275E.

The internal computing platform comes in form of a Com-HPC Mini module and is expandable with additional features if required. Also two Mini-PCIe module slots are available for custom options. SSD storage up to 2 TB can be configured. All interfaces are routed to a EM4165 connector, and optional a separate USB 3.0 and an antenna connector is provided. The inside chassis surface is colorless passivated, the outside is either powder-coated or anodized.

The SRCS system perfectly fits in new designs as also in retrofit solutions. Due to the Com-HPC Mini form factor it is easily adaptable to different application requirements and future-proof.

powerBridge Computer

System Specifications

Processor	Intel Core Ultra 7 125U / 135U / 155H / 165H
	Intel Core Ultra 5 125U / 135U / 155U / 165U
Memory	Up to 64GB LPDDR5x at max. 7467 MT/s
Storage	Opt. 64-256GB NVMe SSD soldered onboard
	Up to 2TB via M2 NVMe module 2280
	2 external SATA Gen3 channels
Graphics	Intel® Arc graphics
	HW decoding of HEVC (H.265), H.264, AV1, VP9, MPEG2, WMV9, JPEG/MJPEG formats
	HW encoding of HEVC (H.265), H.264, AV1, VP9 and JPEG/MPEG formats

I/O

Video	1x Mini DP 1.4a
Audio	1x I2S, up to 2x sound wire
LAN	Up to 6x GbE, up to 2x 2.5GbE
USB	Up to 1x USB 4.0
	up to 3x USB 3.x
	up to 5x USB 2.0
Serial	2x UART (RS232, 422, 485)
CAN	1x CAN
GPIO	12x GPIO
I/O expansion	2x M.2 Expansion (2280 / 2260 / 2242 / 2230 / e.g. WiFi, SSD, …)
I/O options	GPS, GSM

Power Supply

Power input	18 … 32 V DC
Power filter	MIL-1275E
Power consumption	40 W max. @ 55 °C T_A, 45 W max. @ 45 °C T_A, depending on configuration

Environmental

Cooling	Convection and cold plate conduction
Operating temperature range	-40 … +70 °C, (-55 .. +55°C on req.)
Storage temperature range	-40 … +85 °C, (-55 .. +85°C on req.)
Vibration	MIL STD-810-G
Operating shock	MIL-STD-810-G
Ingress protection	IP 67
Altitude	-1,500 to +60,000 ft
Humidity	0 … 95% relative humidity
EMI/RFI	MIL-STD-461

Certification and Standards

Compliance	CE, prepared for MIL-STD-810 certification
MTBF	acc. to MIL-HDBK-217F on req.

Mechanical

Dimension	127 x 127 x 62 mm³, < 1dm³
Form factor	Proprietary, opt. VITA 75 compliant
Weight	< 1.3 kg, depending on configuration
Connectors	EM4165 series, opt. SMA, MIL38999

Software

BIOS	AMI BIOS
Security	TPM 2.0
OS	Microsoft® Windows 11 IOT (64 bit) Ubuntu (64 bit)

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