

BLOK Family

Industrial BoxPC platforms for the long life mission critical network and HMI applications with SWaP-C Premium design

-10 +50 °C / -40 +70 °C



RUGGED



LIGHT



THIN



RELIABLE



MULTIDISPLAY



CONNECTIVITY



FANLESS



COSTEFFECTIVE



BLOK Family computers are designed and manufactured in Russia. They are based on cutting edge engineering ideas, on advanced digital technologies in microprocessing, networking, multimedia, 3D CAD design.

Every cubic inch of BLOK Family computers combines 30 years-old expertise and successful RTSoft teamwork with our Partners – world leaders in embedded IoT, energy, security, industrial automation, transportation and other industries.

BLOK – privilege for future owners who values comfort and profits:

- High reliability
- State-of-the-art functionality
- Maximum compatibility level
- Ergonomic design
- Long warranty
- Low TCO
- Easy to use
- Reasonable price
- Short delivery time
- Long lifecycle
- Technical support from the best industry experts
- Customizability

Powerfull & Up-to-date

The heart of BLOK computers is the embedded upgradable COM Express module based on the embedded Intel Core and Xeon processors. It guarantees best in class CPU/GPU performance, low power consumption and excellent compatibility.

Ergonomic & Simple

Fanless rugged design makes BLOK computers absolutely noiseless at work. Compact size and light weight make installation easy and simple.

Stay online

BLOK computers are designed for handy network GigaEthernet environment. Mini PCI Express/SIM expansion slots enable high speed Wi-Fi and GSM connectivity. BLOK BoxPCs – perfect network platforms for IoT tasks.

Reliable & Lower TCO

Extended warranty for BLOK is 3–7 years. All critical components of BLOK are chosen to operate at 24/7. Power is redundant. The longest warranty and the highest reliability means the lowest TCO.



BLOK

Computing core

CPU	Intel Core & Xeon 6 th Skylake H Embedded line	Intel Core & Xeon 7 th Kaby Lake H Embedded line	Intel Core & Xeon 8 th Coffee Lake H Embedded line	Intel Core & Xeon 9 th Coffee Lake Refresh H Embedded line
CPU type (mobile, embedded line)	i5/i7/Xeon E3 v5	i5/i7/Xeon E3 v6	i5/i7/Xeon E	i3/i5/i7/Xeon E
CPU frequency (base/turbo)	up to 2,8/3,7 GHz	up to 3,0/4,0 GHz	up to 2,7/4,4 GHz	up to 1,8/4,4 GHz
Chipset	QM170/CM236	QM175/CM238	QM370/CM246	HM370/QM370/CM246
Number of cores	4	4	4 or 6	4 or 6
Memory types (DDR4 ECC/without ECC)	8/16/32 GB	8/16/32 GB	8/16/32/64/96* GB	8/16/32/64/96* GB
Processor graphics	HD 530/Iris Pro P580	HD 630/P630	Ultra HD 630/P630	Ultra HD 630/P630
TDP CPU/GPU	25/45 W	25/45 W	35/45 W	25/35/45 W

Common Features

RTC + GOLD CAP, Watchdog

Storage

Type	2 x 2,5" SSD or HDD SATA 6 Gb/s, option: M.2 SSD, SATA 6 Gb/s, NVMe* SSD PCIe
Capacity	2,5" SSD: from 64 GB to 4 TB, M.2 SSD: up to 1 TB, NVMe SSD: up to 1 TB

Extensions

Video	3 x DisplayPort up to 4K (Video+Audio)
Audio	1 x Mic, 1 x Line out, Stereo Intel HD

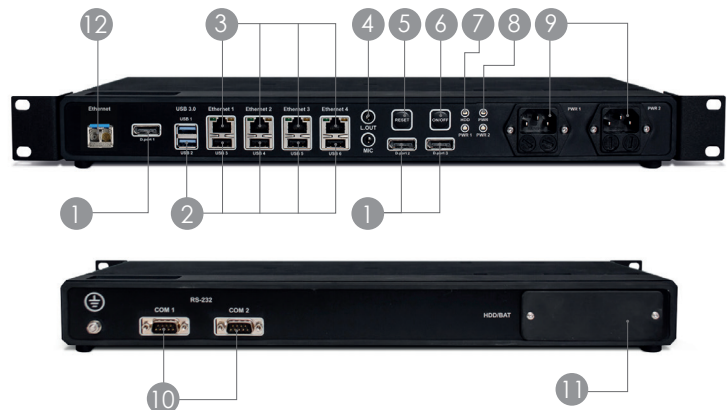
*MOQ, only for Coffee Lake i7/Xeon

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USB	6 x USB 3.0/2.0	
Ethernet	4 x 10/100/1000BASE-T, option: 1 x optical 1G SFP SX/LX	
COM serial	2 x RS232 (up to 115 200 baud, optoisolated), option: 2 x RS422/485	
Mini PCI Express	2 slots/Wi-Fi ready	
SIM slot	1 slot/GSM ready	
Power Input (2x PSU, Redundant)	AC/DC: 220 V/50-400 Hz, DC/DC: 9-36 V, 18-75V	
Software support	Linux, Windows, QNX, LynxOS, VxWorks	
Size, H x W x D (mm)	Blok Ultra 44 x 415 x 210/ Blok XT 49 x 415 x 210	
Mounting	19", desktop, wall, DIN-rail, cold plate	
Weight (max.)	5 kg	
Version	Industrial	Rugged
Temperature		
Operation	standard: -10 to +50 °C / extended: -40 to +70 °C	
Storage	-40 to +85 °C	
Cooling	fanless	
Power consumption (max.)	150 W	
Protection	IP50	
EMC/EMI	Group 3 TS AS-YARO GOST R 32137-2013, TP TC 020/2011, Class A	
Shock (operating)	M41: 30 m/sec ² (3 g) from 2 to 20 ms	75 g (1-5 ms), 15 g (5-10 ms)
Vibration (operating)	M41: up to 20 m/s ² (2 g)/0,5 to 200 Hz	to 5 g (1-500 Hz)
Crash test (operating)	50 g/11 ms, 10 g/0,5-500 Hz	12 g/1-500 Hz
MTBF (hours)	from 70 000	from 50 000
Warranty	3-7 years	
Certification	GOST R Certificate, EAC certificate, ST-1 Chamber of Commerce of Russia	
License	TÜV ISO 9001-2015, FSTEC of Russia, Rostechnadzor, Minpromtorg	
Customization options	<ul style="list-style-type: none"> ▪ Fast customization to meet the goals of the project ▪ Change of powering (DC from 12 to 220 V) ▪ Change of size, cooling type and I/O ▪ Vertical markets certification ▪ Portation of field software and middleware 	

Ports description for BLOK

1. 3 x DisplayPort 4K UHD
2. 6 x USB
3. 4 x GEthernet
4. Audio / Mic
5. Reset
6. On/Off
7. HDD LED
8. PWR LED
9. 2 x AC or DC power
10. 2 x RS232C/ 2x RS422
11. 2 x HDD/SSD
12. SFP GEthernet





BLOK-S

Type of COMe module	COMe Basic	COMe Compact
Computing core		
CPU	Intel Core & Xeon 9th Coffee Lake Refresh H Embedded line	Intel Core & Celeron 8th Whiskey Lake U Embedded line
CPU type (mobile, embedded line)	i3/i7/Xeon	Celeron/i3/i5/i7
CPU frequency (base/turbo)	Up to 2,0/4,2 GHz	Up to 1,7/4,4 GHz
Chipset	HM370/QM370/CM246	Integrated SoC
Number of cores	4 or 6	2 or 4
Memory types (DDR4)	8/16/32/64 GB, ECC/without ECC	4/8/16/24/32/48/64 GB, without ECC
Processor graphics	Ultra HD 630/P630	Ultra HD 610/620
TDP CPU/GPU	25 W	15 W
Common Features	RTC + GOLD CAP, Watchdog	
Storage		
Type	2x M.2 SSD SATA 6 Gb/s or 2x PCIe NVMe Gen 3x4/Gen 3x2	2x M.2 SSD SATA 6 Gb/s on request: 1x M.2 SSD SATA 6 Gb/s + 1x PCIe NVMe Gen 3x4/Gen 3x2
Capacity	M.2 SSD: up to 2 TB, PCIe NVMe: up to 2 TB	
Extensions		
Video	2 x DisplayPort up to 4K (Video+Audio)	
USB	6 x USB 3.0	
Ethernet	2 x 10/100/1000BASE-T	
I/O port	2x RS485, 8x Digital I/O, mPCIe, iButton, Reset, +12V/1A	
Mini PCI Express	2 slots	
Power Input	+12 V DC	
Software support	Linux, Windows, QNX, LynxOS, VxWorks	
Size, L x W x H (mm)	170 x 145 x 50	
Mounting	19" via adapter, desktop, VESA 100/200, cold plate	
Weight (max.)	3 kg	
Version	BLOK-S Rugged 00	BLOK-S Rugged 01
Temperature		
Operation	0 to +45 °C	-40 to +55 °C
Storage	-50 to +85 °C	
Cooling	fanless	
Power consumption (max.)	40 W	

BLOK-S

Protection	IP50	
Shock (operating)	50g (1-5 ms), 3g (5-10 ms)	
Vibration (operating)	up to 3 g (5-500 Hz)	
MTBF (hours)	from 70 000 hours	from 50 000 hours
Warranty	3-5 years	
Licenses	TÜV ISO 9001-2015, FSTEC of Russia, Rostechnadzor, Minpromtorg	
Customization options	<ul style="list-style-type: none"> • Fast customization to meet the goals of the project • Change of powering • Change of size, cooling type and I/O • Vertical markets certification • Portation of field software and middleware 	

Ports description for BLOK-S

1. 2 x GEthernet
2. 6 x USB
3. 2 x DisplayPort 4K
4. DC power
5. I/O port: mPCI & 2xRS485 & iButton & Reset
6. Reset
7. SSD LED
8. PWR LED
9. On/Off



Mounting options

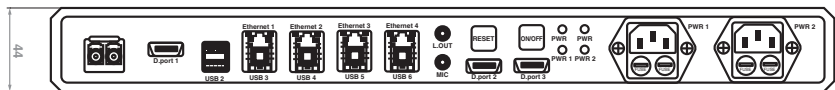
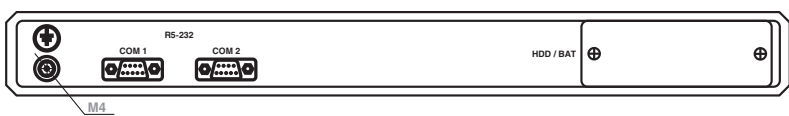
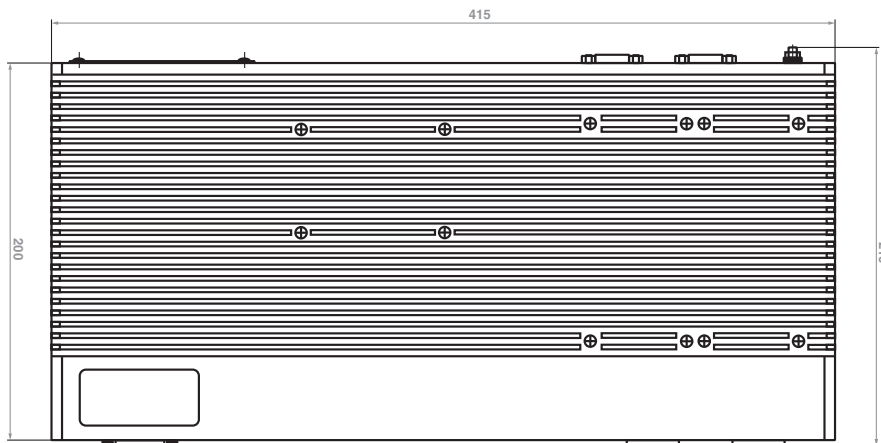
Cold plate



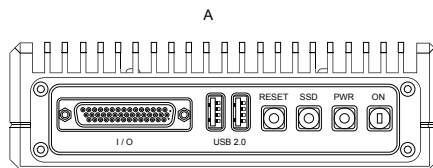
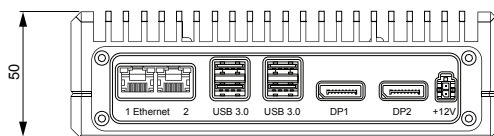
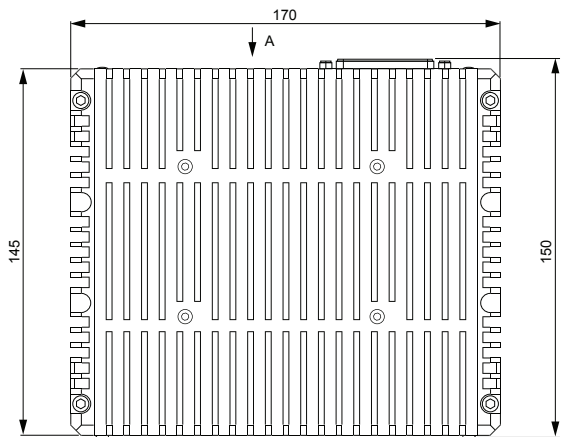
19" adapter



Size and mounting dimensions of BLOK



Size and mounting dimensions of BLOK-S



HMI systems

Capabilities of RTSoft fanless BoxPC: Up to three monitors simultaneously: Video+Audio.



Where to buy

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