RUGGED COMPUTER
A4R SERIES

A4RK - Rugged Computer

Key Features

➤ IP 68 / NEMA 6P waterproof
➤ Full MIL Specs qualified
➤ High-connectivity with flexible positioning of the connectors
➤ Multiple I/O & reconfigurable pin-out
➤ Performing CPU & GPU
➤ RoHs compliant

IRTS A4RK is a rugged computer designed from the A4R Family, a comprehensive range of of 10" to 17" Panel PCs. Its specific design, advanced processing, graphic display and video capabilities to a remote screen meet the evolving and operational needs of military market and cope with the toughest environments.

A4R Technology is based on mechanical and electronic common architecture, which enables modular and flexible configurations : choice of COM Express CPUs, type and number of connectors, pinout connector, extension slots and removable hard disk.

A4RK offers one Mini PCI Express extension slot and one slot for IRTS custom board (USB, PCI Express, I/O, etc).

A4RK can be coupled to any rugged display of the A4RD range or others for providing splited embedded workstations.

Reliable, configurable and upgradeable, A4RK is one of the most remarkable optimized computer in operational use today.

See also the A3RK rugged computer designed for Military application.

PRODUCT SPECIFICATIONS

Integrated Computer	
Microprocessor	Intel® Core™ i3-6100U (6th Generation)
Memory	4 GB, up to 16 GB DDR4 SO-DIMM
Graphic controller	Integrated GPU
Video Out	1 x DVI output
Serial Ports	4 x Serial multiprotocol V11/V24 Soft. Conf.
Digital I/O	4 x opto-isolated (Input / Output)
Audio	1 x Out mono, 1 x In mono
USB 2.0	1 x External / 1 x Front panel
Ethernet	1 x 10/100/1000 MBits
Disk	SSD 32 GB SATA (iSLC), up to 512 GB
Extension slots	1 x mini PCIe + 1 x IRTS format extension board
Operating system	Windows Seven Embedded 64bits or Linux Xubuntu 16.04 64 bits
Security Feature	TPM 2.0
BITE	Unit Management Software
Electrical Features	
Power supply	Power 18/36 VDC with galvanic isolation
LiPo	Internal LiPo battery option
PLD	Power Line Disturbance optional module
Power consumption	50 W normal environment cond. 80 W max in cold environment
Physical Features	
Dimensions	318 x 224 x 60 mm
Weight	5 Kg
Mechanical fixing	200 x 200 - 4 x M8 on top / 170 x 298 - 4 holes for M8 on bottom
Packaging / color	Aluminum / GAM C BLACK 36X3 (Other colors available)
Connectors Selection & Position	
Position	UP in standard or, LEFT in option
MIL-DTL-38999 III (Black Zinc Nickel)	J1 (size 11), J2-J3 (size 13), J4 (Fischer size 102)
Caps	Optional
Options	
CPU	Intel® Core™ i7-6600U (6th Generation)
Removable SSD	Removable SSD 2.5" disk with hatch
Ethernet Gigabit	Optional Ethernet Gigabit board, up to 2 x 10/100/1000 Mbits
CAN	1 x CAN 2.0B (up to 2 x CAN 2.0B)
Video Out	1 x DVI output
Warranty	
	Two-year limited warranty (parts and labor)
	Additional coverage and customized service plans available on request

IRTS
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IRTS NATO CODE : FAAJ7
Contact : sales@irts.fr ▪ **www.irts.fr**

ENVIRONMENTAL CONDITIONS

The tables below show our benchmark for environmental standards.

Airborne	
Random Vibrations	RTCA DO-160E Section 8 Cat.R Zone 2, Cat.U2, up to 5.95g RMS
Sinus Vibrations	RTCA DO-160E Section 8 Cat.R Zone 2 Curve L, up to 3g
Shocks	RTCA DO-160E Section 7 Cat. B, 30g 11ms half sine
Emission	RTCA DO-160E Section 21.3 & 21.4 Cat.M,
Susceptibility	RTCA DO-160E Section 18 Cat. Z & Section 19 Cat. ZN, RTCA DO-160E Section 20 CS & RS Cat. Y
Humidity	RTCA DO-160E Section 6 Cat. A, T = +55°C, HR = 5 to 95%
Operating temperature	RTCA DO-160E Section 4.5.2 & 4.5.4 Cat. B1, -20°C / +55°C
Waterproofness	IP 68, immersion 1 meter

Army	
Random Vibrations	MIL-STD-810G Method 514.6, up to 5,93g RMS (Tracked vehicle)
Bumps	DEF-STAN 0035 TEST M12, 40gx6ms - 1000 shocks/axe
Shocks	STANAG 4370 AECTP400: Method 403, 44gx13ms half sine
Emission	MIL-STD-461E Army ground equipment CE102, RE102
Susceptibility	MIL-STD-461E Army Equipment CS101, CS114, CS115, CS116, RS103
Humidity	MIL-STD-810F Method 507.4 T = +60°C, HR = 5 to 95%
Operating temperature	MIL-STD-810F Method 501.4 & 502.4 Procedure II, -32°C / +60°C
Waterproofness	IP 68, immersion 1 meter

Navy	
Random Vibrations	MIL-STD-810G Method 514.6 Cat. 21 Method 528, up to 5.8g RMS
Sinus Vibrations	MIL-STD 167 Type 1, up to 1.28g
Schoks	DEF-STAN 0035 Part3, 30g 11msec half sine
Emission	MIL-STD-461E Naval equipment CE102, RE102
Susceptibility	MIL-STD-461E Naval equipment CS101, CS114, CS115, CS116, RS103
Humidity	MIL-STD-810F Method 507.4 T = +60°C, HR = 5 to 95%
Operating temperature	MIL-STD-810F Method 501.4 & 502.4 Procedure II, -32°C / +60°C
Waterproofness	IP 68, immersion 1 meter

COLOR PRODUCT

Standard color is black (GAM C Black 36X3).
Other colors can be proposed on request with Minimum Order Quantity.

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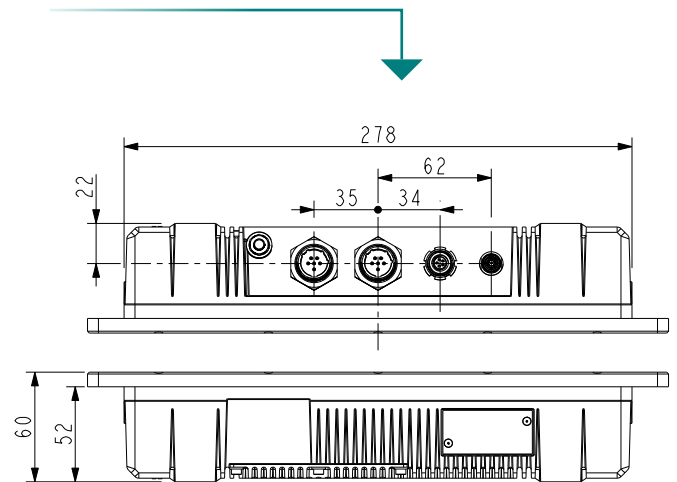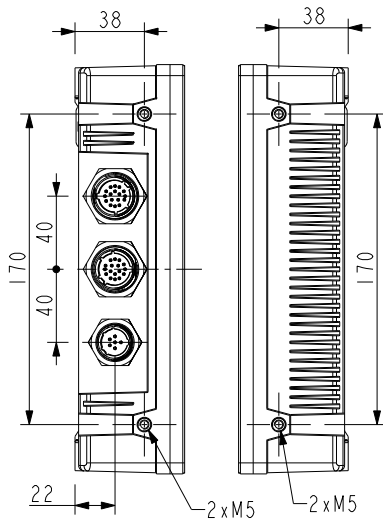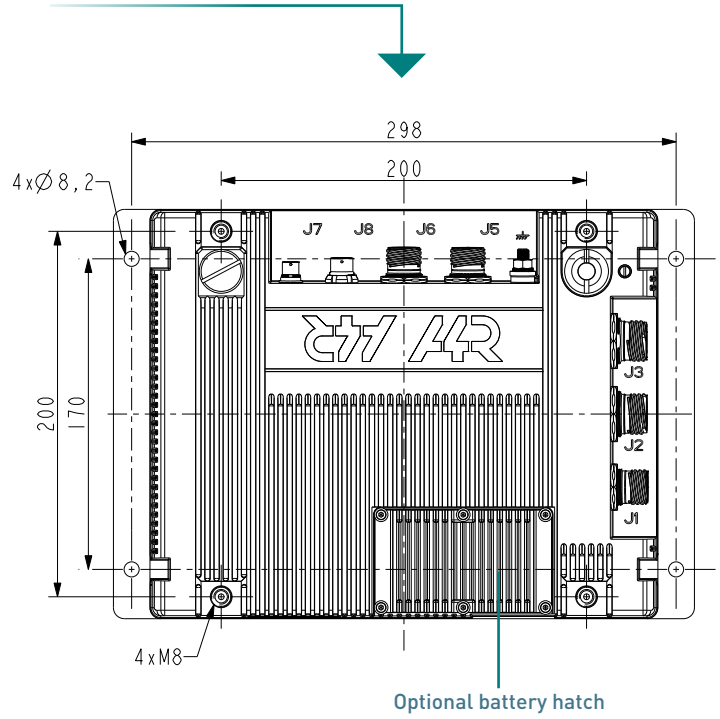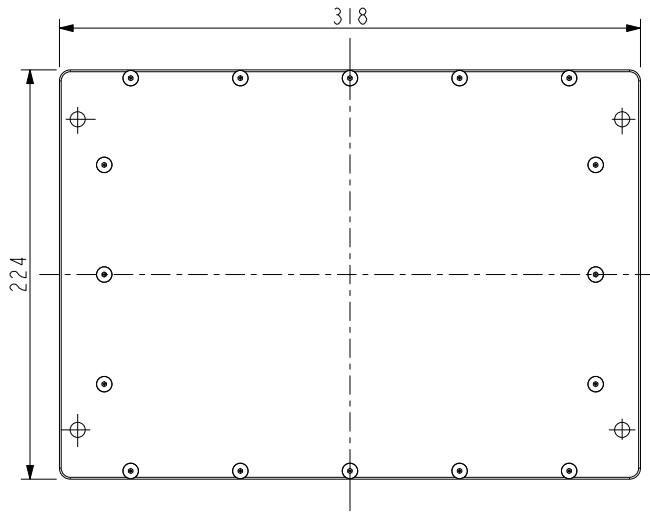Tel.: +33 (0)4 94 20 78 00 ▪ Fax : +33 (0)4 94 20 78 01 —— RUGGED ELECTRONICS, COMPUTERS & DISPLAYS
IRTS NATO CODE : FAAJ7
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TECHNICAL LAYOUT

Dimensions are in millimeters (mm).

318

224

298

200

4 x Ø 8,2

200

170

J7   J8   J6   J5

J3

J2

J1

4 x M8

Optional battery hatch

38

38

170

40

40

40

170

22

2 x M5   2 x M5

278

62

22

35   34

60

52