



MILITARY



RUGGED COMPUTER

A3R SERIES

A3RK - 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 A3RK is a rugged computer designed from the A3R Family, a comprehensive range of MIL specs compliant flat panel workstations. 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.

A3R 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 and extension slots.

A3RK offers one Mini PCI Express extension slot and two XMC extension slots.

A3RK can be coupled to any rugged display of the A3RD range for providing splitted embedded workstations.

Reliable, configurable and upgradeable, A3RK is one of the most remarkable optimized computer in operational use today.

See also the A4RK rugged computer designed for Military application.



PRODUCT SPECIFICATIONS

Integrated Computer	
Microprocessor	Intel® Core™ i7-6600U (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 stereo, 1 x In stereo
USB 2.0	1 x External
Ethernet	3 x 10/100/1000 Mbits
CAN	2 x CAN 2.0B
Extension slots	1 x mini PCIe + 2 x XMC
Disk	SSD 32 GB SATA (iSLC), up to 512 GB
Operating system	Windows Seven Embedded 64bits or Linux Xubuntu 16.04 64 bits
Security Feature	TPM 2.0
Electrical Features	
Power supply DC	Power 18/36 VDC with galvanic isolation
LiPo-DC	Internal LiPo battery option for Power 18/36 VDC
PLD-DC	Power Line Disturbance optional module for Power 18/36 VDC
Power supply AC	Power 90-264 VAC with galvanic isolation
Power consumption	50 W normal environment cond. 80 W max in cold environment
Physical Features	
Dimensions	416 x 262 x 55.2 mm
Weight	5 Kg
Mechanical fixing	230 x 396 - 4 holes for M8 on bottom
Packaging / color	Aluminum / GAM C BLACK 36X3 (Other colors available)
Connectors Selection & Position	
MIL-DTL-38999 III (Black Zinc Nickel)	J1 (size 11), J2-J3-J4 (size 15), J5 (size 13)
Caps	Optional
Options	
Video Out	1 x DVI output
Warranty	
Two-year limited warranty (parts and labor)	
Additional coverage and customized service plans available on request	



IRTS

639 Boulevard des Armaris ■ 83100 Toulon ■ France

Tel.: +33 (0)4 94 20 78 00 ■ Fax : +33 (0)4 94 20 78 01

IRTS NATO CODE : FAAJ7

Contact : sales@irts.fr ■ www.irts.fr

RUGGED ELECTRONICS, COMPUTERS & DISPLAYS



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.



IRTS

639 Boulevard des Armaris ■ 83100 Toulon ■ France

Tel.: +33 (0)4 94 20 78 00 ■ Fax : +33 (0)4 94 20 78 01

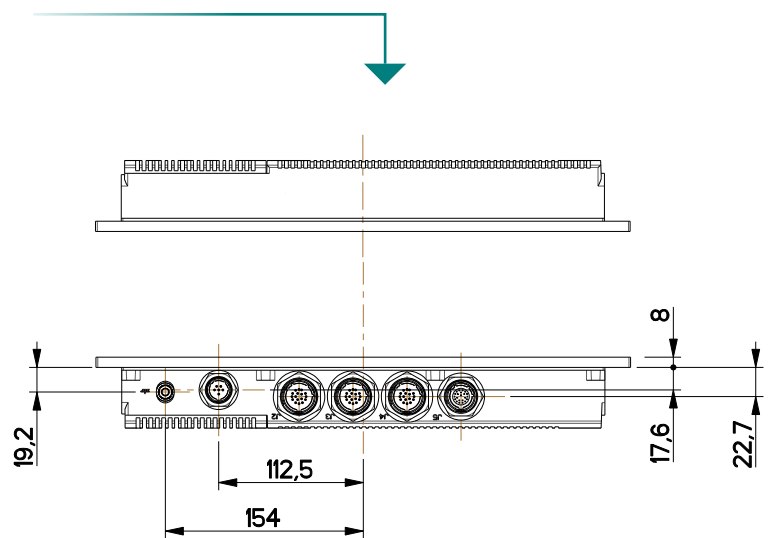
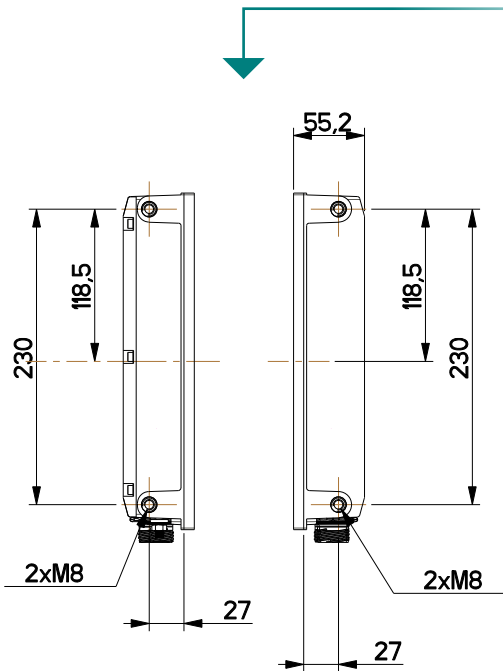
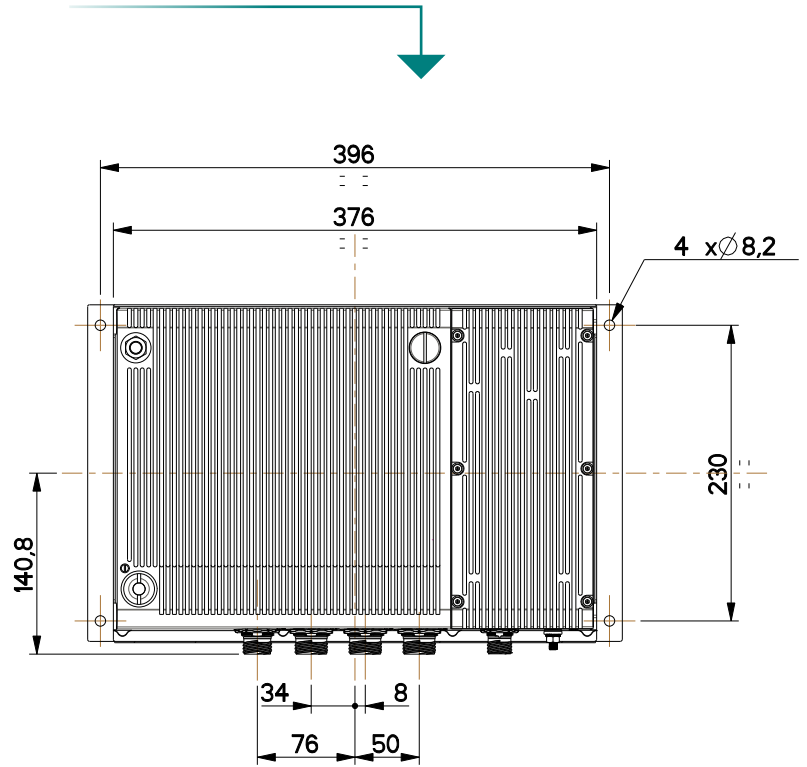
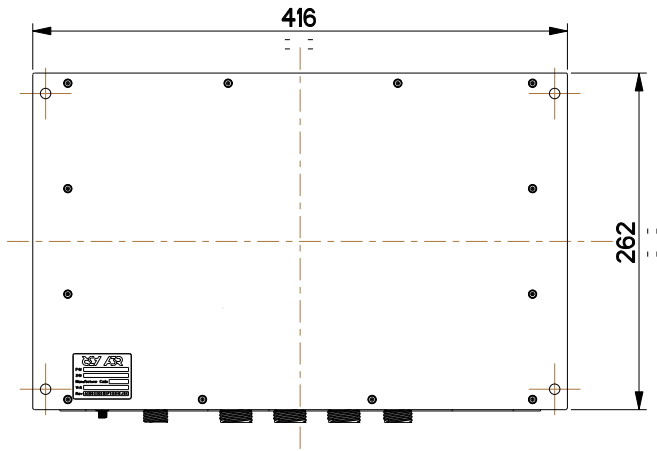
IRTS NATO CODE : FAAJ7

Contact : sales@irts.fr ■ www.irts.fr

RUGGED ELECTRONICS, COMPUTERS & DISPLAYS

TECHNICAL LAYOUT

Dimensions are in millimeters (mm).



IRTS
 639 Boulevard des Armaris ■ 83100 Toulon ■ France
 Tel.: +33 (0)4 94 20 78 00 ■ Fax : +33 (0)4 94 20 78 01
 IRTS NATO CODE : FAAJ7
 Contact : sales@irts.fr ■ www.irts.fr

RUGGED ELECTRONICS, COMPUTERS & DISPLAYS