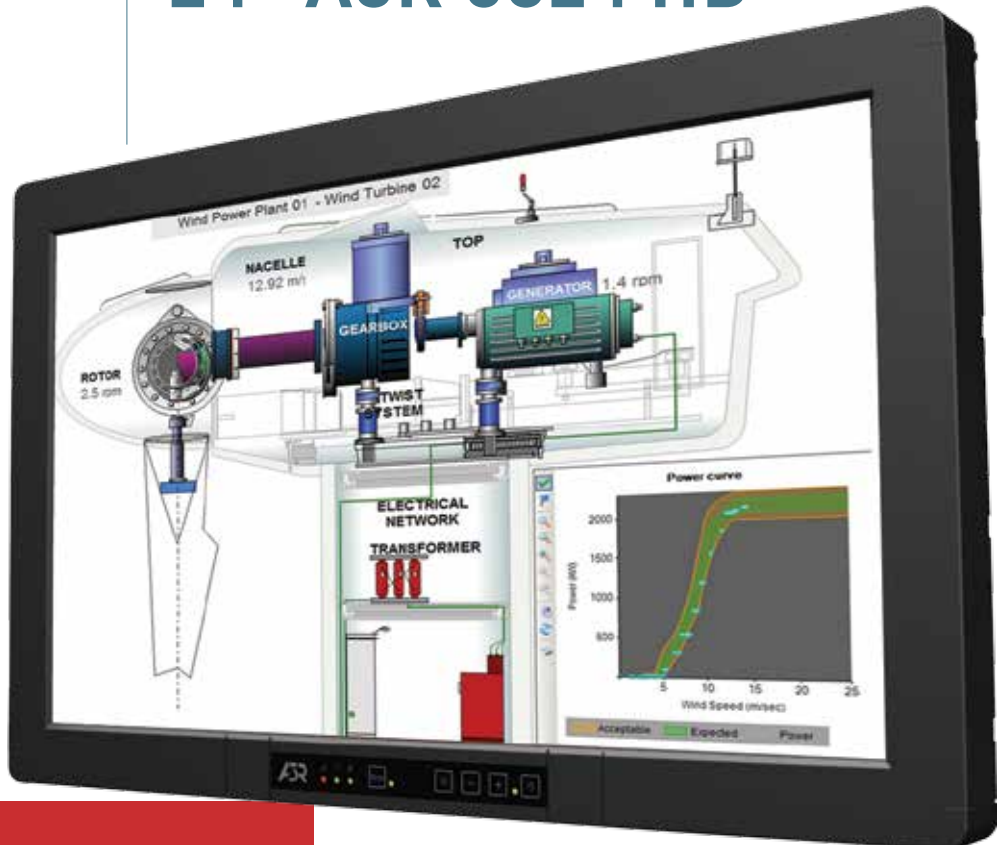




RUGGED PANEL PC

A3R SERIES

## 24" A3R 6824 HD



### Key Features

- > IP68/NEMA 6P waterproof
- > CE/EN compliant & ATEX capability
- > Multiple I/O & reconfigurable pin-out
- > High connectivity with flexible positioning of the connectors
- > Optional USB front connector
- > Performing CPU & GPU up to Intel Core™ i7
- > ROHS compliant

**IRTS 6824HD** is a 24" smart panel from A3R Family, a comprehensive range of 17" to 24" IP68 / NEMA 6P rugged flat panel workstations.

Its specific design, advanced processing, graphic display and video capabilities meet the evolving and operational needs of industry sectors and cope with the toughest environments.

**A3R Technology**, based on mechanical and electronic common architecture, generates modular and flexible configurations. It allows selecting screen sizes (17", 19", 20", 21"W, 24" & 24"W), brightness level and processors performance.

Tightly coupled with client hardware and software - control, command, communication systems - open-ended electronic architecture and easy mounting make it the choice of prime system integrators as a reliable, configurable, upgradeable, best cost and lead time COTS (Commercial Off The Shelf) equipment in operational use today.

See also the other smart panels in the A3R series specifically designed for your Airborne, Army or Navy applications, as well as the displays of the A3RD series.

## PRODUCT SPECIFICATIONS

Display Module	
Size	24"
Resolution	1920 x 1080 (Full HD)
Brightness	250 Cd/m <sup>2</sup>
Dot pitch	0.270 (H) x 0.270 (V) mm
Viewing angles	89°-89° (H) / 89°-89° (V)
Response Time	25 ms (Tr+Tf) White to Black
Contrast Ratio	3000 : 1
Display Color	16.7 M (Dithering)
Backlight	LED Technology
Dimming ratio	up to 10 Cd/m <sup>2</sup>
Touch screen characteristics	Resistive (Capacitive in option)
Controls	
Remote control	Backlight, blackout and On/Off control in front
Additional control capability	3 free programmable function keys
Integrated Computer	
Microprocessor	Intel® Core™ i3-6100U (6th Generation)
Memory	4 GB, up to 16 GB DDR4 SO-DIMM
Graphic controller	Integrated GPU
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
DVI	1 x DVI Out
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
BITE	Unit Management Software
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 (mm)	605.5 x 373 x 86.2 mm
Weight	12 Kg
Mechanical fixing	587,5 x 355
Packaging / color	Aluminum / GAM C BLACK 36X3 (Other colors available)
Connectors Type & Position	
Connectors position / orientation	DOWN / HORIZONTAL (Other configurations available - see below)
Connectors type	FISCHER DBPLU - sizes 103 & 105
Options	
CPU	Intel Core™ i7-6600U (6th generation)
Composite Video	1 x Coaxial composite PAL/NTSC (BNC)
Front USB Connector	1 x Fischer DBPLU serie 102 on front panel
Optical bonding	LCD panel bonding
Connecteur Caps	Standard on front, optional on the others connectors
Fastening	See configator below
Warranty	
	Two-year limited warranty (parts and labor)
	Additional coverage and customized service plans available on request

## CONFIGURATOR FOR FINAL PRODUCT

Various combinations are available according to fastening and to orientation and positioning of connectors.

Commercial reference	<b>6824HD</b>	.....	.....	.....
Fastening	<b>F (Front)</b> <b>R (Rear)</b>			
Orientation of connectors	<b>H (Horizontal)</b> <b>V (Vertical)</b>			
Position of connectors	<b>U (Up)</b> <b>D (Down)</b>			



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](http://www.irts.fr)

RUGGED ELECTRONICS, COMPUTERS & DISPLAYS

## RANGE OF DISPLAYS

A3R offers a wide range of panel PCs whose 5 monitor's screen sizes and 2 brightness levels will meet your needs for your indoor and outdoor applications. IRTS can design additional A3R panels that could meet your specific needs.



A3R LCD DISPLAYS	17"	19"	20"	24" W	21"5 W	24" W
	SXGA		UXGA	WUXGA	Full HD	Full HD
A3R Series	A3R17 SX	A3R19 SX	A3R20 UX	A3R24 WU	A3R21 HD	A3R24 HD
Screen Ratio	5/4		4/3	16/10	16/9	16/9
Resolution	1280 x 1024		1600 x 1200	1920 X 1200	1920 x 1080	1920 x 1080
A3R Standard Luminance cd/m <sup>2</sup>	300	300	250	300	250	250
Viewing Angles	80°/80°/60°/80°	85°/85°/80°/80°	85°/85°/85°/85°	89°/89°/89°/89°	89°/89°/89°/89°	89°/89°/89°/89°
A3R Outdoor Luminance cd/m <sup>2</sup> (option)	800	800	550	On customer request		On customer request
Viewing Angles	80°/80°/60°/80°	85°/85°/80°/80°	85°/85°/85°/85°			On customer request
Sunlight readability (option)	IRTS bonding technology (applicable to standard & outdoor versions)					IRTS bonding technology (applicable to standard & outdoor versions)

## PRODUCT RANGE

Depending on the application, our range offers products that will comply with your size, ruggedization and environmental conditions requirements.

Oil & Gas, Mining  
Maritime, ATEX

A3R for Industry		A3R Range
		SKU L
Display Size	A3R Series	Rugged Model
17"	17" SXGA (1280 x 1024)	A3R17 SX
19"	19" SXGA (1280 x 1024)	A3R19 SX
20"	20" UXGA (1600 x 1200)	A3R20 UX
21"	21" FHD (1920 x 1080)	A3R21 HD
24"	24"5 FHD (1920 x 1080)	A3R24 HD
	24" WUXGA (1920 x 1200)	A3R24 WU
Power Supply Characteristics		
DC Power Supply		18-36 VDC
AC Power Supply		85/265 VAC 50-400 Hz
1 Ruggedization Level		Operating Environmental Conditions
Operating Temperature Range		Level L
Standard range		- 20° to + 55° C
Option		- 32° to + 60° C
Mechanical EN60068		Level L
Vibrations		10-500 Hz: 2G/3 axes to EN 60068-2-6
Shocks		30 g 11 msec Half Sine, 3 axes to EN 60068-2-27
EMC/EMI CE Standards		Level L
EN 61000 - Generic standards		EN 61000-6-2, Immunity for industrial environments
EN 55022 - Radio disturbance		EN 55022 Class B, Emission & susceptibility



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## ENVIRONMENTAL CONDITIONS

The table below shows our benchmark for environmental standards.

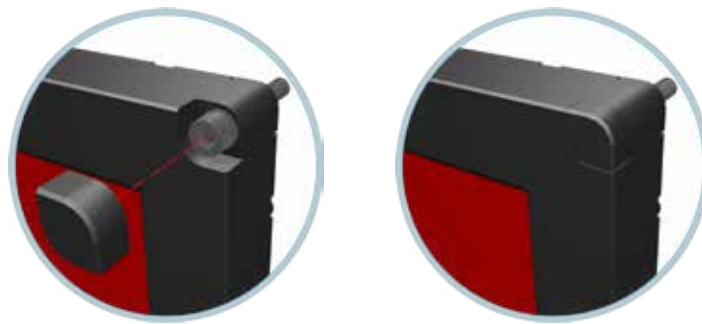
Environmental conditions	
Vibrations	EN 60068-2-6
Shocks	EN 60068-2-27
EMC	EN 61000-6-2, EN 55022 Class B
Humidity	10 % to 90 % Relative Humidity, non-condensing
Operating temperature	EN 60068-2-32
Waterproofness	IP 68 / NEMA 6P, immersion 1 meter

## PRODUCT MOUNTING

Basically, the back side of the A3R packaging offers threaded holes for four M8-screws, that can be operable or not. Note that this mounting is invariant whatever the size of display. Customer has to choose between front or rear mounting.

### STANDARD FRONT MOUNTING

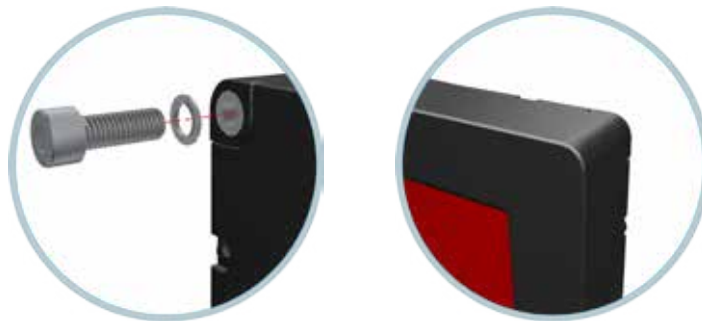
Standard front mounting is realized by fastening of 4 x M8-captive screws positioned at each front corner of the product, finished with trim screws.



FRONT MOUNTING

### OPTIONNAL REAR MOUNTING

Optionnal rear mounting can be realized by using the 4 threaded holes for M8-screws positioned at each rear corner of the product.



REAR MOUNTING



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## CONNECTORS POSITIONS AND ORIENTATIONS

Standard position of the 2 FISCHER connectors is Down-side. Considering that the A3R technology makes it possible to rotate the rear frame of 180°, optional position can be Up-side.

Customer can also choose connectors orientation. Standard orientation is horizontal, optional is vertical.

The following chart summarize all the mounting possibilities for an A3R product as well as the choices to make for the position and orientation of connectors:

FRONT MOUNTING A3R		Connectors Position	
		Down Positionning	Up Positionning
Connectors Orientation	Horizontal	6824HD-FHD	6824HD-FHU
	Vertical	6824HD-FVD	6824HD-FVU
REAR MOUNTING A3R		Connectors Position	
		Down Positionning	Up Positionning
Connectors Orientation	Horizontal	6824HD-RHD	6824HD-RHU
	Vertical	6824HD-RVD	6824HD-RVU

## 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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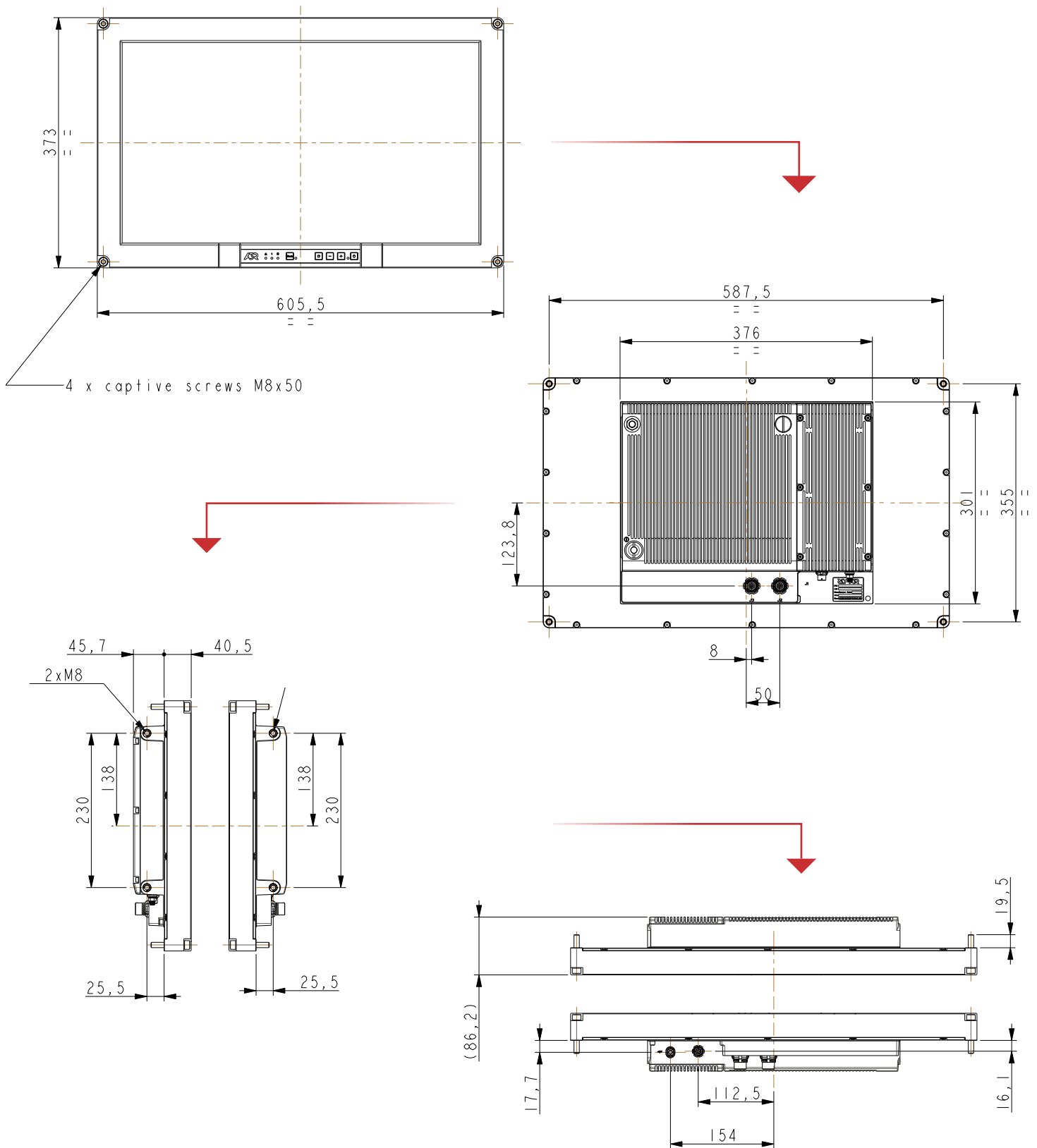
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# SKU L TECHNICAL LAYOUT

Dimensions are in millimeters (mm).



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