



# INDUSTRY

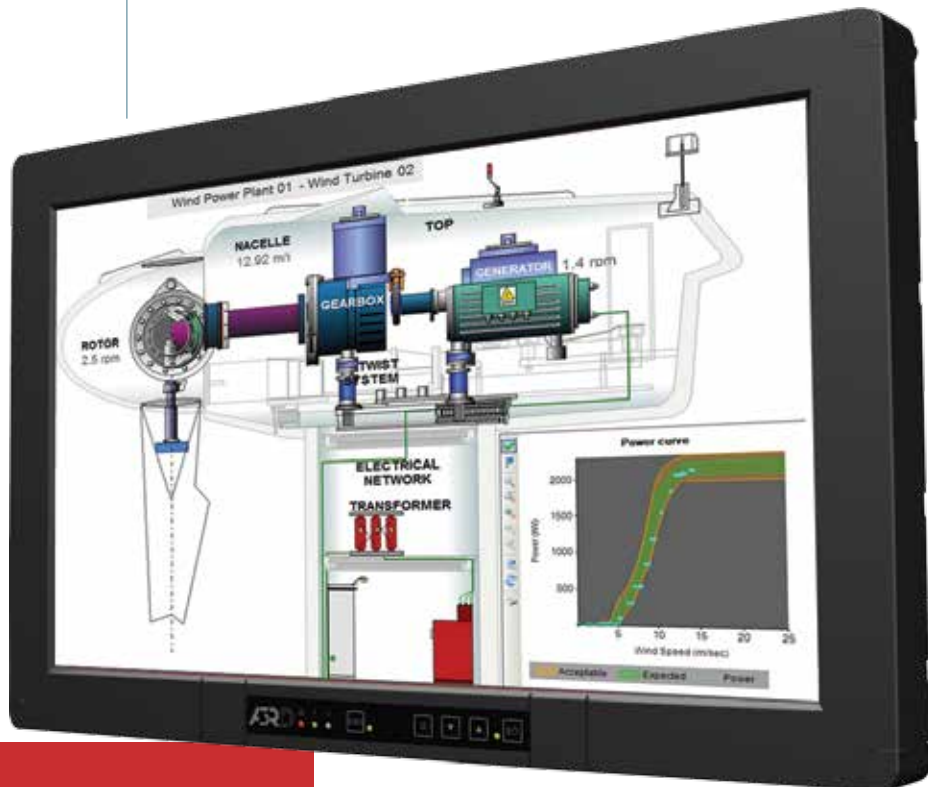


RUGGED DISPLAY

A3RD SERIES

## 21"5 A3RD 5821 HD

21"5



### Key Features

- IP 68 / NEMA 6P waterproof
- CE/EN compliant and ATEX capability
- High-connectivity with flexible positioning of the connectors
- Ruggedized touch screen (glass to glass)
- USB front connector for easy accessibility [option]
- RoHs compliant

**IRTS 5821HD** is a 21" display from A3RD Family, a comprehensive range of IP68 / NEMA 6P rugged displays.

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

Direct interface with client system, versatile configuration capabilities and easy mounting make it the choice of prime system integrators as a reliable, configurable, best cost and lead time COTS (Commercial Off The Shelf) equipment in operational use today.

See also the other CDUs in the A3RD series specifically designed for your Airborne, Army or Navy applications.

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

RUGGED ELECTRONICS, COMPUTERS & DISPLAYS

## PRODUCT SPECIFICATIONS

Display Module	
Size	21"
Resolution	1920 x 1080 (Full HD)
Brightness	250 Cd/m <sup>2</sup>
Pixel pitch	0.248 (H) x 0.248 (V) mm
Viewing angles	89°-89° (H) / 89°-89° (V)
Response Time	25 ms (Tr+Tf) White to Black
Contrast Ratio	5000 : 1
Display Color	16.7 M (Dithering)
Backlight	LED Technology
Dimming ratio	up to 10 Cd/m <sup>2</sup>
Controls	
Remote control	Backlight, blackout and On/Off control in front
Integrated Video Controller	
Graphic controller	IRTS Embedded Video Controller
Analog Video	1 x input VGA
Digital Video	1 x input DVI
Serial Ports (RS232/RS422)	1 x Serial touch controller / 1x Serial for remote control
USB 2.0	1 x Touch controller / Remote control
BITE	Unit Management software
Electrical Features	
Power supply DC	Power 18/36 VDC with galvanic isolation
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	552 x 343.5 x 86.2 mm
Weight	11 Kg
Mechanical fixing	534 x 325,5
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	
Composite Video	1 x Coaxial composite PAL/NTSC (BNC)
Front USB Connector	1 x Fischer serie 102 for connection transfer from CPU (key board, pointing devices, etc.)
Optical bonding	LCD panel bonding
Touch screen	Resistive or Capacitive multitouch
Connecteur Caps	Standard on front, optional on the others connectors
Fastening	See configurator 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>5821HD</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

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## RANGE OF DISPLAYS

A3RD offers a wide range of control display units whose 5 monitor's screen sizes and 2 brightness levels will meet your needs for your indoor and outdoor applications. IRTS can design additional A3RD displays that could meet your specific needs.



A3RD LCD DISPLAYS	17"	19"	20"	24" W	21"5 W	24" W
	SXGA		UXGA	WUXGA	Full HD	Full HD
A3RD Series	A3RD17 SX	A3RD19 SX	A3RD20 UX	A3RD24 WU	A3RD21 HD	A3RD24 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
A3RD 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°
A3RD Outdoor Luminance cd/m <sup>2</sup> (option)	800	800	550	On customer request	On customer request	On customer request
Viewing Angles	80°/80°/60°/80°	85°/85°/80°/80°	85°/85°/85°/85°			
Sunlight readability (option)	IRTS bonding technology (applicable to standard & outdoor versions)				IRTS bonding technology (applicable to standard & outdoor versions)	IRTS bonding technology (applicable to standard & outdoor versions)

## PRODUCT RANGE & ENVIRONMENTAL CONDITIONS

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

Oil & Gas, Mining  
Maritime, ATEX

A3RD for Industry		A3RD Range
		SKU L
Display Size	A3RD Series	Rugged Model
17"	17" SXGA (1280 x 1024)	A3RD17 SX
19"	19" SXGA (1280 x 1024)	A3RD19 SX
20"	20" UXGA (1600 x 1200)	A3RD20 UX
21"	21" FHD (1920 x 1080)	A3RD21 HD
24"	24"5 FHD (1920 x 1080)	A3RD24 HD
	24" WUXGA (1920 x 1200)	A3RD24 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.

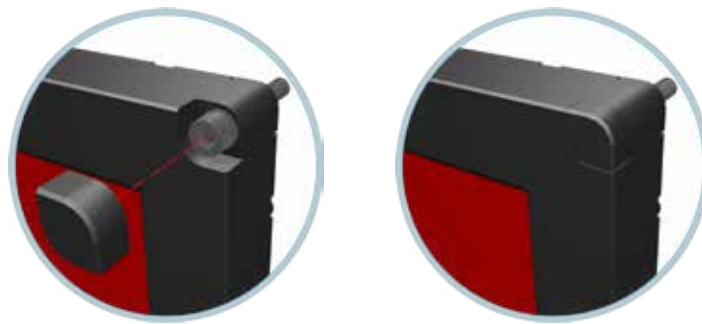
Environmental conditions	
Vibrations	EN 60068-2-6
Shocks	EN 60068-2-27
EMC	EN 61000-6-2, EN 55022 Class B
Humidity	10 % to 90 % Relative Humidity, non-condensing
Operating temperature	EN 60068-2-32
Waterproofness	IP 68 / NEMA 6P, immersion 1 meter

## 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

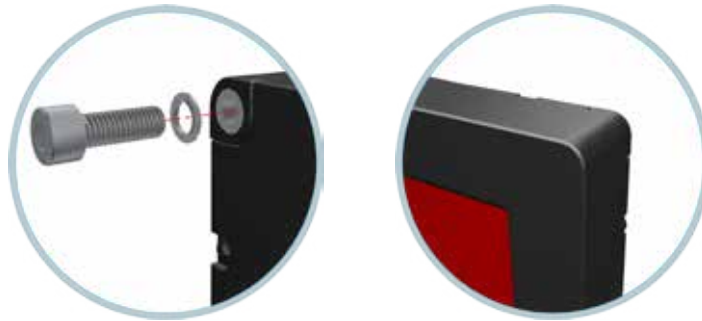
Standard front mounting is realized by fastening of 4 x M8-captive screws positioned at each front corner of the product, finished with trim screws.



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 A3RD		Connectors Position	
		Down Positionning	Up Positionning
Connectors Orientation	Horizontal	5821HD-FHD	5821HD-FHU
	Vertical	5821HD-FVD	5821HD-FVU
REAR MOUNTING A3RD		Connectors Position	
		Down Positionning	Up Positionning
Connectors Orientation	Horizontal	5821HD-RHD	5821HD-RHU
	Vertical	5821HD-RVD	5821HD-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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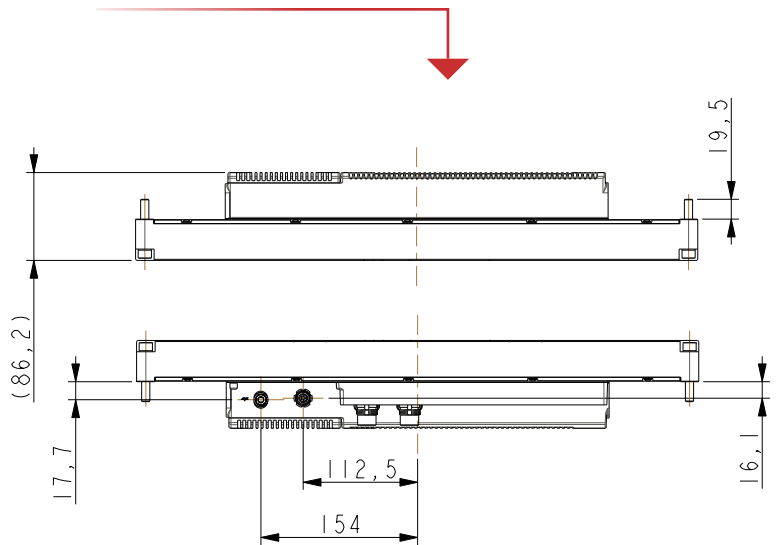
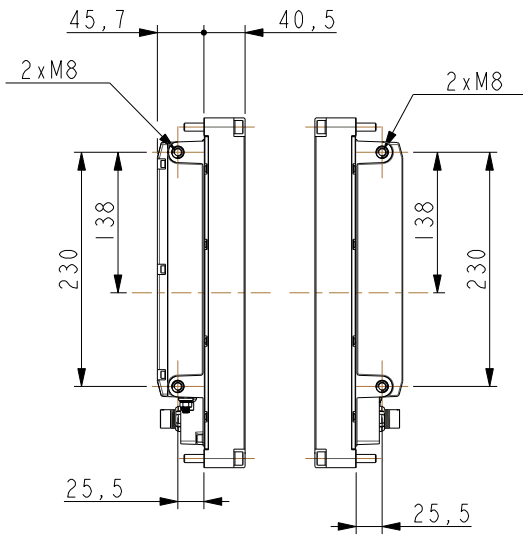
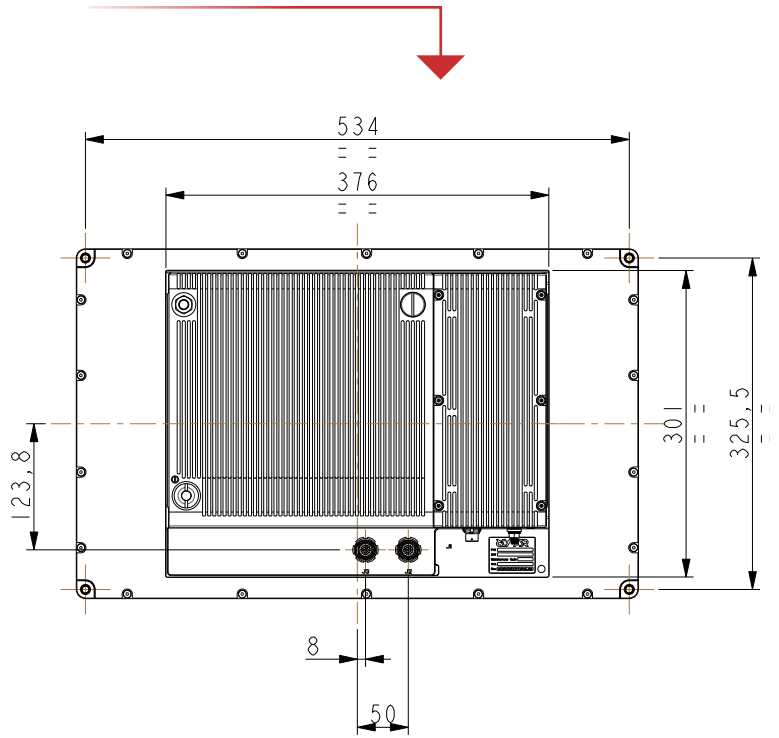
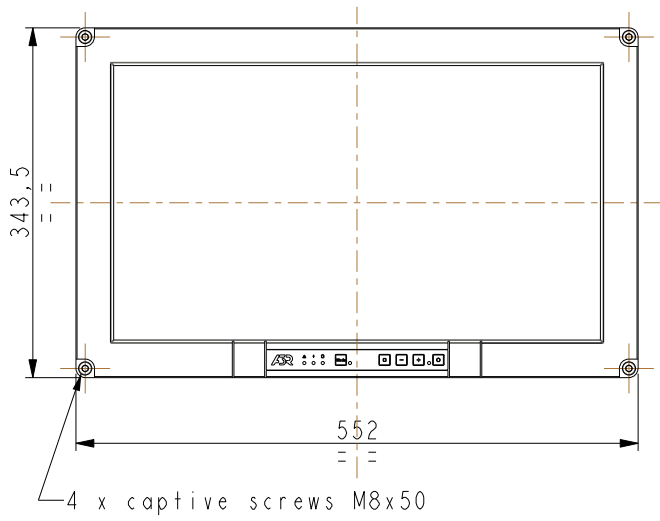
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# SKU L TECHNICAL LAYOUT

Dimensions are in millimeters (mm).



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