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# The Simrad Radar Range

Based on 50 years of experience and designed by some of the world's leading marine radar system engineers, the Simrad Argus X-Band, Argus S-Band and Broadband Radar Systems offer world class solutions for professional vessels. As the only manufacturer to offer this full range of radar solutions, we can design a target detection solution specifically for your vessel.

Both Argus X-Band and S-Band options are fully IMO compliant and their configuration is characterised by reduced weight, small dimensions, and compact electronics thereby offering a great solution for a wide variety of vessels (including high speed craft).



## Argus X-Band

The Argus X-Band is a state of the art professional X-band radar including 6 and 9 ft. antenna options\* and up-mast transceiver in both 12kW and 25 kW.

Thanks to the modular design, they can either be assembled to form a stand-alone display cabinet, or be flush mounted as part of an integrated bridge. The standard configuration includes full automatic target tracking (ARPA), integrated interfaces for AIS and gyro with Stepper, Syncro and serial interface (NMEA). An electronic built-in interswitch for dual radar installations is also included as standard.

\*Note: a 12ft antenna option is available and this requires a modified up-mast transceiver.

## Argus S-Band

The Simrad Argus family has been expanded with the addition of the lightest S-Band radar available in the market today. The S-Band radar has a new slim profile antenna to reduce disturbances caused by sea waves and wind resistance.

The Argus S-Band radar does not require a separate power supply and uses the exact same single cable as the Argus X-Band. This makes installation and service significantly easier than most other S-Band installations in the market today.

The 30 kW Argus S-Band Radar has enhanced near target detection, pre-wired plug and play installation, and full integration with the current Argus X-Band Radar. The Argus S-Band is perfect for vessels over 3000 gross tonnes who require an S-Band radar (3 GHz) as part of their carriage requirements.

The Argus S-Band shares some of the same proven technology and electronic components as the Argus X-Band thus reducing the required on-board spare parts and assuring their availability via our world-wide Advantage Service program.

### KEY FEATURES

- ▶ Combined intelligent video of two radar transceivers onto one PPI or two independent PPI on a wide screen monitor for better situational awareness and performance
- ▶ Modular and solid state construction for ease of maintenance and servicing
- ▶ Separate processor, monitor and operation panel offering flexible mounting options
- ▶ Up to 100 target (ARPA) and 300 AIS targets
- ▶ Five different monitor sizes/options to suit your needs
- ▶ Seamless use of up to four antennas combining X and S Band interswitching capability. Very light S-Band antenna that does not require a separate power supply.
- ▶ Optional special application add-ons: Oil Spill Detection, Small Target Detection and Ice Navigation.
- ▶ Controllable antenna rotation speed 20 or 40 rpm (not available with 12ft X-Band antenna)
- ▶ IMO approved
- ▶ Pre-set video processing modes for easy operation, including Harbour, Short Range, Medium Range, Rough Sea and Ice
- ▶ Includes a comprehensive standard configuration with no hidden costs. Performance Monitor, Gyro Interface, AIS, ARPA are all included as standard.
- ▶ Integrated FMCW Radar compatibility

## Argus Radar Approvals

Both the Argus X-Band and S-Band radars meet and even exceed IMO regulations and Solas V minimum carriage requirements as follows:

1. All ships of 300 gross tonnage and upwards and passenger ships, irrespective of size, shall be fitted with a 9 GHz X-band Radar.

2. All ships of 500 gross tonnage and upwards shall have an automatic tracking aid.

3. All ships of 3000 gross tonnage and upwards shall have a 3 GHz S-band radar or where considered appropriate by the administration a second 9 GHz X-band radar, functionally independent of those referred to in point 1.

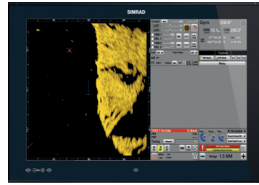
Size of ship/craft	Under 500 gt	500 gt to 10000 gt and HSC<10000 gt	All ships/craft ≥10000 gt	Simrad Argus X-Band and S-Band	
CATEGORIES OF SHIPS	CAT 3	CAT 2 CAT 2H	CAT 1 CAT 1H	CAT 1 CAT 2	CAT 1H CAT 2H
Auto-acquisition of targets	NO	NO	YES	YES	YES
Minimum acquired radar target capacity	20	30	40	100	20
Minimum activated AIS targets	20	30	40	300	20
Minimum sleeping AIS target capacity	100	150	200	300	120

### OTHER RADAR APPROVALS

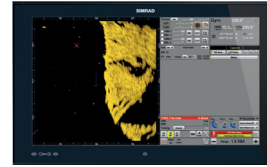
- EC Marine Equipment Directive (MED)
- United States Coast Guard (USGC)
- China Classification Society (CCS)
- Russian Maritime Register of Shipping (RS) (approval pending)
- FCC / IC
- ISO 9001



▶ **M5024 CAT 2**  
Part no. 000-12300-001



▶ **M5019 CAT 3**  
Part no. 000-12299-001

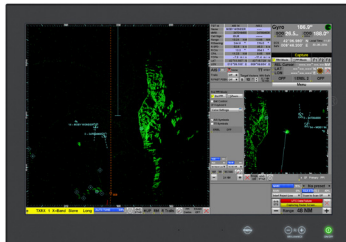


▶ **M5016 CAT 3**  
Part no. 000-12298-001

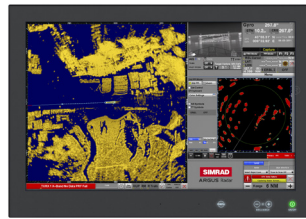


▶ **ARGUS Core Unit**  
Part no. 000-10330-001

Non-IMO Argus Core unit for special applications  
Part no. 000-10883-0001



▶ **26" Series X CAT 1**  
Part no. 000-12334-001



▶ **24" Series X CAT 2**  
Part no. 000-12335-001



▶ **ARGUS keyboard**  
Part no. 000-11855-011  
An external mouse can be used in conjunction with the Argus keyboard.

## ARGUS Radar Display

The ARGUS display is available in three different configurations.



▶ **The modular configuration** with monitor, keyboard and Electronic Core Unit supplied as three separate modules which can be flush mounted into the bridge console to the customers' preference.



▶ **The table top configuration** where the monitor and keyboard are installed into an ergonomic desktop (P/n 305373A1) console while the ARPA electronics are contained in a separate bulkhead mounted cabinet.



▶ **The deck configuration** provides an optional display pedestal (P/n 305374A1) which can also house the electronic cabinet. Three different frame kit options available :

- Adapter Frame kit for M5024 Monitor (P/N 000-12256-001)
- Adapter Frame kit for 26" Series X Monitor (P/N 000-12342-001)
- Adapter Frame kit for 24" Series X Monitor (P/N 000-12343-001)

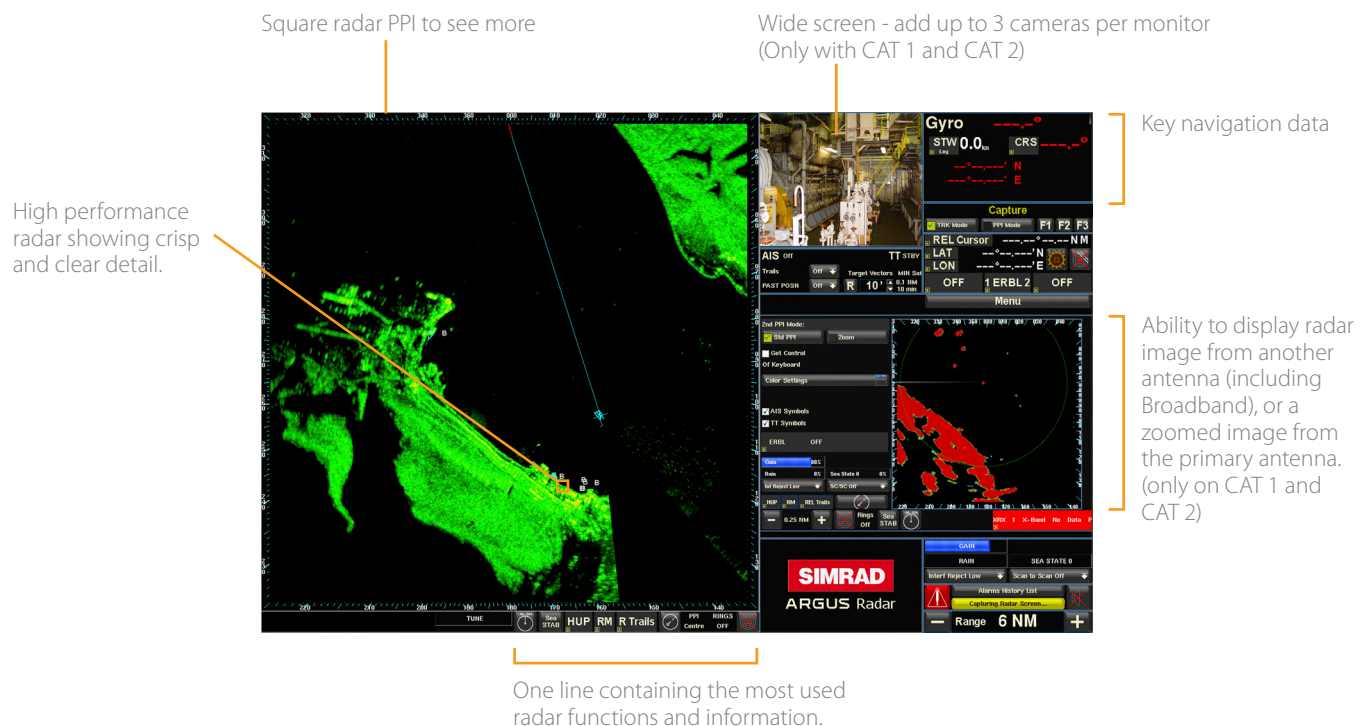
## ARGUS Radar Screen Presentation

### ► Wide screen CAT 1 and CAT2 radar presentation:

- **Square or wide Radar PPI** to see more
- **Simplified PPI presentation** - choose from centered or offset PPI to allow for flexible presentation options.
- **User selectable second PPI** - use for dual range, extra target zoom, Broadband Radar Integration, or for center presentation.
- **User selectable viewing area** - select CCTV, full Conning or second radar scanner (including Broadband 4G), all without compromising IMO performance requirements.

### ► Wide screen CAT 3 displays radar presentation:

- **Square Radar PPI** - same as a chart on an ECDIS.
- **Simplified PPI presentation** - choose from centered or offset PPI to allow for flexible presentation options.
- **Main radar operator settings** - one line containing most used radar functions and information.
- **User selectable viewing area**



## ARGUS Special Applications

We are among the first companies in the world to provide special application add-ons that work in parallel with an IMO/SOLAS ARPA navigational radar (note a dedicated core unit must be available for full IMO approval for navigational radar). From the ships owners' point of view, the most important benefit is the reduced maintenance costs in terms of installation, service and spare parts, and the officer on watch only has to learn to use one radar system.

There are three additional special application software packages available offering Oil Spill Detection, Small Target Detection, and Ice Navigation.

## 1. OIL SPILL DETECTION

Early detection and the ability to mount an emergency response are essential should an oil spill occur. Adding the Oil Spill Detection capabilities to your Simrad Argus X-Band or S-Band Radar is a must to stay operational. An Argus OSD Radar will increase your hours of operation and efficiency, as the vessel can now work in the dark and know which part of the oil slick to concentrate on.

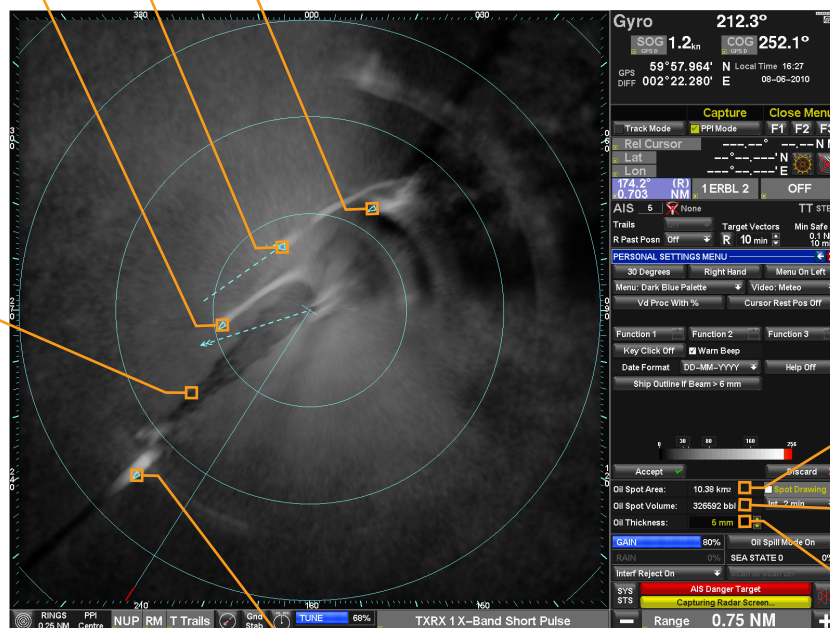
The Simrad Argus Oil Spill Detection application works by receiving and processing signals in real-time from on-board transceivers. The water surface is usually dampened when it is contaminated by oil, so the backscatter of microwave radiation from these waves is unlike the

rest of the sea. The radar is then able to highlight the dampening of the reflected microwave radiation on the radar display, thus calculating the size, position and drift (speed and course) of the oil spill. We let you see inside the oil spill!

The Simrad Argus Radar with Oil Spill Detection software has been successfully tested during two NOFO (Norwegian Clean Seas Association for Operating Companies) on-water exercises. The radar has been found suitable for use in NOFO mode of operation. The success of this application is further supported by the dozens of installations that are in operation today around the world.

Vessels towing oil recovery booms into place

Spot area of oil concentration



Oil spot area = 10.38km<sup>2</sup>

Oil volume = 326,592 barrels

Oil thickness set to 5mm

## 2. SMALL TARGET DETECTION

Being able to identify small targets can be a matter of life and death. The Simrad Argus Small Target Detection unlock key allows the user to access a set of radar functions specific to identifying small targets amongst the sea clutter.

The superior detection of small objects in clutter is carried out by using advanced signal averaging to suppress the chaotic sea clutter returns in the background, and preserve the signal level of stationary

targets. Therefore, in terms of amplitude of the received radar signal, the distance between the clutter and target is increased and the target detect-ability is enhanced.

In addition, the operator can manually adjust the colour palette threshold to suit sea and weather conditions by adjusting some parts of the radar signal from grey to green to highlight the presence of small targets above the average sea clutter.

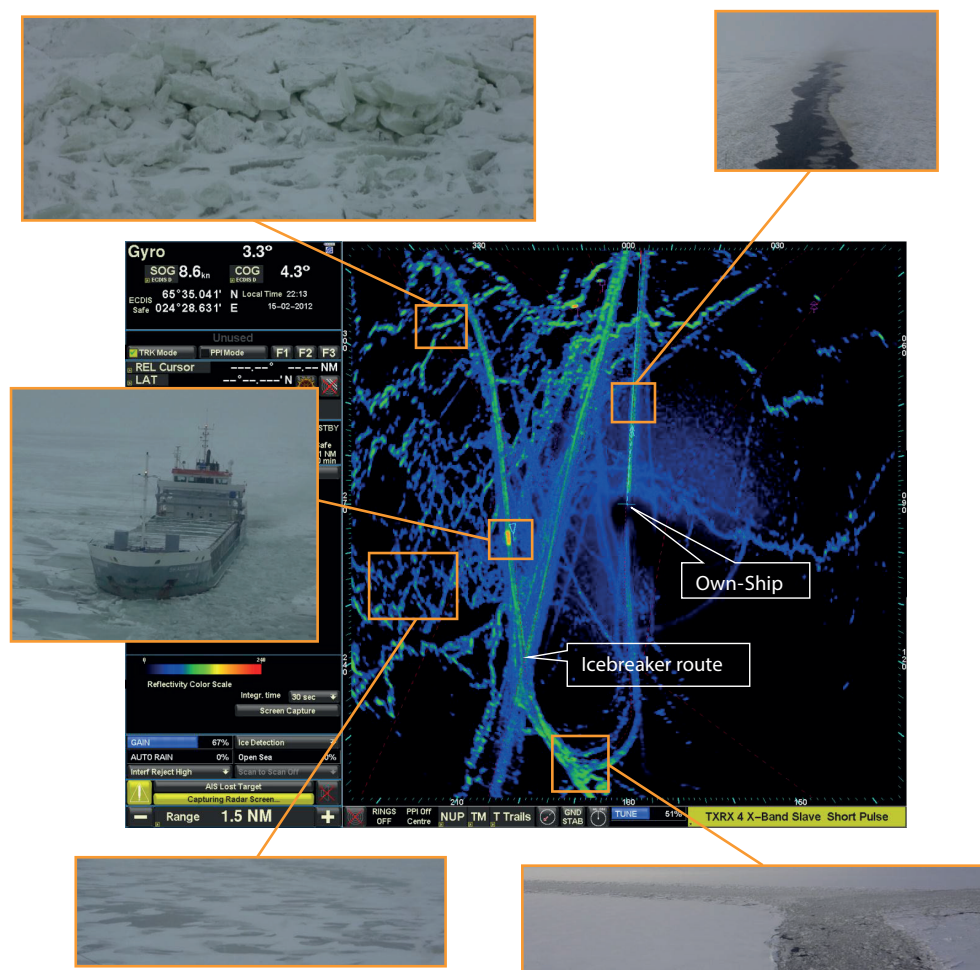
### 3. ICE NAVIGATION

For vessels operating in low temperature environments, purchasing the Ice Navigation unlock key helps reduce any potential risk of serious incidents in Arctic waters. This special application supports both strategic route planning and tactical ice avoidance.

The reflectivity properties of different objects (or surfaces) will be displayed on screen as different colours. Sea water, grease ice, first-year ice and in general low radar reflectivity areas are represented with a

shade of colour from black through to green, while land, old hard ice, vessels etc. are represented by a shade of colour from green through to red.

The Ice Navigation unlock key will assist the ships navigators to set a course that will follow safety routes for significant time savings and to avoid damage to the ship, ultimately increasing operational profits. The Ice Navigation software has been tested and approved by the Russian administration for cold weather operation down to -50C.



#### Argus Radar Special Application Configuration Options:



PART NUMBER	CONFIGURATION	OIL DETECTION	ICE NAVIGATION	SMALL TARGET DETECTION
305172A2	USB Unlock Key for Oil/Ice/Small Target detection software	✓	✓	✓
305172A3	USB Unlock Key for Oil Spill detection software	✓		
305172A4	USB Unlock Key for Ice Navigation software		✓	
305172A5	USB Unlock Key for Small Target detection software			✓
305172A6	USB Unlock Key for Oil/Ice Navigation software	✓	✓	
305172A7	USB Unlock Key for Oil/Small Target detection software	✓		✓
305172A8	USB Unlock Key for Ice/Small Target detection software		✓	✓

# Broadband Radar Overview

Simrad has introduced a revolutionary radar system unlike anything else on the navigation market. Utilising broadband Frequency Modulated Continuous Wave (FMCW), this breakthrough technology provides superior target detection and separation, ease of operation and a new level of navigational safety. Broadband Radar near-range performance and usability is optimized with the addition of high-speed antenna rotation (48 RPM). This Broadband 4G™ Radar has all of the benefits of our revolutionary Broadband 3G™ Radar but with more advanced features, including beam sharpening for target separation control, dual range radar and increased target detection capabilities. The Broadband 4G™ also includes 18 range scales all the way down to a 50m scale, providing the operator unprecedented short range performance.



### KEY FEATURES

- ▶ Beam sharpening with target separation control
- ▶ Dual range anywhere from 5m to 36NM
- ▶ Up to 48RPM at less than 1NM
- ▶ Directional STC and Sidelobe suppression
- ▶ FMCW technology with inherent LPI
- ▶ Extremely low emissions
- ▶ InstantOn™
- ▶ Low power consumption

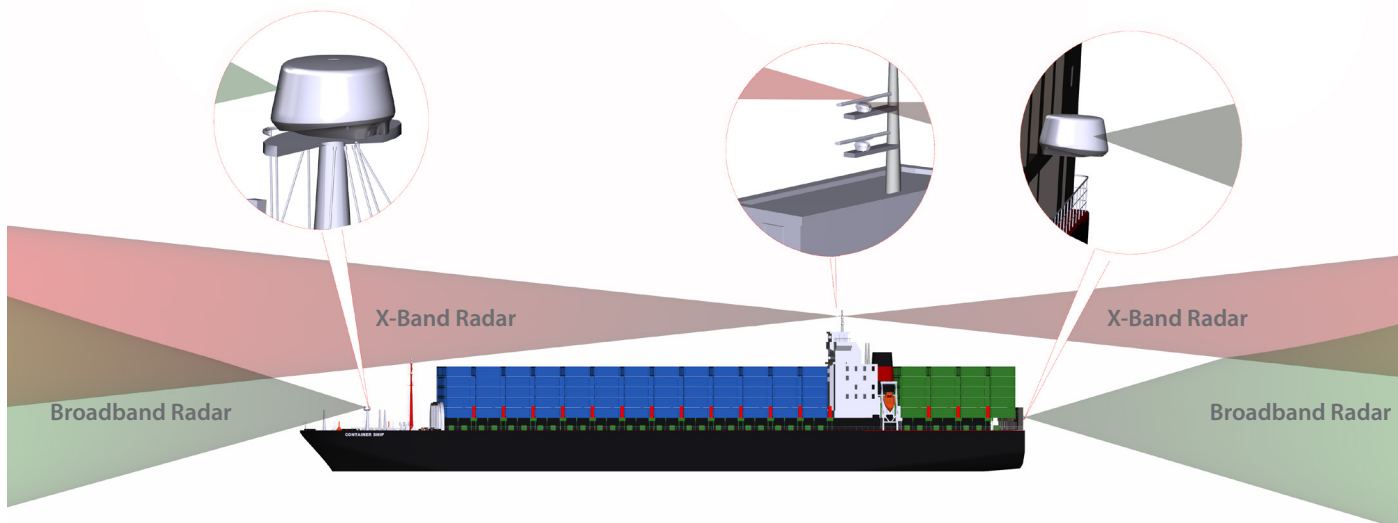
## BROADBAND AND ARGUS RADAR INTEGRATION (ONLY CAT 1 AND CAT2)

Integrating Broadband Radar with the Argus X or S-Band Radars is now a standard feature. Simrad Argus X-Band and S-Band Radars can combine signals from up to four transceivers with different output power, frequency band, antenna sizes and mounting positions.

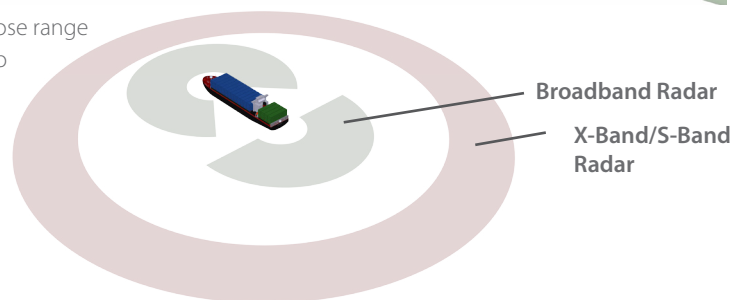
Utilizing solid-state technology, the breakthrough 4G™ Broadband Radar solution provides superior target detection and separation, ease of operation, and a new level of navigational safety to a wide range of applications.

Integrate the Simrad Broadband 4G™ Radar with an Argus X or S-Band for complete close range coverage.

**Tighten blind zones** and reduce piracy threats –targets can be detected within a 5m range ensuring all potential threats are monitored.

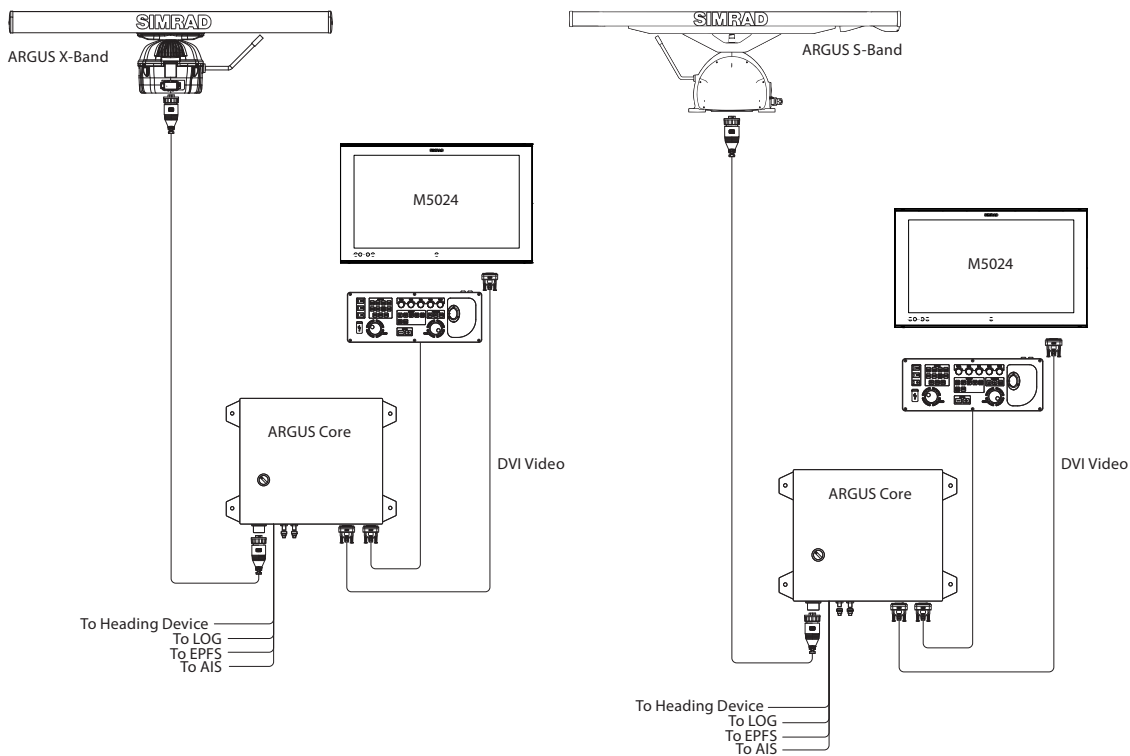


**Docking Radar capabilities** -with the optional Broadband Radar's close range performance, the navigator or pilot can monitor the vessel relative to the dock or other structure (such as a wind farm turbine) right up to the point of contact. Total flexibility of installation is available due to zero radiation hazard enabling a scanner location that is not possible with pulse radars' inherent radiation.

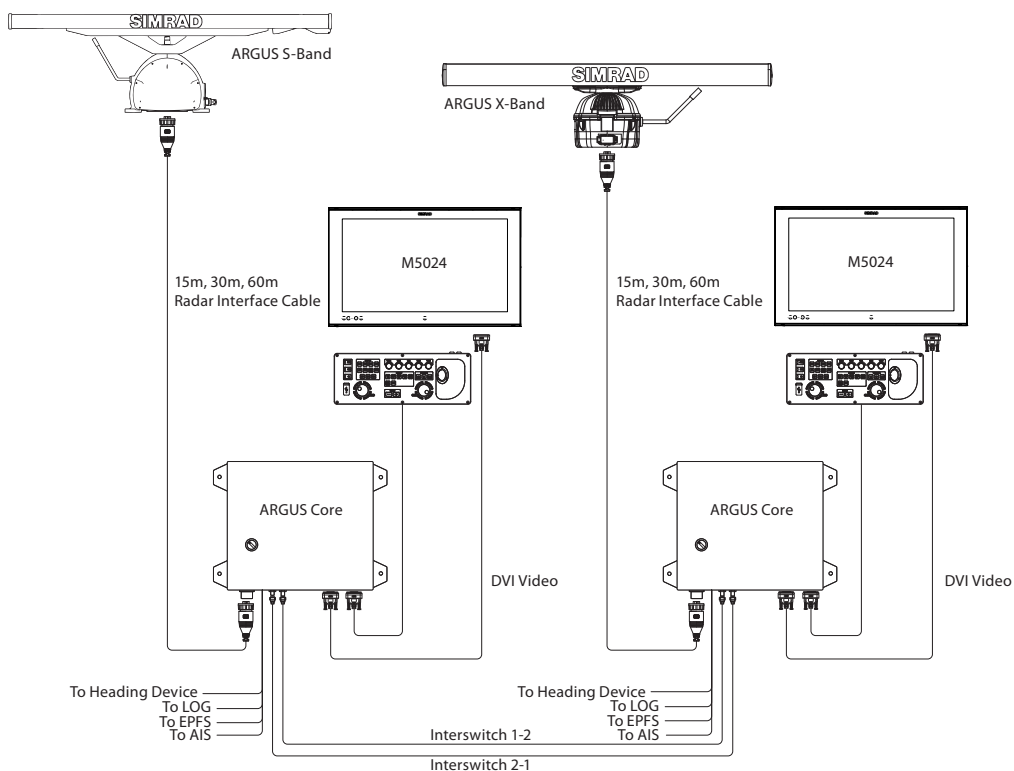


# System Configurations

## 1. IMO APPROVED X OR S-BAND SYSTEM

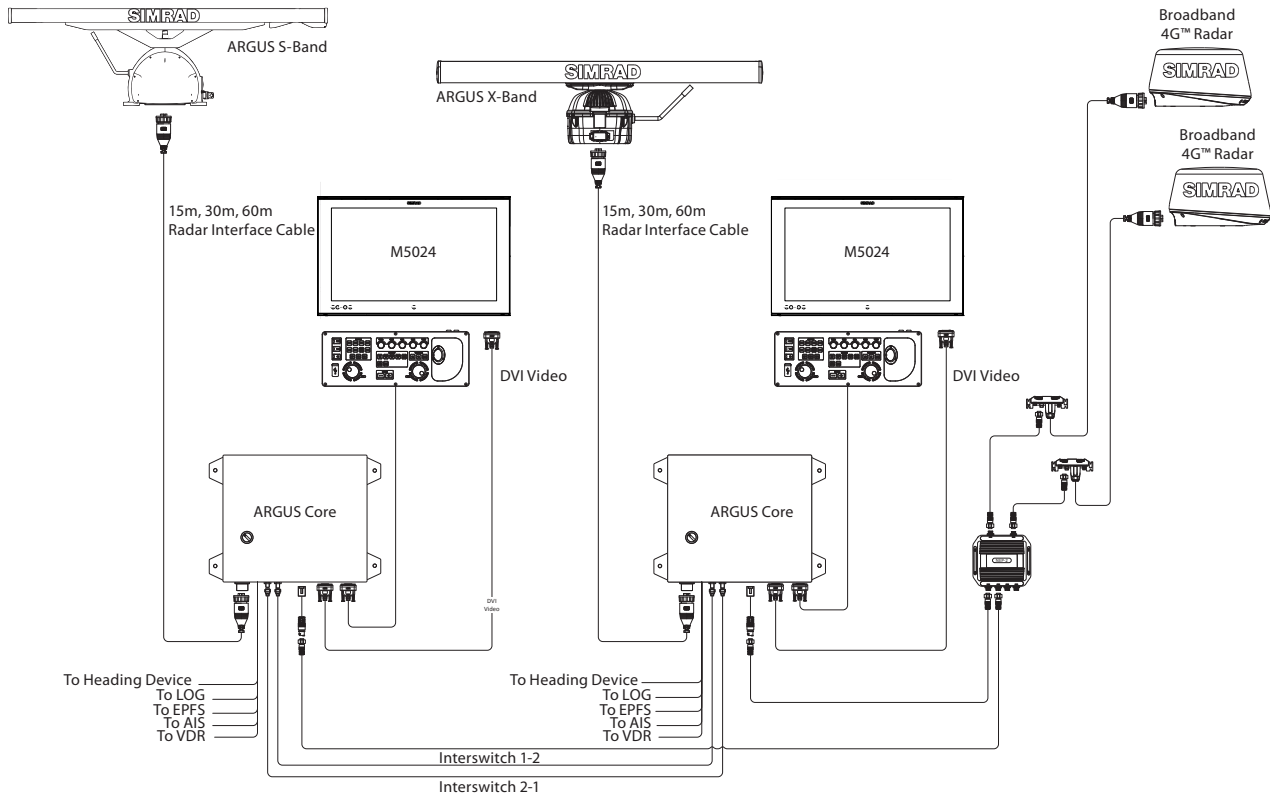


## 2. IMO APPROVED X AND S-BAND INTERSWITCHED

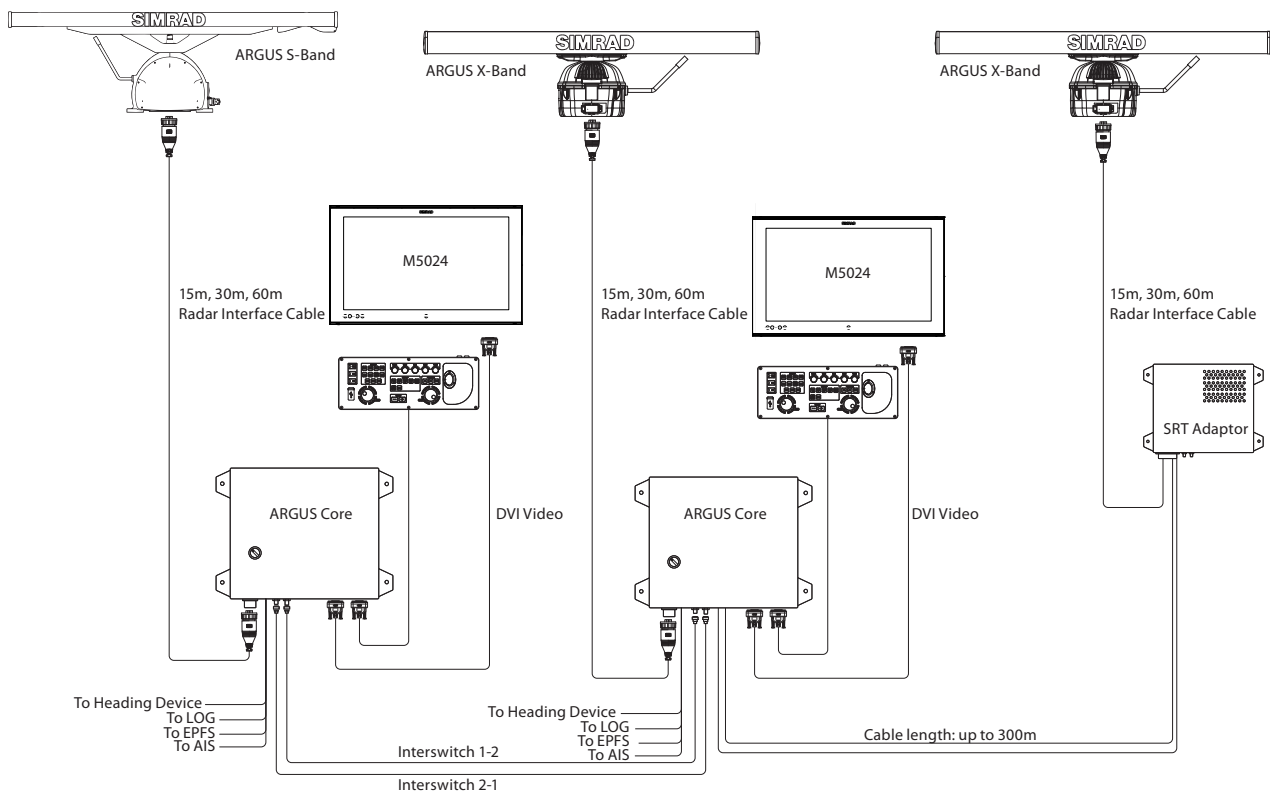




### 3. IMO CAT 1 AND CAT 2 APPROVED WITH BROADBAND RADAR INTEGRATION

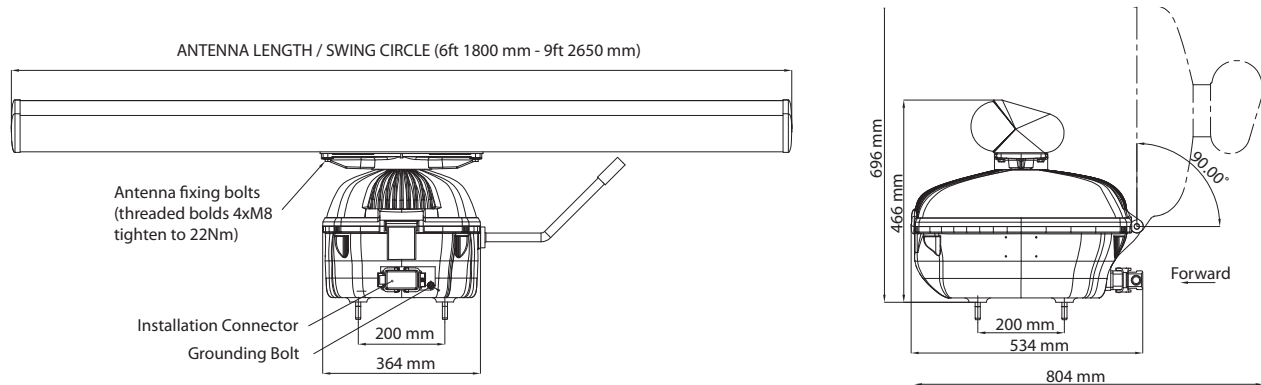


### 4. LONG CABLE RUN INSTALLATION SHOWING X AND S-BAND

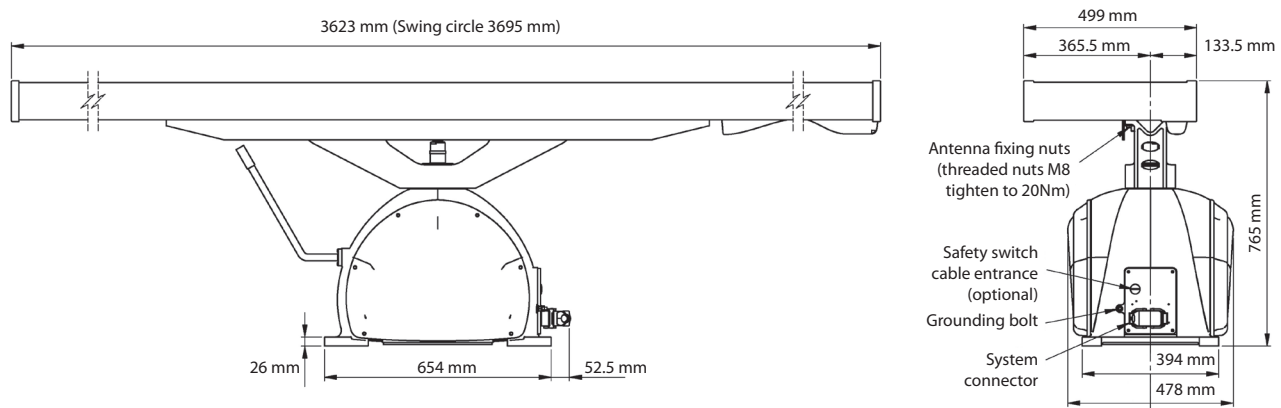


# Dimension Drawings

## ARGUS X-BAND RADAR UPMAST



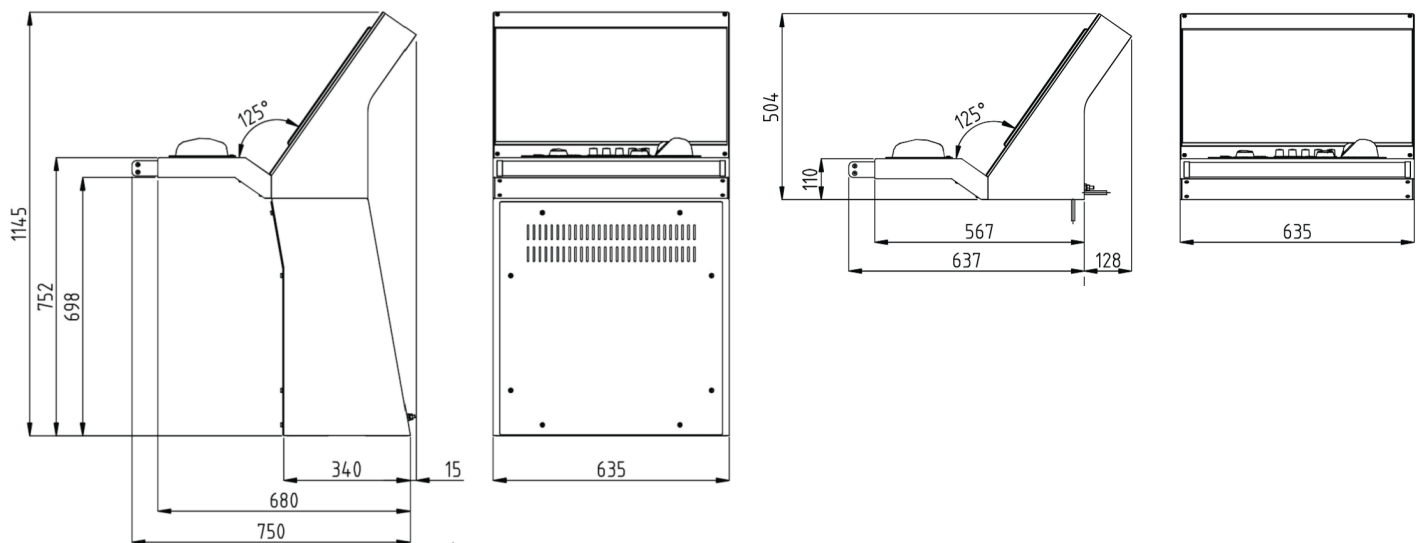
## ARGUS S-BAND RADAR UPMAST



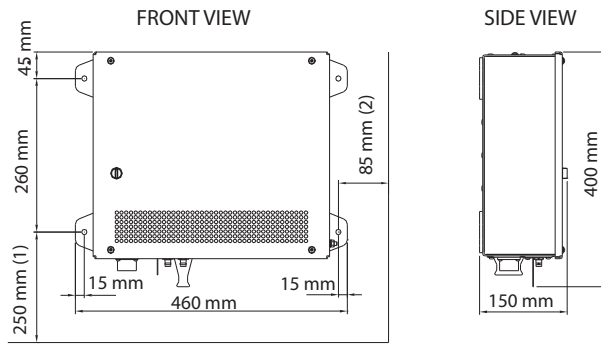
## ARGUS RADAR CABINET MOUNTING

SIDE VIEW

FRONT VIEW

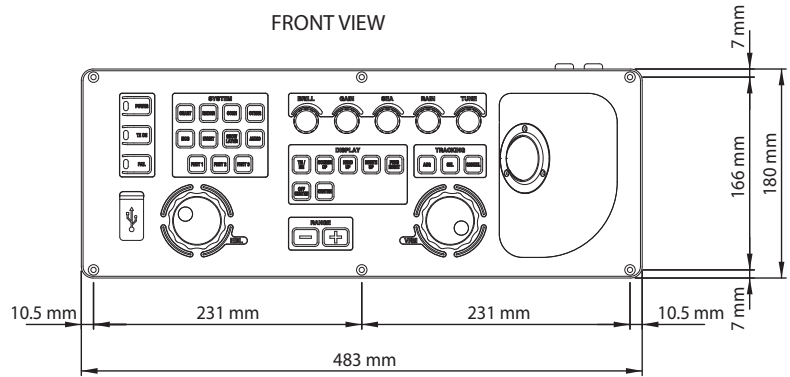


### ARGUS CORE UNIT

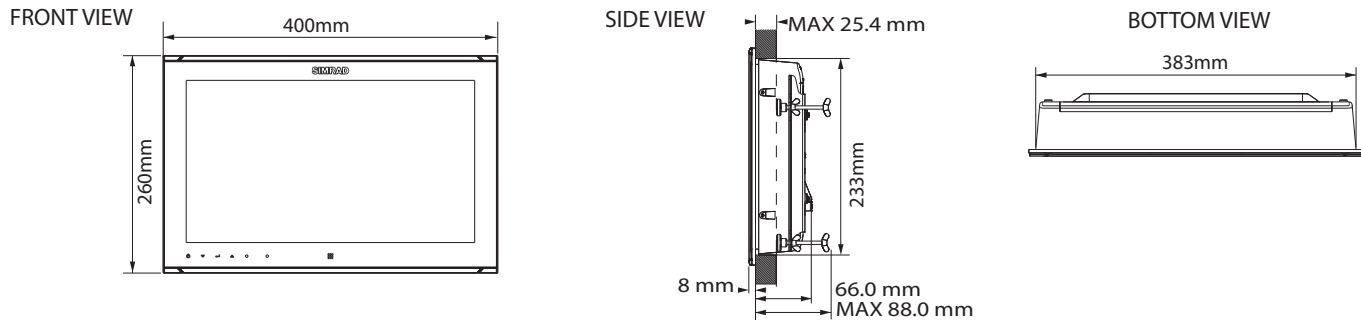


- (1) Minimum distance to the floor
- (2) Minimum distance to the wall and to others equipments

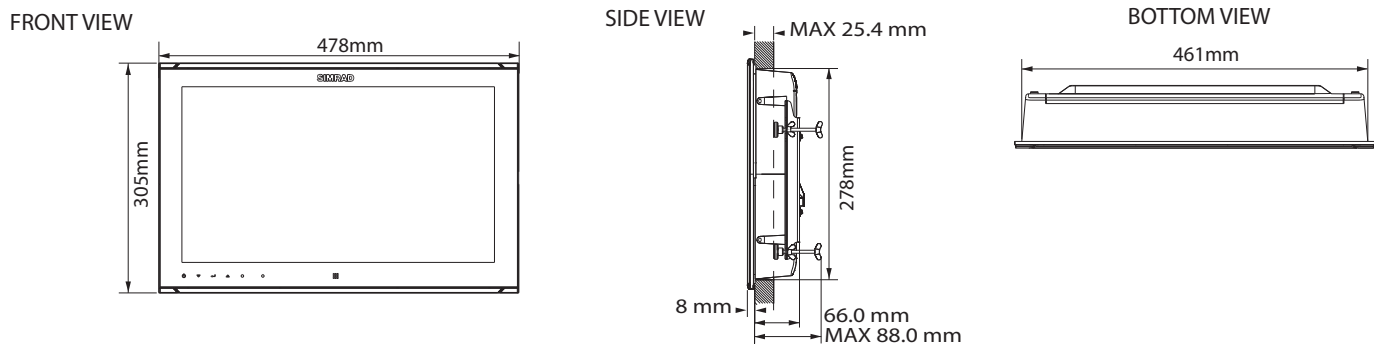
### ARGUS RADAR KEYBOARD



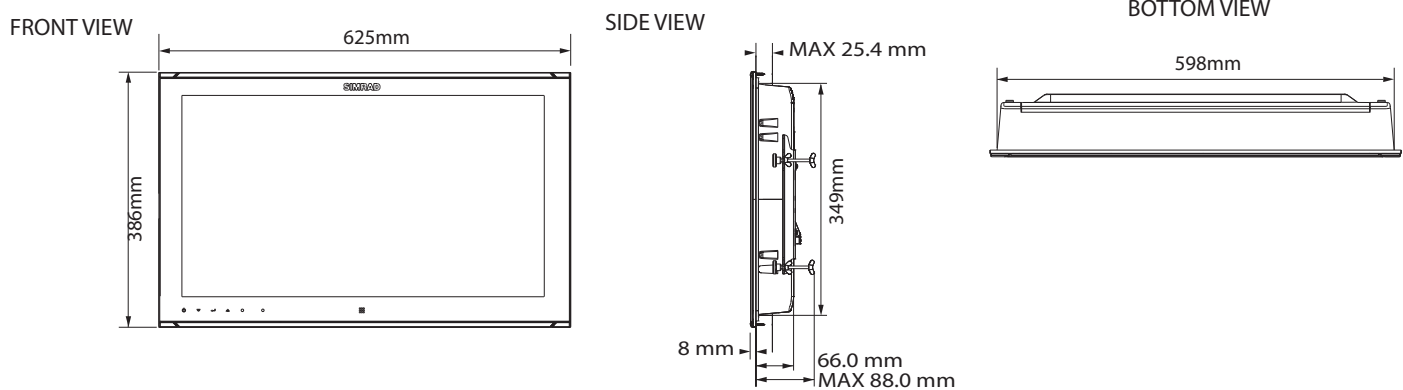
### 16" M5016-P WIDE SCREEN



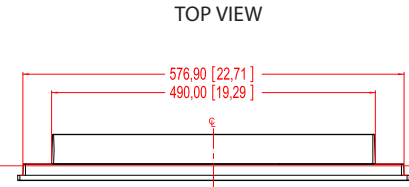
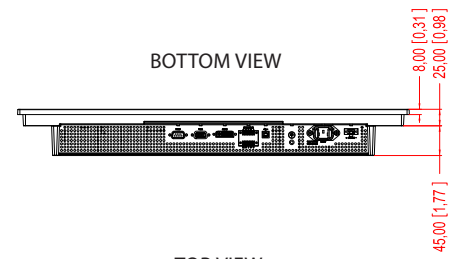
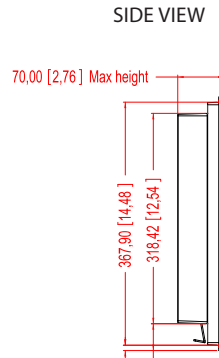
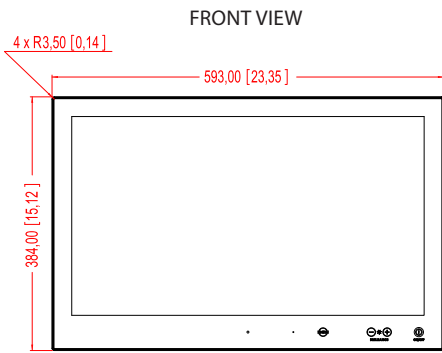
### 19" M5019-P WIDE SCREEN



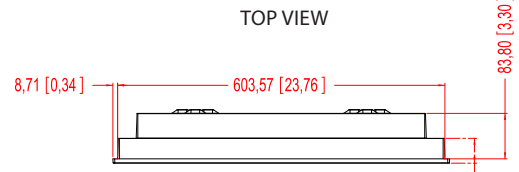
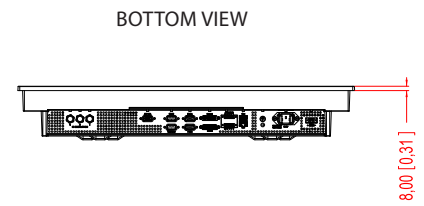
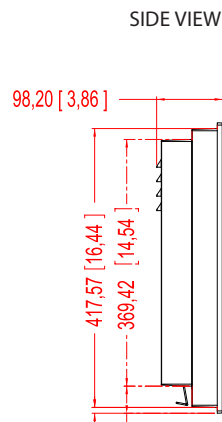
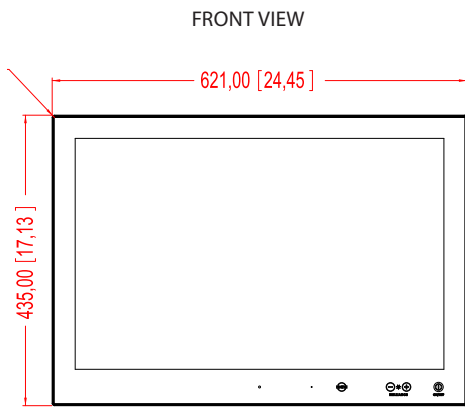
### 24" M5024-P WIDE SCREEN



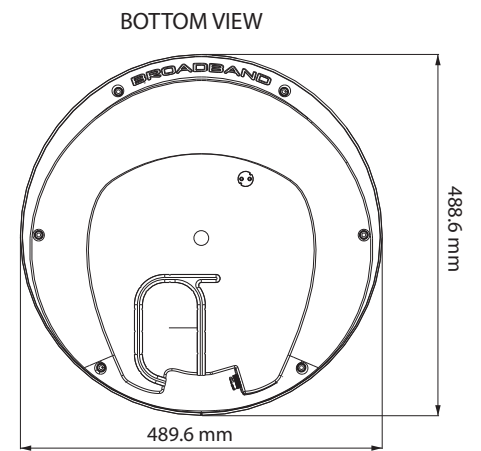
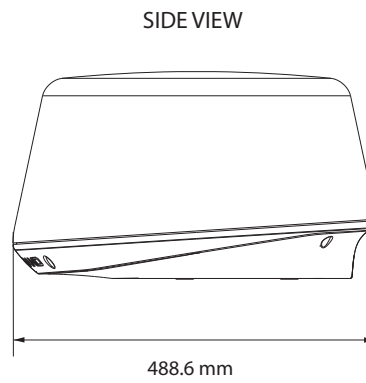
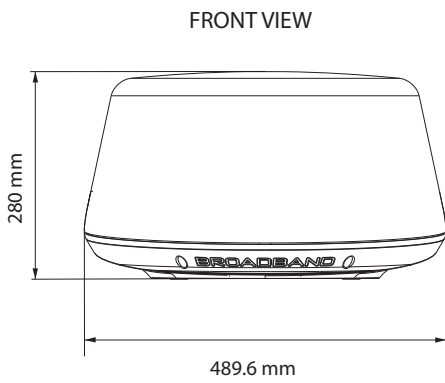
### ARGUS RADAR 24" SERIES X MONITOR



### ARGUS RADAR 26" SERIES X MONITOR



### 4G™ BROADBAND RADAR



# Technical Specifications

## ▶ ARGUS SPECIFICATIONS

DISPLAYS	
Monitor - size and resolution	CAT 1 : 26" Series X - 1600x1200 (16:10) CAT 2 : 24" M5024 Wide Screen 1920x1080 (16:9) 24" Series X - 1920x1080 (16:9) CAT 3 : 16" M5016 Wide Screen 1366x768 (16:9) 19" M5019 Wide Screen 1366x768 (16:9)
Radar picture	CAT 3 >180 mm / CAT 2 >250 mm / CAT 3 >320 mm
Presentation Modes	Day/Night modes
Relative motion (RM)	Head, Course and North Up
True Motion (TM)	Course and North Up
Off-centering	Up to 50% of range scales in use
Range Scales	0.125; 0.5; 0.75; 1.5; 3; 6; 12; 24; 48; 96 nm
Range Resolution	3 m on 0.75 nm range scale
Azimuth resolution	0.1°
Trackball	Polar and Geographical coordinates. Continuously displayed
Diagnostic	On-line diagnostic programs
TARGET TRACKING FACILITIES	
Acquisition	Manual or automatic up to 100 targets (20 targets with CAT 3)
Tracking	Automatic up to 100 targets (20 targets with CAT 3)
Auto acquisition / Guard Zones	One auto acquisition zone stabilized on Ownship heading and size/shape configurable. Four sectors with fixed width of 0.5 nm configurable as auto acquisition or guard zone
AIS FACILITIES	
Presentation	Up to 300 targets (120 target with CAT3) chosen as the nearest to own ship AIS overflow mechanism of priority
Safe checking	All 300 targets (120 Targets with CAT3) in sleep or activated stated
Auto acquisition / Guard Zones	Same zones as described for Target Tracking facilities. The System provides up to four Guard Zones
TRIAL MANOEUVERS (NOT AVAILABLE IN CAT 3)	
Trial course	For Target Tracking and AIS target. Manually adjustable from 0° to 360° or automatically computed within 135° with reference to present course.
Trial speed	Adjustable from 0 to 50 knots
Trial ROT	Adjustable from 1° to 60°/min
Trial time	Adjustable with 1 min increments
MAPPING	
Operator compiled maps up to 120 segments plus symbols and text strings with selectable colors and line styles.	
Map stabilization	Relative, true (Dead Reckoning) or geographic
Map storage	By name, on a built-in non-volatile memory. Transferable via USB Memory stick
Map adjustment	Position and Orientation
Parallel index	Four independent parallel index lines
Data readout	Own ship data ARPA target data AIS target data
System setting	Safe minimum CPA and TCPA, vector / past position / trial / trials time
OTHERS	
Alarms	Acoustic and visual warning for: Dangerous Target, Target in Guard Zone, Lost Target, System Failure and external interface sensors (EPFS and AIS).
Other features	Anchor watch, echo reference speed (not for AIS enabled systems), EPFS speed.
Inputs	Serial interface NMEA0183 (IEC 61162-1/2) Gyro, Speed log, EPFS, AIS, Wind sensor, Ext. Alarm Interface
Outputs	Serial interface NMEA 0183 (IEC 61162-1/2) RATTM-RAOSD-RARSD-RAALR sentence AIACK for AIS alarm acknowledge, RATTD, RATLB, Dead Man Alarm, Power Fail, Danger Target, Video output for VDR

Gyro interfaces	Synchro: . Voltage value: 50 ÷ 115 Vac +/- 10% (reference) . 50/60 Hz or 300/400 Hz . Gear ratio: 1:360, 1:180, 1:90, 1:36 Stepper: . Voltage value: 15 to +100 V positive (Vef) -15 to -100 V negative (Vef) . Gear ratio: 1:360, 1:180, 1:90, 1:36 Stepper rectified: . Voltage value: 100 Vac (Vef) . Frequency: 50/60 Hz or 300/400 Hz ±6% . Gear ratio: 1:360, 1:180, 1:90, 1:36 Serial: . RS422 standard FNMEA or RS232 . Load: ≥ 7 KΩ, terminated 120 Ω
Other interface	Dual Ethernet 10/100Mbit/s USB 2.0 port

### ENVIRONMENTAL CONDITIONS

Operating temperature	In-door Units: -15° to 55°C (IEC 60945 protected equipment) Out-door Units: -25°C to 55°C (IEC 60945 protected equipment) Out-door Units: Down to -53°C (Pedestal with heater)
Storage Temperatures	-25°C to 70°C (IEC 60945)
Damp Heat	+40 °C 93% relative humidity 1 cycle (IEC 60945)
IP class	IP20 (display)
Vibrations	As per IEC 60945
Power supply	Display Unit: 230/110 VAC 50/60 Hz (30 W) Radar Sensor: (300 W) Fed by Core unit
Power consumption	500 W max (depending on monitor and wind load)
Type testing in accordance with	IMO-Resolution A.278 (VIII), A.694 (17), A.823 (19), MSC 191 (79), MSC 192 (79) EN 62388 Ed.1.0, 2008 EN 62288 Ed.1.0, 2008 EN 60945 Ed.4.0, 2002 incl. Corr.1, 2008 EN 61162-1 Ed.4.0, 2010 EN 61162-2 Ed.1.0, 1999

### X-BAND RADAR UP-MAST

Peak Power (kW)	12 or 25		
Pulse length (nsec)	60 – 250 - 800		
PRF (Hz)	3000-1500-750		
Antenna model	<b>6X</b>	<b>9X</b>	<b>12X</b>
Gain (dB)	29	31	32.5
Horizontal beam width at -3 dB (°)	1.3	0.9	0.7
Vertical beam width at -3 dB (°)	22	22	22
Weight of Antenna incl. Pedestal with Transceiver (kg)	40	44	49
Nominal Rotation speed (RPM)	≥20 or ≥40	≥20 or ≥40	≥20

### S-BAND RADAR UP-MAST

Peak Power	30
Pulse length (nsec)	60 – 250 - 800
PRF (Hz)	3000 - 1500 - 750
Antenna model	12S/LP
Gain (dB)	27
Horizontal beam width at -3 dB (°)	1.9
Vertical beam width at -3 dB (°)	24
Weight of Antenna incl. Pedestal with Transceiver (kg)	125
Nominal Rotation speed (RPM)	20

### GRAPHIC FUNCTIONS

True or relative time adjustable vectors
Target identification number, track-ball marker and true marks
AIS identification number, ship names or call signs
Time adjustable past position plots
Four independent parallel index lines
Waypoints and Route from Electronic Position Fixing Systems
Own ship shape and activated AIS target shape on lower range scales

## ► BROADBAND RADAR SPECIFICATIONS

GENERAL	
Compliance	FCC/IC/R&TTE FCC ID: RAY3G4G IC ID: 4697A-3G4G Human Exposure General Public Safety Limit – touch dome anywhere.
Environmental	IEC60945 4th edition 2002-2008 Operating Temperature: -25° to +55°C Relative humidity: +35°C, 95% RH Waterproof: IPx6
Relative wind velocity	51 m/sec (Max:100 Knots)
Power consumption	Operating: 18W (Typ.) @ 13.8VDC Standby: 2W (Typ.) @ 13.8VDC ~ 150ma
DC input (at end of radar cable)	9V to 31.2Vdc (12/24 Volt systems). Reverse polarity protection
Transmitter Source (pre-heating time)	No magnetron – Instant On™
Outside dimensions	Height 280mm x Diameter 488mm
Weight (no cable)	7.4 kg
RADAR AND ANTENNA PARAMETERS	
Radar Ranges	200' to 24nm with 17 range settings (nm/sm/km)
Rotation	24/36 rpm +/- 10%; Mode Dependant
Transmitter frequency	X-band - 9.3 to 9.4Ghz
Transmitter source (warm-up time)	No Magnetron – all solid state. Instant On™
Plane of polarization	Horizontal Polarization

Transmitter peak power output (at antenna port)	165mW (nominal)
Main Bang Dead Zone & Tuning	None – not a pulse radar
Sea and Rain Clutter	5X less than a pulse radar
Sweep Repetition Frequency	200Hz
Sweep Time	1ms
Sweep Bandwidth	75MHz max
Horizontal Beam width (Tx and Rx antenna)	5.2° +/- 10% (-3dB width)
Vertical Beam width (Tx and Rx antenna)	25° +/- 20% (-3dB width)
Side lobe level (Tx and Rx antenna)	Below -18dB (within ±10°); Below -24dB (outside ±10°)
Noise figure	Less than 6dB
COMMS/CABLING/MOUNTING	
Communication Protocol	High Speed Ethernet and Serial
Heading	NMEA2000/Simnet (with RI-10 interface box)
Inter Connecting cable length	20m standard with RJ45 thin custom connector – Display model dependent
Maximum inter-connecting cable length	100m
Bolts (4)	M8x30 - 304 stainless steel
Footprint	W233mm (port/starboard) x L141.5mm

## ► ARGUS RADAR SYSTEMS PART NUMBERS

Part Number	Description
000-10421-001	4G Broadband Radar including 20m (66 ft) scanner cable, RI10 interface box, 1.8m (6 ft) yellow Ethernet cable
000-10496-002	Argus 12U/6X P HSC System - includes 12kW Upmast Scanner with 6' Antenna, Control Panel and Core Unit
000-10497-002	Argus 12U/6X P System - includes 12kW Upmast Scanner with 6' Antenna, Control Panel and Core Unit
000-10498-002	Argus 12U/9X P HSC System - includes 12kW Upmast Scanner with 9' Antenna, Control Panel and Core Unit
000-10499-002	Argus 12U/9X P System - includes 12kW Upmast Scanner with 9' Antenna, Control Panel and Core Unit

Part Number	Description
000-10500-002	Argus 25U/6X P HSC System - includes 25kW Upmast Scanner with 6' Antenna, Control Panel and Core Unit
000-10501-002	Argus 25U/6X P System - includes 25kW Upmast Scanner with 6' Antenna, Control Panel and Core Unit
000-10502-002	Argus 25U/9X P HSC System - includes 25kW Upmast Scanner with 9' Antenna, Control Panel and Core Unit
000-10503-002	Argus 25U/9X P System - includes 25kW Upmast Scanner with 9' Antenna, Control Panel and Core Unit
000-11753-002	Argus 30U/12S (S-Band) System - includes 30kW upmast transceiver with 12' Antenna, Control Panel and Core Unit

# OUR SERVICE PROGRAMS

READY FOR ANYTHING, ANYWHERE.

## GLOBAL WARRANTY & ONBOARD SUPPORT



### Certified Dealers & Vessel Portal

We offer a global warranty supported by our network of regional Navico hubs and Certified Dealers. With Vessel Portal, our dealers have access to a complete service history of your Certified Vessel for consistent, reliable service.



### 2 Years OnBoard Service

Our OnBoard Service Program gives customers the option to receive warranty service on board their vessel for two years after purchase, on certified systems valued over \$2,500 USD.

Refer to our Warranty policy at [navico.com/commercial](http://navico.com/commercial) for full terms and conditions.

## 7 YEARS OF COMPREHENSIVE SUPPORT



### Comprehensive support for 7 years, with discounted upgrades to current-model technology.

In the unlikely event of failure within seven years of purchase, our 7-Year Upgrade program lets customers choose a repair, direct replacement, or an upgrade to the current model at a discounted price.

A web-based portal allows dealers to easily locate part numbers and pricing for spare parts, service units, extended warranties, and upgrade options – ensuring support for all of our installed products and systems throughout their lifecycle.

## FLEXIBLE WARRANTY OPTIONS



### Mix and match coverage to create a warranty package for any requirement.

Choose to extend the product warranty or OnBoard Support period with our Extended Warranty program. With a custom warranty package, only pay for the extensions you need.



### GLOBAL SUPPORT TRACKING

We employ global systems to monitor and manage:

- Speed of issue resolution via phone and email
- RMA response time
- Customer satisfaction

AVAILABLE  
**24/7/365**

### 24/7/365 SERVICE HOTLINES

#### Americas:

**24/7** +1-918-438-8669 (USA)  
855-241-3598 (USA toll free)

#### Asia Pacific:

**24/7** +64-9-925-4595 (New Zealand)

#### Europe, Middle-East & Africa:

**24/7** +31-786-530-004 (Netherlands)



### GLOBAL TECHNICAL DRAWING SERVICE

- System network design and validation support
- Quotation assistance
- Systems specified to best suit customer requirements



### COMMERCIAL TRAINING

- ECDIS Training
- Online, on-board and classroom based training solutions to ensure maximum value for money and performance
- Highly skilled, specialised facilitators

## OUR HERITAGE: ESTABLISHED IN 1947.

With more than 60 years of maritime expertise invested in delivering solutions to the professional market, we have unique knowledge to support professional customers with cost effective navigation solutions.

### Contact us:

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[www.navico.com/commercial](http://www.navico.com/commercial)