



## **RADAR ANTENNAS SERIES ASX-2101 • ASX-1901**

### **GENERAL DESCRIPTION**

Chosen by top prime contractors and administrations worldwide, the GEM ELETTRONICA ASX-2101 • ASX-1901 Series answers to the most demanding requirements of high-resolution of radar detection of surface targets.

Available in a wide span of versions, it meets virtually any requirement whichever the weather, due to the choice of polarization made available.

Such maintenance-free antennas can be installed at far different latitudes, anyway providing tireless performances due to robustness of construction and quality of materials.

All versions have low level sidelobes to cancel unwanted returns from directions other than the broadside.

### **FEATURES**

- High azimuth discrimination
- Fan-beam
- Functionality 24 h for 360 day/night all-weather conditions.
- Can be remotely driven to select different rotation rates
- Can interface different GEM ELETTRONICA radar transceivers
- Maintenance free (MTBF more that 60000 h)
- Compact aspect
- Fully compliant with IALA Guideline No. 1111, Edition 1 (May 2015)

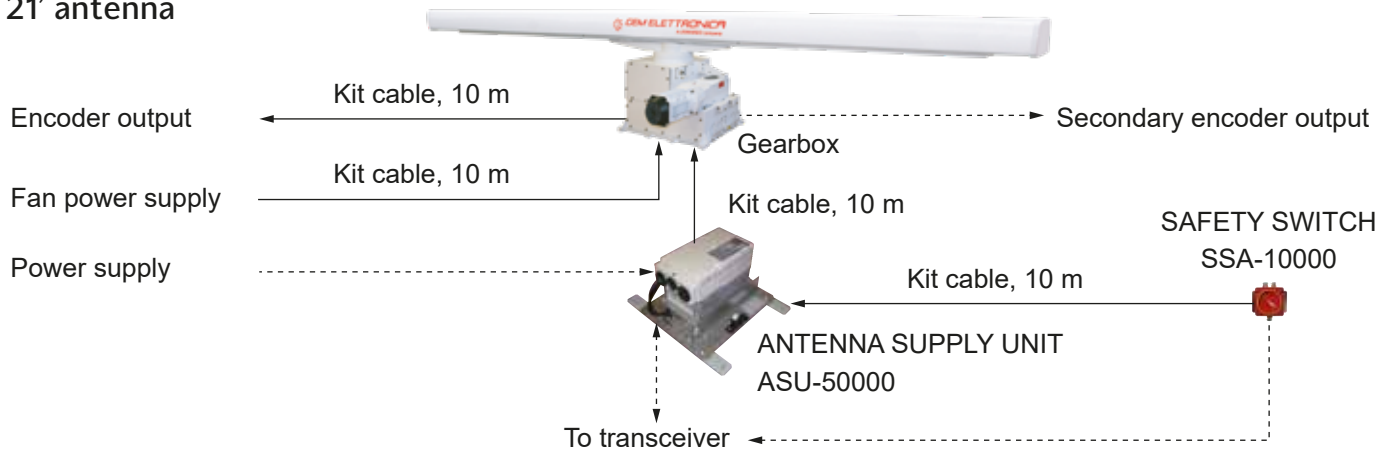
### **APPLICATIONS**

The antenna system series ASX-2101 • ASX-1901 is targeted to top-ranked applications, such as:

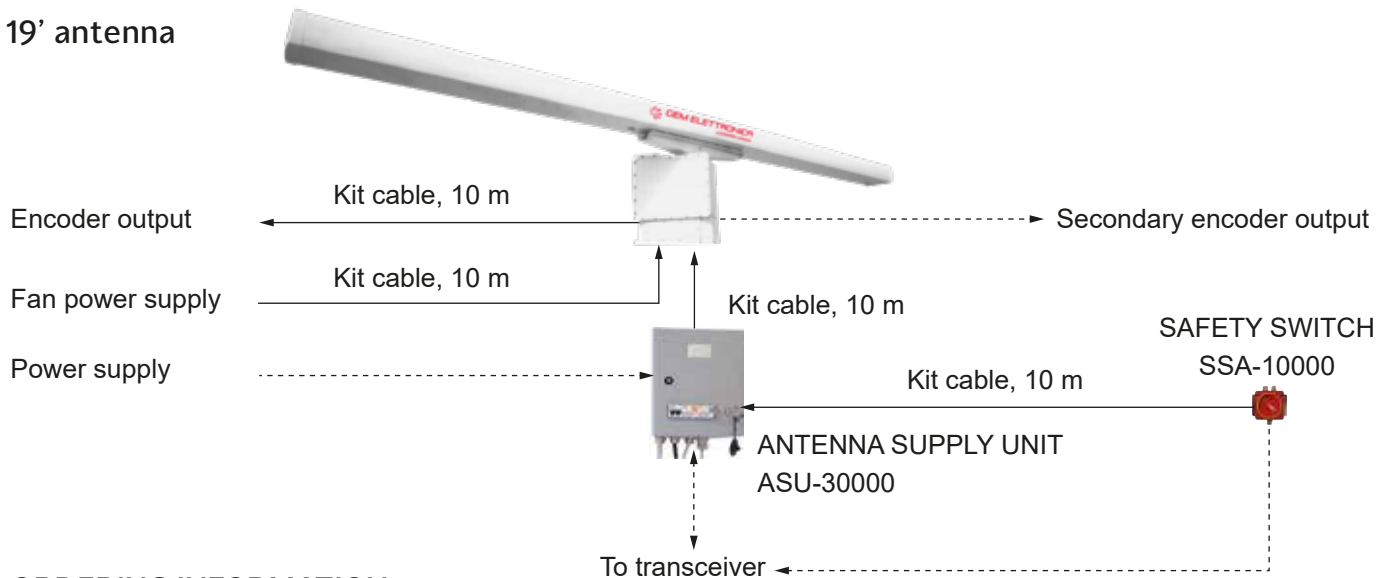
- Vessel Traffic System (VTS), Vessel Traffic Management & Information Systems (VTMIS)
- Coastal Surveillance & Security
- Surface Movement Guidance Control System (SMGCS)
- Homeland Security

## GENERAL DIAGRAM OF CONNECTION

### 21' antenna



### 19' antenna



## ORDERING INFORMATION

Order Code	Antenna Length	Switchable Polarizations	Nominal center frequency	Antenna Supply Unit	Safety Switch	Gearbox	Tilt	rpm
ASX-2101	21 feet (6.51 m)	Horizontal	9375 MHz	ASU-50000	SSA-10000	MU-3122	TIM-12000	11,22
ASX-2101/C	21 feet (6.51 m)	Circular	9375 MHz	ASU-50000	SSA-10000	MU-3122	TIM-12000	11,22
ASX-1901	19 feet (5.89 m)	Horizontal	9375 MHz	ASU-30000	SSA-10000	MU-1022X	TIM-11000	16,22
ASX-1901/C	19 feet (5.89 m)	Circular	9375 MHz	ASU-30000	SSA-10000	MU-1022X	TIM-11000	16,22
ASX-1901G	19 feet (5.89 m)	Horizontal	8900 MHz	ASU-30000	SSA-10000	MU-1022XG	TIM-10000	16,22
ASX-1901G/C	19 feet (5.89 m)	Circular	8900 MHz	ASU-30000	SSA-10000	MU-1022XG	TIM-10000	16,22

## SUPPLY COMPOSITION AGAINST EACH ORDER CODE

- Antenna system including gearbox and antenna unit
- Tilt Unit
- Antenna Supply Unit (ASU)
- Safety switch Unit (SSA)
- Connecting cables kit (standard lengths: 10 mt)
- Certificate of conformance
- Packing list

## OPTIONS:

- Depending on installation requirements, cable lengths are delivered in accordance with Buyer's instructions
- Can be released at other center frequencies between 8800-9600MHz upon Buyer's requirement
- Use and installation manual in English language

## SERIES SPECIFICATIONS

BASIC PERFORMANCE DATA	ASX-2101	ASX-2101/C	ASX-1901	ASX-1901/C	ASX-1901G	ASX-1901G/C
Antenna type:	Slotted waveguide array					
Nominal Center frequencies:	9375 MHz				8900 MHz	
Frequency band:	80 MHz					
Array length:	21 feet (6.51 m)			19 feet (5.89 m)		
Polarization:	Horizontal	Circular	Horizontal	Circular	Horizontal	Circular
Gain:	38 dBi ± 0.5 dB	38 dBic ± 1 dB	35 dBi ± 0.5 dB	35 dBic ± 1 dB	35 dBi ± 0.5 dB	35 dBic ± 1 dB
VSWR:	less than 1.2:1					
Beamwidth (at -3 dB):						
Horizontal	0.35° ± 0.03°		0.42° ± 0.03°			
Vertical	11° ± 1°		18° ± 2°			
Sidelobes:						
Within ± 10°	less than -28 dB					
Outside ± 10°	less than -35 dB					
Azimuth encoders:	16384 or 8192 or 4096 pulses per revolution		2048 or 4096 pulses per revolution			
Rotation speed:	11, 22 rpm		16, 22 rpm			
Drive Motor Power:	3.5 kW		1.5 kW			
Operational wind speed:	up to 100 knots					
<b>ELECTRICAL POWER</b>						
Required supply at ASU input:	mono phase, 50/60 Hz					
Voltage:	220 Vac					
Absorption:	less than 2 kW		less than 1 kW			
<b>ENVIRONMENTAL PERFORMANCES</b>						
Operating temperature range:						
Standard	from -25° C to +55° C					
with heating unit	from -40° C to +70° C					
Relative humidity:	up to 100% at +40° C with dehydrator					
Vibrations:	in accordance with IEC-60945					
Vibrations/shock:	1g from 0 to 50 Hz					



# OUTLINE

dimensions in mm

### ANTENNA and ROTATION UNIT

**21' antennas**

Weight  
Antenna Unit: 178 Kg  
Rotation Unit: 245 Kg  
Tilt: 31 Kg

**19' antennas**

Weight  
Antenna Unit: 65 Kg  
Rotation Unit: 140 Kg  
Tilt: 28 Kg

### ANTENNA SUPPLY UNIT

**ASU-50000**

Weight 10 Kg

**ASU-30000**

Weight 10 Kg

### SAFETY SWITCH

**Weight 2 Kg**

