	Title: Supply and Delivery of VTS Equipment	
	Delivery: Lighthouse and Navigational Systems	<b>Date Issued:</b> 23 June 2022

## Specifications for VTS Equipment for Lighthouse and Navigational System

### 1. Requirement of Equipment

1.	Radar Power Supply	Port of Durban (Bluff)
2.	Radar Power Supply	Port of Saldanha
3.	AIS Base station	Port of Saldanha
4.	VHF receiver power supply	Port of Cape Town
5.	VHF receiver power supply	Port of Nqura
6.	VHF receiver power supply	Port of Nqura

#### A. 1x Single AIS Base Station

##### INTERFACES

Communication ports: Service and redundancy, RS-232

Message formats: NMEA

LAN: 100 Mbs BaseT Ethernet

##### GNSS MODULE

GNSS receivers 50 channels

##### RADIO MODULE

Sensitivity Better than -115 dBm

Bandwidth 25 kHz

Frequencies 156.025 to 162.025 MHz

Default Ch. 87B (161.975 MHz)

Default Ch. 88B (162.025 MHz)

##### POWER SPECIFICATIONS

AIS Unit 100 to 240 V AC (50 to 60 Hz)

AIS Unit 24 V DC Optional combined 100 to 240 V AC

and 24 V DC

AIS Unit power

consumption Average 9 W, peak 39 W

GNSS antenna 5 V DC from AIS Unit


##### ENVIRONMENTAL SPECIFICATIONS

Operating temperature range

AIS Unit -15 to +55 °C

GPS antenna -50 to +70 °C

VHF antenna -55 to +70 °C

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### Humidity

AIS Unit < 95 % relative, non-condensing

GPS antenna 100 %, hermetically sealed

VHF antenna 100 %, hermetically sealed

### STANDARDS AND REGULATIONS

Electrical safety EN 60950-1 Electromagnetic

compatibility EN 60945/EN 61000-6-3/6-2

Electrical interface IEC 61162-1/2

IALA recommendation A-124

Base station operation IEC 62320-1

Radio IEC 61993-2 (clause 15)

ITU-R M. 1371-5

MTBF (hours) >100.000 (designed to meet)

### B. 2 x Scanter 5000 Series Radar (Solid state) spares Power Supply

#### Product Number Description

386290-003Terma Scanter 5000 Series Power Supply, PSU, Spare Part

### C. 3 x Tait TB8100 VHF Repeater Power Supply


#### Product Number Description

TB9090-0000-0000-J000-10Power Management Unit AC, 12VDC!@C aux

### 2. Procurement Method

Formal RFQ and advertised on Transnet eTenders management platform website/Portal ([transnetetenders.azurewebsites.net](https://transnetetenders.azurewebsites.net)).

### 3. Sign-Off

Compiled & approved by: David Gordon	Date
	24/06/2022