

# VDL 6000

## AIS Airborne System



-The AIS Airborne transponder is the result of our extensive experience in avionics, and is designed and produced to the same high standards as our VDL 4000 avionic transponders.

-The transponder receives and transmits all required information within VHF coverage.

**The VDL 6000 AIS Airborne Transponder** is developed for aircraft installation for use in Search and Rescue (SAR) and Coastal surveillance missions.

The AIS Airborne transponder greatly enhances surveillance of large areas. The localization and identification of all AIS equipped vessels greatly increases national security, environmental protection and the possibility of rescuing vessels in distress. AIS-equipped aircraft, with their high speed and expansive VHF coverage, are well suited to be used in SAR-operations.

### Features

The SOTDMA technology used in the AIS transponder broadcasts and receives information about all AIS equipped vessel within VHF coverage. This information includes position, identity, course and speed over ground, heading, navigational status and destination.

The information received is easily plotted on an electronic chart display system. This gives a surveillance capability that was not possible prior to AIS. AIS information is also useful in rescue operations with the increased situational awareness.

### Configuration and interfaces

The AIS Airborne transponder, with its internal GPS, connects to power supply, VHF and GPS antennas and to a laptop with configuration software. The same laptop or a CDTI can also run an electronic chart system to display targets received by the AIS Airborne transponder.



**CNS Systems**<sup>TM</sup>

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## Technical Specifications

### Power

Input voltage	21.6-31.2 V DC
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### Radio

Transmitter output power (adjustable)	1 and 12.5 W, 50 Ohm load
Bandwidth	25 kHz
Channel access method	TDMA (AIS)
Baud rate	9600 bps (AIS) / 1200 bps (DSC)
Modulation	GMSK (AIS) / FSK (DSC)
Frequencies	156.025 MHz - 162.025 MHz
Default channels	87B (161.975 MHz), 88B (162.025 MHz), 70 (156.525 MHz)
Number of receivers	3 (2 AIS TDMA, 1 DSC)
Receiver sensitivity, 20% MER	< -107 dBm

### GNSS Receiver

GNSS receiver	GPS L1, 16 parallel channels
DGNSS support	Yes

### Environmental

IEC 60945	Protected installation
ED-14E / RTCA/DO-160E	

### Interfaces

VHF antenna	N female, 50 Ohm
GPS antenna	TNC female, 50 Ohm
Power	D-sub 9-pole male
External Display (RS422)	IEC 61162-2 (optional RS232, with GPS data out)
Alarm relay	Normally closed

### Standards

ITU-R M.1371-4
IEC 61993-2
IEC 61162-1, 2
IMO Resolution A.694(17)
IMO Resolution MSC.74(69) Annex 3
ITU-R M.825-3
ITU-R M.1084-3
IEC 61108-1
IPC-A-610 (manufacturing)
ED-12B / RTCA DO 178B (SW development)

### Physical characteristics

Size (W x H x L mm)	146 x 86 x 276 (165 x 94 x 389)
Weight	2,8 kg (3,5 kg in tray)
Cooling	Not required

### Accessories

Vibration isolators (helicopter installation)	Optional
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### Compliance

BSH Statement of Conformity
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