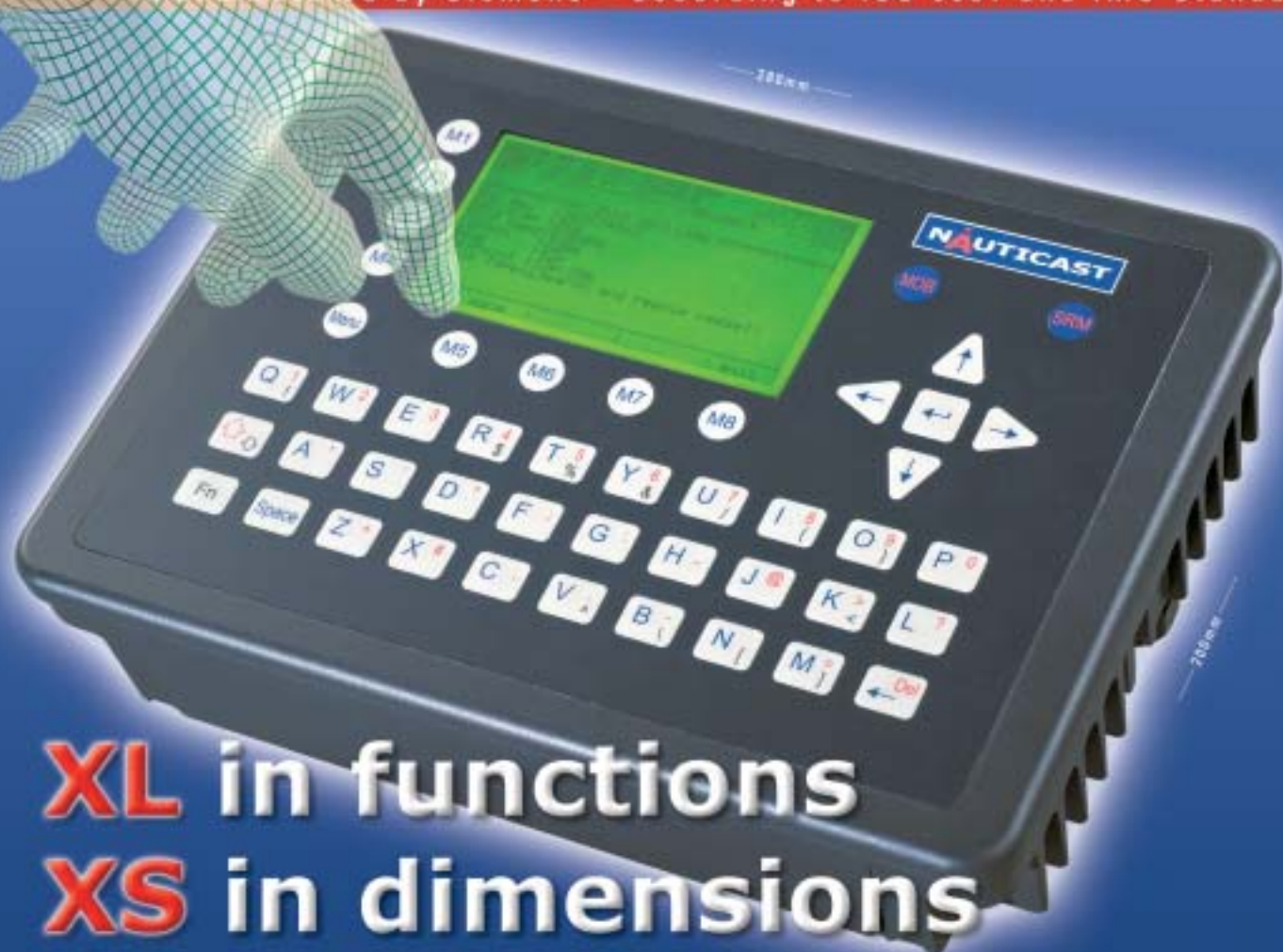


# X-Pack DS™

## The Multifunctional AIS Transponder

Manufactured by Siemens – according to ISO 9001 and IMO Standard



**XL** in functions  
**XS** in dimensions  
**eXpect** more  
 more safety  
 more usability  
 more information

▲ The X-Pack DS Transponder fully corresponds to the technical specifications for the Universal Automatic Identification System (AIS) Transponder, laid down and issued by the International Maritime Organization (IMO).

▲ The X-Pack DS Transponder is specifically designed for commercial shipping, e.g. for vessels which are subject to the SOLAS regulations. The X-Pack DS Transponder makes a significant contribution, to increasing safety at sea.

#### PHYSICAL DIMENSIONS

Size in mm (w)	201,26
Size in mm (h)	60
Size in mm (d)	281,26
Weight	2490 g
Operating Temperature (Celsius)	-15° to +55°

#### POWER SUPPLY

Supply Voltage (minus pole connected to chassis ground)	24 V DC (+10% -30%)
Input Current	max.5 A (24V)

#### INTERFACES

Number of Data Ports	3 Input / 4 I-O / 1 Output
IEC 61162-1/2	( RS422 / NMEA 0183)
ITU-R M.823-2	( RS422 / RTCM SC104)
Bitrate	4800 bps / 38400 bps
Sensor	(Input: i.e.: GPS)
Sensor	(Input: i.e.: GYRO)
Sensor	(Input: i.e.: HDG)
Pilot Port (In- / Output)	AIS targets, AIS messages
ECDIS Port (In- / Output)	AIS targets, AIS messages
Long Range Port (In- / Output)	
DGPS correction (In- / Output)	DGPS (RTCM SC104)

#### BUILT IN GPS

Receiver Architecture	12 channel differential
Tracking Capability	12 satellites sim.
Accuracy Horizontal	10m (2drms) *
Accuracy Vertical	15m (2drms) *
GPS Antenna Connector	TNC
DGPS Accuracy	< 5m (2drms)

\*) depends on SA

#### GPS Solutions

Beacon interoperability	
EGNOS interoperability	
WAAS interoperability	
OMNISTAR interoperability	
LongWave interoperability	
VHF Interop. (DGPS over Msg.17)	
Optional internal Beacon Receiver	
Combined GPS/DGPS Antenna	

#### OPTIONAL INTERFACES

Number of Data Ports RS232	up to 5
Bitrate	up to 115000 bps
Simplex / Duplex	Duplex
Number of Data Ports IEC 61162-3 CAN (RS485)	1
Bitrate	up to 1 Mbps

#### KEYBOARD

Integrated	alphanumeric
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#### STANDARDS

ITU-R M.1371	
IEC 61993-2	
IEC 61162-1	NMEA 0183-3
IEC 61162-2	NMEA 0183-3
IEC 61162-3	NMEA 2000
ITU-R M.823-2	
CE-Approved	
Environmental Standard IEC 60 945	

#### VHF

Frequency Range	156 MHz - 162MHz
Channel Spacing	12.5 or 25kHz
Number of RF Channels	3 Receiv. / 1 Transm.
Number of AIS Receivers	2
Number of DSC Receivers	1
Frequency Error	+/- 2.5ppm

#### VHF TRANSMITTER

Output Power	2 Watt to 12.5 Watt (adjustable)
Receive to Transmit Switching Time	< 1ms
Transmit release time	< 1ms
Automatic shutdown	1 sec.
Channel switching time	< 25ms
Attack Time	< 1ms

#### VHF RECEIVER

Max. Useable Sensitivity	< -110dBm
Co-channel Rejection	> -8dB (25kHz); > -12dBm (12.5kHz)
Adjacent Channel Selectivity	> 70dB (25kHz); > 60dB (12.5kHz)
Inter-modulation Rejection	> 65dB
Spurious Response Rejection	> 70dB
Blocking	> 84dB

#### VHF MODEM

Bitrate GMSK	9600 bps
RF Baud Rate (DSC)	1200bps
Modulation	GMSK / FSK

#### SOFTWARE

- Installed and ready for use
- Implemented configuration Software
- User friendly Interface to System and AIS Information
- Additional Interface to System Configuration (Windows 2000®)
- X-Pack DS Demonstrator for training purposes (Windows 2000®)

#### DISPLAY

Integrated	graphical 240 x 128 adjustable brightness and contrast
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For more information on this or our other Transponder products, please contact us:

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