

CORTEX V1 VHF, AIS & MONITORING

CORTEX-V1

DESCRIPTION

Advanced multi-station VHF with intuitive touchscreen operation. Class B SOTDMA with *smartAIS* send and receive and integrated no-loss splitter. Monitor and control onboard systems and keep alerted on board or ashore from your smartphone.

- Includes M1 Hub, H1 Tethered Handset and Accessories
- Add H1P Portable Handset for wireless freedom
- Combined AIS and VHF display with voiced alerts
- Transmit AIS and VHF simultaneously
- Universal compatibility



M1 Hub

- Built-in Class B SOTDMA with no-loss antenna splitter
- Built-in WiFi and Cellular connectivity for monitoring on board and ashore
- Galvanically isolated ports
- GNSS: GPS, GLONASS, Bei Dou, Galileo
- GPS Anti jamming feature
- Low power consumption
- 10Hz GPS and external antenna port
- Monitor up to 5 external sensors connected directly
- Connect to NMEA 2000 to monitor network sensors remotely
- Integrated no-loss AIS / VHF splitter

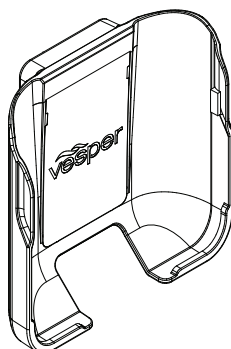
CORTEX V1 VHF WITH AIS	
PRODUCT CODE	CORTEX-V1
UPC	0797776885848
DESCRIPTION	VHF radio with SOTDMA <i>smartAIS</i> and remote vessel monitoring
INCLUDED	M1 Hub, H1 Tethered Handset, GPS Antenna, Power Cable, Audio Cable, External Sensors Cable, External WiFi Antenna, Bulkhead connector, Non Powered H1 Cradle
PACKAGING	330 x 218 x 148mm (1' 1" x 8 9/16" x 5 13/16") 1.98 kg (4.37 lb)

H1 Tethered Handset

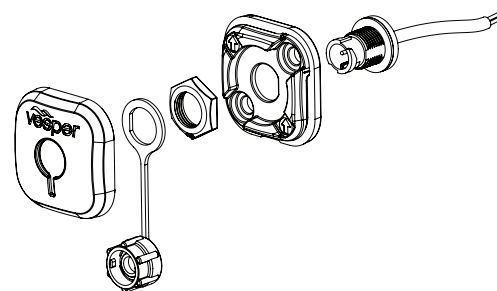
- Wet and glove capable touchscreen
- 4-inch multi-touch display with gorilla glass for maximum durability
- Optically bonded display for wide-angle and sunlight viewability, even in the harshest midday sun
- Single hand operation with click wheel and dedicated buttons
- 85 dBA of crystal-clear audio
- Touch a vessel onscreen for direct calling (DSC)
- IPx7 full plastic housing

INCLUDED

ACCESSORY CODE	DESCRIPTION
CRDL-H1	NON-POWERED H1 CRADLE
PTC-GPS	GPS LOW LOSS PATCH CABLE, 10M (32' 9 11/16")



NON-POWERED H1 CRADLE



BULKHEAD CONNECTOR

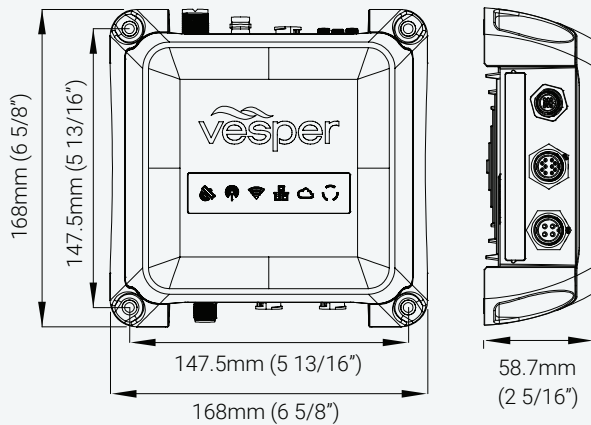


HUB

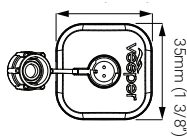
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| 1 VHF Antenna In | 7 General Purpose Input / Output, NMEA 0183 |
| 2 VHF Antenna Out (no-loss splitter) | 8 NMEA 2000 port |
| 3 DC Power (12/24V) | 9 Coloured backlit status indicators for GPS/GNSS, VHF/AIS, WiFi, NMEA 2000 Cloud and Power |
| 4 GPS/GNSS, WiFi and Cloud antenna ports | |
| 5 Mounting holes | |
| 6 External Speaker output | |

DIMENSIONS

HUB



BULKHEAD CONNECTOR

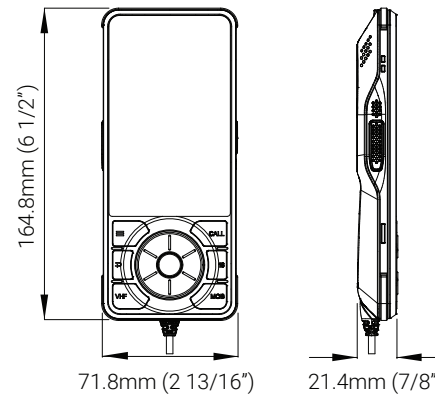


HANDSET

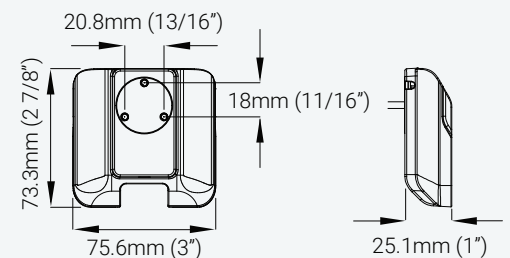
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|--------------------------------------|--------------------------------|
| 1 DSC distress call button | 10 VHF screen shortcut button |
| 2 Up to 85 dBA high fidelity speaker | 11 Return button |
| 3 Side volume buttons | 12 Menu button |
| 4 Power On button | 13 Push to talk button |
| 5 DSC Call shortcut | 14 4-inch touch screen |
| 6 Channel 16 shortcut button | 15 Protective rubber overmould |
| 7 MOB waypoint activation | 16 Power cord |
| 8 Click-wheel rotary controller | |
| 9 Microphone | |

DIMENSIONS

TETHERED HANDSET



CRDL-H1



CORTEX HUB		
GENERAL SPECIFICATIONS		
HUB SIZE	168 x 168 x 58.7mm (6 5/8" x 6 5/8" x 2 5/16")	
POWER SUPPLY	9-33V. 12V: 6A max, 500mA nom	
WEIGHT	770g (1.7lb)	
ENVIRONMENTAL	Waterproof (IPx7)	
OPERATING TEMPERATURE	-25°C to +55°C (-13°F to +131°F)	
SUPPORTED PROTOCOLS	AIS Class B SOTDMA, VHF Voice, Class D DSC, ATIS (user configurable, EU region) NOAA Weather (US region)	
TRANSMITTER FREQUENCY ERROR	Less than 300Hz	
ANT CONNECTOR	SO239	
SPLITTER	Max input power 25W, Insertion Loss RX 0dB, TX < 1dB	
SPLITTER CONNECTOR	BNC	
CABLE LENGTH	50mm curled, 200mm uncurled (H1)	
VHF VOICE		
VHF FREQUENCY RANGE	TX RX	156.025–161.600 MHz 156.050–163.275 MHz
DEDICATED RX CHANNELS	3	
POWER OUTPUT	25W, 1W (High, Low)	
REGIONS	USA, CAN, INT	
SENSITIVITY (12 DB SINAD)	-116 dBm	
ADJACENT CHANNEL SELECTIVITY	80 dB	
SPURIOUS RESPONSE	70 dB	
INTERMODULATION	70 dB	
SPURIOUS EMISSIONS	Less than -80 dBc (at 25 W)	
MAX AUDIO OUTPUT POWER	10W, < 1% THD	
CLASS D DSC		
DEDICATED RX CHANNELS	1	
SENSITIVITY (1% BER)	-116 dBm	
ADJACENT CHANNEL SELECTIVITY	80 dB	
SPURIOUS RESPONSE	70 dB	
INTERMODULATION	70 dB	
SOTDMA CLASS B AIS		
DEDICATED RX CHANNELS	2	
FREQUENCY RANGE	156.025 – 162.025 MHz	
POWER OUTPUT	5W, 1W (High, Low)	
AIS SENSITIVITY (20% PER)	-112 dBm	
ADJACENT CHANNEL SELECTIVITY	80 dB	
SPURIOUS RESPONSE	70 dB	
INTER-MODULATION	65 dB	
AUDIO		
SUPPORTED FUNCTIONS	VHF RX, Alarms	
AMPLIFIER	10W Class D, THD < 1%	
SPEAKER	4 ohm	

GNSS	
SENSITIVITY	-167dBm
CONSTELLATIONS	GPS, GLONASS, Bei Dou, Galileo
CHANNELS	72
DIFFERENTIAL SUPPORT	SBAS, WAAS, EGNOS
NAVIGATION RATE	10Hz
CONNECTOR	SMA
CERTIFICATIONS	IEC 61108
FEATURES	Anti-jamming, Anti-spoofing
NETWORKING	
NMEA 2000 GATEWAY	1 x Isolated Micro-C male port, AIS, GPS & MOB PGN output, Gateway Translations to/from NMEA 0183
NMEA 0183	1 x Isolated NMEA 0183 port, AIS and GPS sentences, Gateway Translations to/from NMEA 2000, 4800 / 38400 baud
WIRELESS	Access Point for up to 10 devices, 2.4GHz, 802.11b/g/n, Integrated Antenna, SMA-RP external antenna port (optional)
WIRELESS SECURITY	WPA2 Personal
CLOUD CONNECTIVITY	LTE-Cat1 with 3G fallback (USA), 3G (Canada, EU, Asia), Integrated SIM, Integrated Antenna, SMA-RP external antenna port (optional)
CONTROL OUTPUTS	2 Outputs, Low side driven (max 200mA)
SENSORS	
HEADING	9-Axial, Internal use only, Accuracy: +/- 1 deg, Updated rate: 10Hz (max)
BAROMETER	Update rate 1Hz max (averaged)
BATTERY VOLTAGE	Measured at power input
EXTERNAL SENSORS INPUTS	5 Inputs, Digital (0-24V), Analog (0-10V)

CORTEX HANDSETS	
GENERAL SPECIFICATIONS	
HANDSET SIZE	164.8 x 71.8 x 21.4mm (6 1/2" x 2 13/16" x 7/8")
POWER SUPPLY	12V, 1A max, 200mA nom 12-24V compatible
BATTERY	Lithium Polymer 2 hour full charge, >12 hours nominal operation
WEIGHT	H1 285g (0.63lb), H1P 235g (0.52lb)
ENVIRONMENTAL	Waterproof (IPx7)
OPERATING TEMPERATURE	-20°C to +55°C (-13°F to +131°F)
AUDIO	2W, THD < 5% @ 85dBA
DISPLAY	
SCREEN	LCD TFT Si, 640 x 800, 24bit Colour, Polarised Compatibility
TOUCH	Capacitive, optically bonded, LCD, glove and salt water operable
BACKLIGHT	600 cd/m2, Ambient Light sensor for auto dimming

All stated specifications are subject to change without notice or obligation. Dimensional measurements based on metric.