

Datasheet

6G Acoustic Comms Module (ACM) – external clock



The 6G[®] ACM is based on field proven electronics from the Compatt 6 family and has been modified to reduce the overall size to allow it to be easily incorporated as OEM into third party pressure housings.

The 6G ACM can provide all of the capabilities of a 6G instrument and benefits of Wideband[®] V2 acoustic communications.

The Module is housed in a bespoke aluminium container which protects the sensitive electronics from external noise, electrostatic discharge and mechanical damage.

The module is supplied with an acoustic transducer that provides a complete acoustic communication system.

The 6G ACM benefits from being compatible with all 6G transceivers, thereby enabling data download or command and control from vessels of opportunity.

The 6G ACM is supplied as a fully tested instrument with a Sonardyne transducer (only this transducer can be used).

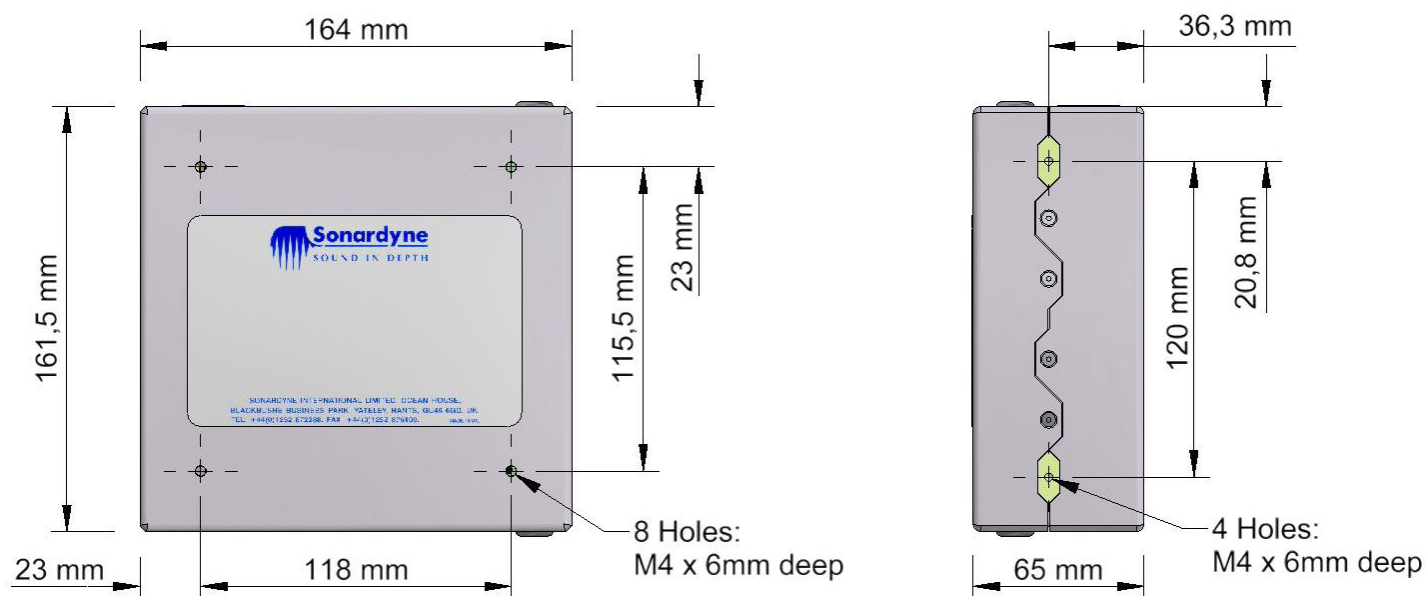
The lids are screwed to the chassis on each side with countersunk screws. Four M4 x6 mm holes are provided on both sides of the housing for mounting (shown on the technical drawing). The aluminium housing is approximately 165 x 164 x 65 mm and is soft anodised to provide basic protection.

Key features

- Transmission and reception of user data at rates of up to 9 kbps
- Large input serial buffer 512 kB
- Flexible operation; scheduled, subsea master, trigger level, serial time-outs etc.
- Configurable behaviour; retries, missed sub-frames, buffer flushing
- Dual RS232 serial port
- Trigger input or Synch output
- General purpose I/O
- External power out; VBatt or 12 V regulated
- External power in; Quiescent, ping and charging (not telemetry)
- Dual battery pack connection

Specifications

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Feature	8290 MF omni-directional	8290 MF directional	8290 LMF directional
Operating range	3,000 m	>3,000 m	>5,000 m
Operating frequency	MF (20–34 kHz)	MF (20–34 kHz)	LMF (14–19 kHz)
Transducer beam shape	Omni-directional	Directional	Directional
Transmit source level (dB re 1 μ Pa @ 1 m)	187–196 dB (4 Levels)	190–202 dB (4 Levels)	190–202 dB (4 Levels)
Tone equivalent energy (TEE) ¹	193–202 dB	196–208 dB	196–208 dB
Receive sensitivity (dB re 1 μ Pa)	90–120 dB (7 Levels)	80–120 dB (7 Levels)	80–120 dB (7 Levels)
Number of unique addresses	>600	>450	>450
Ranging precision	Better than 15 mm	Better than 15 mm	Better than 15 mm
External power supply	24 V (20–40 V)	24 V (20–40 V)	24 V (20–40 V)
Battery supply	Input voltage range	11–16.8V	11–16.8V
	Sleep/active power	45 mW/150 mW	45 mW/150 mW
	Transmitting power	60 W typ. 120 W peak during high power telemetry	
Dimensions (length x width x height)	165 x 164 x 65 mm	165 x 164 x 65 mm	165 x 164 x 65 mm
Serial connections	2 x RS232	2 x RS232	2 x RS232
Battery	1 or 2 Sonardyne alkaline, lithium or Li-ion packs ²		
Dimensions (length x width x height)	164 x 162 x 65 mm	164 x 162 x 65 mm	164 x 162 x 65 mm
Operating temperature	-5 to 40°C	-5 to 40°C	-5 to 40°C
Storage temperature	-20 to 55°C	-20 to 55°C	-20 to 55°C

¹ Third party battery packs will allow any capacity or voltage monitoring.

² The system has a battery disconnect for improved transportation safety by means of a short circuit between two pins specific on the connector.