

Title	Explain NMEA standards and proprietary on-board data communication systems		
Level	3	Credits	4

Purpose	People credited with this unit standard are able to explain NMEA standards and proprietary on-board data communication systems.
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Classification	Boating Industries > Boatbuilding
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Available grade	Achieved
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Guidance Information

- 1 Range
 BUS systems include – NMEA 0183, NMEA 2000, and proprietary systems.
 marine electronics equipment may include – GPS, radar, VHF, SSB, AIS, chart plotter, sounder or sonar, autopilot and heading, speed, wind sensing equipment, PC interface.
 evidence of four marine electronic equipment is required.
- 2 Definitions
AIS – Automatic Identification System.
BUS refers to a subsystem that transfer data between components in a computer or electronic devices. It may include Controller Area Network (CanBUS), or proprietary systems of electronic component manufacturers.
GPS – Global Positioning System.
NMEA – National Marine Electronics Association.
NMEA 0183 and 2000 refers to the marine networking interface standards that defines data transmission protocols and time, and electrical signal requirements.
PC – Personal computer.
SSB – Single Side-Band.
VHF – Very High Frequency.

Outcomes and performance criteria

Outcome 1

Explain NMEA standards and proprietary on-board data communication systems.

Performance criteria

- 1.1 Data BUS communication is explained for marine electronics equipment.
- 1.2 Data BUS options are explained in terms of equipment compatibility.

- 1.3 Equipment interface options using Data BUS are explained in terms of interfaced electronic equipment.

Planned review date	31 December 2025
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	20 May 2011	31 December 2022
Review	2	27 August 2020	N/A

Consent and Moderation Requirements (CMR) reference	0136
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact the NZ Marine and Composites Industry Training Organisation training@nzmarine.com if you wish to suggest changes to the content of this unit standard.