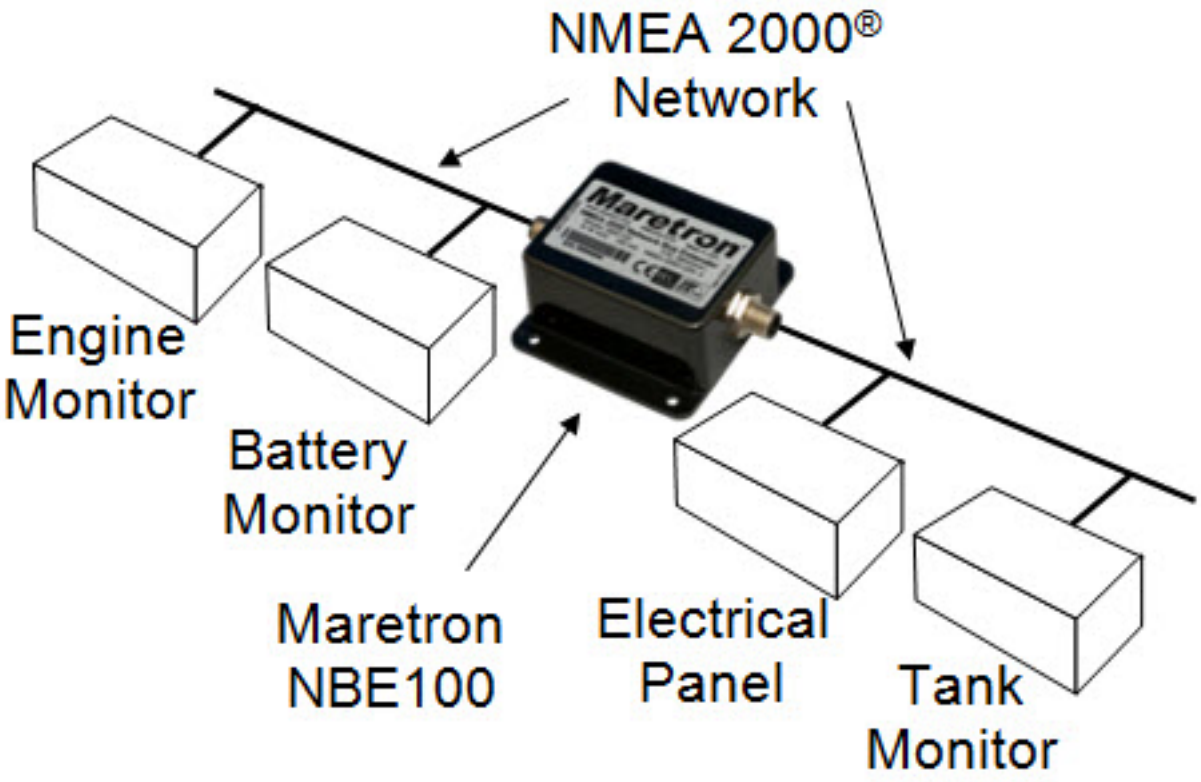
Are there any NBE100 network diagram examples?

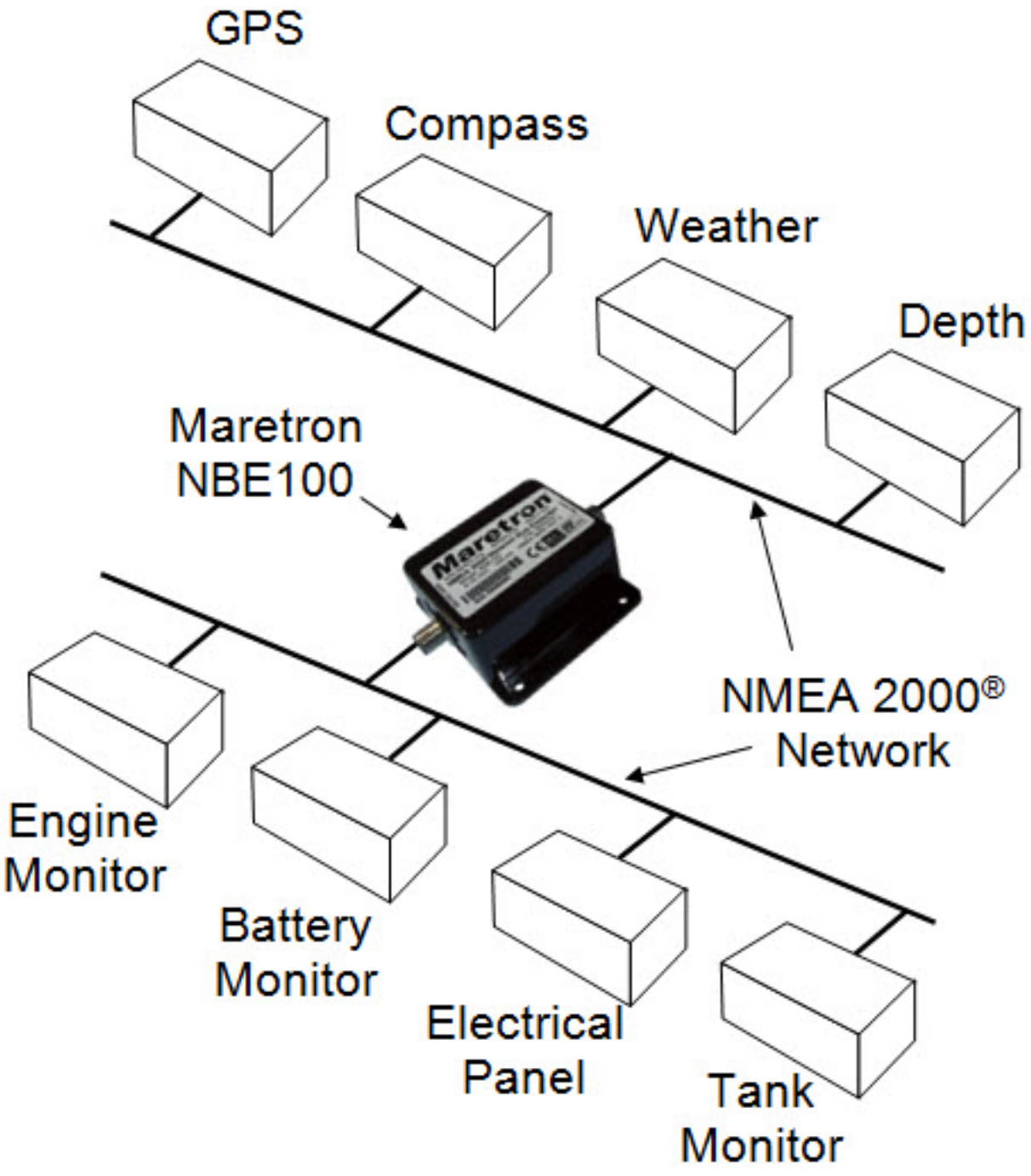
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Two NBE100 network diagram examples are shown in this article. Please note that both diagrams show just one NBE100 allowing the normal NMEA 2000 network restrictions (50 nodes or products, 200m trunk line, 78m of drop length) to be doubled. It is possible to add up to four NBE100's to effectively make a network 5 times larger than normal (250 nodes, 1000m trunk length, 390m of drop length).



Network Extension End-to-End Example

The End-to-End network diagram shows how the NBE100 can be used to linearly extend a network. Both network segments require network terminators and a power supply. This type of installation might be used to create a network segment for each deck on the vessel. A significant advantage of segmenting the network is that if one of the segments becomes compromised (e.g., network cable is severed or some other catastrophic failure), the other network segments continue to operate. Assuming a network segment at the end of a five network segment is compromised, then the remaining four segments continue to operate losing only data from the compromised network. If the middle segment of a five segment network is compromised, then the two segments on both ends continue to operate but they lose data from three segments; the compromised middle segment plus the two segments at the other end of the network. Although it is unfortunate that any data is lost, at least some network segments continue to operate without crashing the entire network.



Network Extension Side-to-Side Example

The Side-to-Side network diagram shows how the NBE100 can be used to bridge across two network segments. Like the End-to-End network diagram, both network segments require termination resistors and the insertion of network power. This type of installation might be used for multi-hull vessels or even for safety critical, high reliability applications. For example, two networks with sensors duplicated on each segment could be bridged together to facilitate a fully redundant system. If a product on one network fails, then the backup product on the other network is used to keep the network up and running.

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