NET MODULE

Peter Guebeli

Success Story – Internet at Sea

The boat owner Peter Guebeli equipped his ship with an NB800. The router provides a reliable Internet access for important on-board devices such as the navigation system.

The Project

As almost everywhere, a temporary Internet connection is essential today also on ships. The shipboard equipment needs information as current sea charts or latest weather data. At the ports, there is often a WiFi now, which the boat owners can use. Inshore also LTE is available to set up an Internet connection. However, a smartphone is not always sufficient because its internal antennas do not have the necessary range.

«The stability and simplicity of the NB800 convinces me. The reliable network witching is exactly what I was looking for.»

Peter Guebeli
Owner of the boat

Peter Guebeli searched for a router, which switches automatically – depending on the availability – between LTE and WiFi and thus ensures a stable Internet connection. With the NB800, he found the perfect device for his needs.

Requirements

The NB800 must fulfill the following requirements so that it can be used on a boat:

— Industrial grade

— Power supply with 12 Volt

— External antennas

— Automatic switching between LTE and WiFi

Solution

Now, a NB800 router is permanently installed in the engine room of the boat. The compact industrial grade device can be powered with 12 Volt and integrates a WiFi and a LTE module and an Ethernet interface.

With a long-range roof antenna, the router establishes an Internet connection. Depending on the availability, either the LTE or the WLAN module is used. If the boat is near a port with an active WiFi, the router automatically connects to this network. If no WiFi is available, it's automatically switched over to LTE. This is realized with the so-called «Link Manager» of the NetModule router software. The Link Manager prioritizes the WiFi over the LTE link and uses it whenever possible. If the WiFi link is active, every 20 seconds a ping, for example to Google, is sent. If Google does not respond, the Link Manager switches over to LTE. In the background, attempts are still being made to establish an Internet connection via WiFi. As soon as this works again, the router immediately switches back to WiFi and the LTE link is closed.

Via the Ethernet interface, the router is connected to a WiFi access point, which distributes the Internet access on board. This has the advantage, that the shipboard equipment only must have programmed the credentials of the access point. Therefore, the Internet access remains unchanged, even if the network changes. Previously unknown WiFi networks only need to be configured to the NB800.
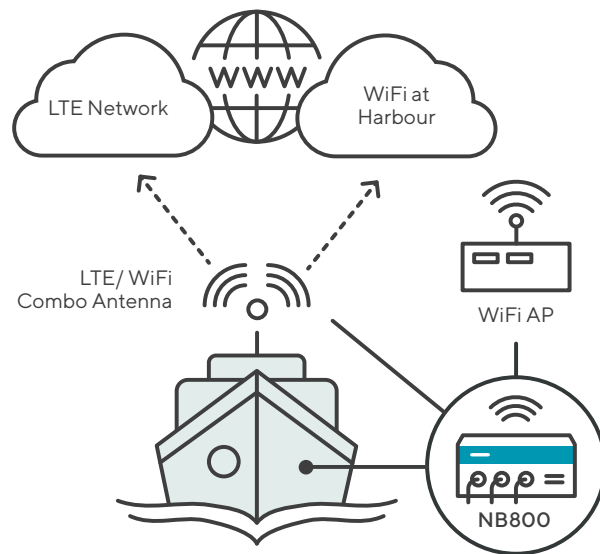
To be able to check the status of the router at any desired time, Peter Guebeli has activated an SDK script, which regularly reads the most important parameters of the router and displays them on a website. The site can easily be accessed via the board computer.

With the NB800, Peter Gübeli has installed a stable and professional device on his boat, which meets the requirements and considerably simplifies the access to the Internet.