

Ocean Medallion

- Medallion was created by Carnival Corporation. It is a piece of Carnival Corporation initiative dubbed OCEAN (One Cruise Experience Access Network), that combines several technology-driven initiatives with the OceanMedallion as the flagship element.
- It is a free, wearable casino chip-sized disc that serves as an access point to information about you (i.e. your "digital identity") so that you can personalise your onboard experience.
- Medallion is just the iconic element of a vast network of readers and sensors embedded across the ship that interact instantaneously with the two microscopic antennas (one NFC and one BLE) inside each guest's OceanMedallion. NFC for nearer range detection and BLE for detecting the Medallion from far.

NFC:

- Near-field communication (NFC) is a set of communication protocols that enables communication between two electronic devices over a distance of 4 cm or less.
- It offers a low-speed connection through a simple setup that can be used to bootstrap more-capable wireless connections. Like other "proximity-card" technologies, NFC is based on inductive coupling between two so-called antennas present on NFC-enabled devices.

BLE:

- BLE (Bluetooth Low Energy) is a wireless personal area network technology. Compared to Classic bluetooth, Bluetooth Low Energy is intended to provide considerably reduced power consumption and cost while maintaining a similar communication range.
- Instead of the classic Bluetooth 79 1-MHz channels, Bluetooth Low Energy has 40 2-MHz channels. Its Nominal max. Range is <100 m (<330 ft) .
- Here the Medallion speeds up embarkation, unlocks stateroom doors, enables payment and so much more.

MYWI Protocol:

- MiWi is a proprietary wireless protocol supporting peer-to-peer, star network connectivity. MiWi uses small, low-power digital radios and is designed for low-power, cost-constrained networks, such as industrial monitoring and control, home and building automation, remote control, wireless sensors, lighting control, and automated meter reading
- The MiWi protocol is a small foot-print alternative (3K-32K) to Zigbee (40K-180K), for cost-sensitive applications with limited memory.

PROTOCOLS:

- A communication protocol is a system of rules that allows two or more entities of a communications system to transmit information via any kind of variation of a physical quantity.