



TerraWave Case Story

TerraWave Solutions Brings **Custom Wi-Fi** to the Seas for **Carnival Cruise Lines**



The major benefit of wireless LANs (WLANs) is the ability to take wireless networking to places where wires restrict networking deployments. A prime example is ocean travel. Carnival Cruise Lines began deploying wireless networks in Internet Cafes on its ships in order to meet the growing demands of both passengers and the ships' crews.

Carnival came to TerraWave in the midst of a retro-fitting exercise for its ships with bow-to-stern Wi-Fi. The company was looking for an antenna at a reasonable price point and comparable to the current brand of antennas they were deploying with the Cisco 1242 Access Points (APs). The antenna requirement had to be small in size, hidden away from guests' view. What impressed Carnival about TerraWave's innovative "Quad" antenna was the ability to deploy one dual band antenna instead of two single band antennas, cutting the amount of antennas deployed in half.

TerraWave Part Number: M6020045O23602S
TerraWave 2.4 / 5 GHz 2 / 4.5 dBi Dual Band
Diversity "Quad" Omni Antenna with RPTNC
Plug Connectors, 36" Pigtails and Screw Mount

List Price: \$185.90

[View Detailed Specs](#)

One major issue during the pre-planning phase of the project was to determine how the antennas would stay mounted during sea travel. TerraWave's off-the-shelf solution was designed for an in-building application and came with standard ceiling tile clips. However, this solution was problematic for Carnival because its ships did not have dropped ceilings nor could the clips securely mount to the ships' ceilings.

A TerraWave sales director worked with Carnival to develop a ceiling screw mount to securely and semi-permanently mount each antenna throughout the ships. Carnival successfully deployed these antennas on multiple ships within its fleet. Throughout the deployment, TerraWave sales directors provided a mounting template to hasten the deployment and had its manufacturing facility label each antenna lead for the 2.4 and 5 GHz sides of the radio. Without TerraWave's assistance, the deployment would have taken much longer, cutting into the fall cruising season.

The following summer, several other ships underwent renovation and again Carnival contacted TerraWave. At that time, TerraWave had just introduced its line of "Mini-Quad" antennas, a smaller version of the Quad with four 18-inch dual band leads. The Mini-Quad antennas were even more aesthetically pleasing and easier to install. Carnival requested to have 36-inch pigtails integrated into each antenna to aid in easier installation.

At each stage in the process, TerraWave sales directors were available to assist, from project conception to modification to completion. TerraWave was able to offer Carnival a custom solution to fit its exact needs. Ultimately, the Carnival retrofit came in under budget with room to grow its wireless networks on each ship.



TerraWave Part Number: M7025040O21802M
TerraWave 2.4 / 4.9-5.85 GHz 2.5 / 4 dBi Dual
Band Diversity "Mini-Quad" Omni with
RPTNC Plug Connectors, 18" Pigtails and
Screw Mount

List Price: \$121.25

[View Detailed Specs](#)

TerraWave Part Number: M7025040O23602M
TerraWave 2.4 / 4.9-5.85 GHz 2.5 / 4 dBi Dual
Band Diversity "Mini-Quad" Omni with
RPTNC Plug Connectors, 36" Pigtails and
Screw Mount

List Price: \$121.25

[View Detailed Specs](#)

For detailed product information and to purchase product, please contact a TerraWave wireless networking solutions sales engineer at 210-375-8482, 800-851-4965, sales@terrawave.com or visit www.terrawave.com.

