USAT
Connect What's Critical™

Cradlepoint Routers and NetCloud Bring Reliable 5G to Ferries

Ferry Transit Infrastructure Plagued By Connectivity Issues

Since our nations oldest continuous ferry system began operating back in 1655, ferries have been an integral part of our transportation infrastructure. According to the United States Department of Transportation Federal Highway Administration, there are over 190 ferry operators throughout the country operating in 37 states, Puerto Rico, and the US Virgin Islands, transporting hundreds of millions of passengers per year across 7,877 nautical miles of navigable waterways.

While the basic method of transportation hasn't changed - carrying passengers over a body of water, from one wharf to another - the processes, procedures, conveniences, and security measures have certainly evolved since 1655.

What once were trips undertaken on a floating platform pushed along the waterways with poles are now coordinated endeavors on large vessels that can carry hundreds of people and dozens of cars, with ticketing systems and high-tech security measures. Modern-day ferries require reliable internet connectivity to manage both onshore and offshore operations, including streaming and downloading security footage via CCTV, processing on-board payments, and more.

The Challenge | Maintaining Connectivity With Poor 4G Coverage

Maintaining reliable internet connectivity has long been a challenge for marine vessels, even those that are used for near-shore travel — like ferries — are no different. A spotty connection coupled with slow upload speeds can lead to difficulties with vessel security and passenger services.

In order to undertake tasks such as connecting intelligent video surveillance solutions *(available from our partners MCA)*, making on-board public address announcements, and updating on-board digital signage, ferries require high-quality, reliable connectivity.

Since most modern high-definition video cameras capture and store an immense amount of footage, monthly wireless data can amount to multiple terabytes. Most older 4G routers max out with upload speeds at 150 Mpbs — leaving them struggling to keep up — while newer 5G routers can upload at over 600 Mbps, making them better equipped for sizable, and timely, data offloads.

The Solution | Cradlepoint Allows Ferry Operators Connectivity and Control

In order to achieve the type of connectivity required by ferries and other near-shore marine vessels to maintain security, emergency, operational, and customer service activities, a robust 5G solution is necessary.

To achieve this connectivity, vessels and wharves must be outfitted with ruggedized 5G routers, such as the Cradlepoint R1900. When coupled with Cradlepoint's NetCloud Service for Mobile also affords ferry operators with the ability to remotely monitor, manage, and control their network devices while also ensuring the optimal passenger security, safety, and satisfaction.

For ferry services that depend on mobile networks — optional NetCloud Mobile Performance Service plans provide a ruggedized GNSS/GPS enabled in-vehicle network solution that provides threat management, web filtering, application visibility, analytics, and advanced GNSS/GPS functionality including location tracking and cellular coverage maps.

To expand maritime vessel coverage ranges, we typically advise transit agencies pair their shipboard routers with purpose-built marine antennas capable of withstanding harsh UV rays, high winds, and unexpected impacts like the Poynting OMNI-414.

To maximize shipboard Wi-Fi and Bluetooth range, as well as GPS/GNSS accuracy, we recommend similarly rugged low-profile antennas like the Mobile Mark SMWG-410. Exact antenna pairings will depend upon the individual needs of your enterprise and its onboard devices specific requirements.

Industry Profile

- Water Transportation
  - Passenger Ferries
  - River Cruise Lines

Technology Solutions

- Cradlepoint R1900 Router
- NetCloud for Mobile Service
- Poynting OMNI-414
- Mobile Mark SMWG-410

Targeted Results

- Rugged & Reliable Devices
- Near-Shore Connectivity
- HD Video Offloading
- Remote Management

USAT delivers public and private marine transit and logistics agencies the end-to-end communications solutions they need to support their business-critical maritime operations.

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R1900 5G Router

OMNI-414 Antenna

The Results | High-Quality, Reliable 5G Connectivity to Power On-Board Operations

Unlike 4G cellular solutions, 5G allows ferries to stream high-quality, high-definition CCTV footage more quickly and efficiently. It also allows operators to download footage from the CCTV and other on-board data points directly to their control room.

Public Announcement systems, passenger information displays, digital signage, Point of Sale *(POS)* systems, and corporate Wi-Fi are also all powered by Cradlepoint Endpoints and NetCloud.

Additionally, ruggedized 5G routers — like the R1900 — can withstand the elements and inclement weather conditions that maritime vessels regularly encounter, while NetCloud Manager allows the operation command to monitor the real-time location of vessels.

Other Benefits Include:

Protect Critical Information

Send and receive data - including sensitive passenger information and payment details - confidently and securely.

Automatic Data Offloads

Automate the offloading of video surveillance footage from each vessel to central dispatch upon returning to harbor.

Streamline Platform Visibility

Monitor and manage all wireless in-vehicle and IoT solutions through a single cloud-based management platform.

The Team | Device Provisioning, Activation and Installation Services

USAT specializes in designing and deploying mobile wireless data connectivity solutions, for public and private fleet vehicles — complete with implementation, training, proof of concept (POC), system auditing, and on-site RF surveying services with optional engineering maintenance contracts. Our team not only helps you select, provision, and activate devices, we make sure they work in practical applications and real-life situations.

For over 25 years, USAT has provided communications solutions for coastal and marine applications across the USA. With our extensive catalog of top-of-the-line routers, gateways, and software for the remote monitoring and management of your river, sea, and ocean-bound vessels — designed for operation in the harshest of environments — you can count on us to get and keep you connected.

Better marine fleet connectivity solutions translate to less manual equipment maintenance, reduced downtime, and an overall increase in your business's ROI. Contact the experts at USAT to learn how our wireless networking solutions can help meet your organizations' exacting needs.

CONTACT US TODAY TO ENGINEER YOUR VESSEL COMMUNICATIONS SOLUTIONS

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