

DragonWave Packet Microwave Solutions Helping to Ensure Safe and Dependable Water Delivery for Oahu Residents



CUSTOMER

The Honolulu Board of Water Supply (BWS) manages the municipal water resources for Honolulu and the island of Oahu, which is Hawaii's most populous island, sustaining a population approaching one million people.

After years of shortages and improper management of the island's water resources throughout the early twentieth century, the BWS was established in 1929 with an immediate mandate to modernize the water delivery system, meter all water distribution and to seal all faulty, leaking artesian wells in an effort to halt the waste of fresh water. After successfully meeting these goals, the BWS set its focus on ensuring the long-term availability of safe and dependable water service at a reasonable cost.

CHALLENGE

Like many other public safety organizations, the BWS had been adopting new technologies to safeguard its critical infrastructure – including their potentially vulnerable water storage and transportation facilities.

After completing a significant upgrade to high definition surveillance cameras across their many sites, the BWS was in need of a high capacity transport network to handle the extra data traffic generated by these IP-based cameras. Additionally, the board was dealing with increased capacity requirements for other key operations, including: inter-facility links, internet connectivity, field communications, SCADA systems, SAN mirroring and disaster recovery.

The BWS initially evaluated unlicensed microwave systems but found the overall performance of these solutions to be quite poor with low throughput and unreliable service. Leased services were costly and offered only a fraction of the required capacity. Connecting all BWS facilities with fiber would only have been possible using aerial runs at significant cost and with questionable resiliency to the region's many tropical storms. Wireless was clearly the technology of choice but the BWS needed a high capacity, highly reliable multi-gigabit system that could span relatively long distances. Additionally, due to the lack of suitable indoor facilities at many sites, the solution had to offer the benefit of all-outdoor deployment.

“With the increase in security risks after 9/11, the Board of Water Supply was under pressure to modernize all of its surveillance and communications systems to ensure the highest degree of safety and security for its essential infrastructure.

- Daniel Schwarz, Lead Engineer/Project Manager, CACI International

FAST FACTS

Customer:

- Honolulu Board of Water Supply

Solution Provider:

- CACI International

DragonWave Solution & Features:

- Horizon Compact & Horizon Quantum high-capacity packet microwave systems
- Highly resilient all-outdoor deployment options
- Multi-gigabit capacity for critical video surveillance, data communications, SAN mirroring and disaster recovery
- Lowest total cost of ownership transport



The Horizon Compact and Horizon Quantum are the most advanced licensed packet microwave systems in the industry, offering unmatched capacity, reliability and deployment flexibility. Simple installation and operations, combined with all-outdoor deployment options, ensure the lowest total cost of ownership.

HORIZON COMPACT



HORIZON QUANTUM

SOLUTION

The Board of Water Supply (BWS), along with CACI International, evaluated several licensed microwave systems but found that DragonWave's Horizon Compact and Horizon Quantum packet microwave systems delivered the highest capacity and scalability as well as the flexibility of all-outdoor deployment. Additionally, DragonWave's extensive experience with over 75,000 packet microwave units in service, provided assurance that these were highly field-proven solutions.

The Horizon Compact and Quantum offer several unique benefits to the BWS:

High Reliability and Availability	<ul style="list-style-type: none"> Field proven, hardened systems with multiple protection and redundancy options for carrier-grade performance
Multi-Gigabit Capacity	<ul style="list-style-type: none"> The Horizon Quantum scales to 1.6 Gbps capacity with additional capacity of up to 4 Gbps achievable with DragonWave's Bandwidth Accelerator
All-Outdoor Operation	<ul style="list-style-type: none"> Horizon Compact is a single all-outdoor unit offering simple installation and unmatched performance Horizon Quantum also provides all-outdoor deployment options
Ultra-Low Latency	<ul style="list-style-type: none"> Ensures smooth delivery of real-time applications including voice and video
Low Power	<ul style="list-style-type: none"> The low power consumption of the Horizon Compact allows the BWS to use solar and battery backup systems

“DragonWave's packet microwave systems deliver much more capacity than we have seen in any other wireless solution. These systems have also proven to be extremely reliable and resilient in even the most extreme weather conditions.”
 – Daniel Schwarz
 Lead Engineer/Project Manager,
 CACI International

SUCCESS STORY

With its high capacity wireless packet network in place, the BWS now has the scalability and performance to handle all of its current and future requirements. While its previous network could handle basic communications, the DragonWave solution now forms the backbone for all of the Board's critical data transport including: high-definition surveillance video, inter-facility links, internet connectivity, field communications, SCADA communications, SAN mirroring. The new network has resulted in greater operational efficiency and the enablement of a robust disaster recovery system.

The most fundamental benefit of the DragonWave solution has, however, been a vast improvement in the BWS' ability to monitor and manage sensitive water facilities, ensuring a safer and more dependable water distribution service.

