PORTS OF AUCKLAND
Strong logistics partnerships supporting critical national operations
The Ports of Auckland was built in 1840 and has grown in tandem with the city to become the largest and most important seaport in New Zealand. The port ships and receives everything from cars to trains; giant tunnel-boring machines to container loads of Christmas presents; and over 70% of the total vehicle imports to New Zealand.

The Ports of Auckland is vital to the New Zealand economy and a successful trade gateway to the world. By 2031 The Ports of Auckland is expected to add $42 billion dollars annually to the New Zealand economy, which is equivalent to roughly 628,000 jobs, making it one of the most important pieces of infrastructure in the country.

For the Ports of Auckland to achieve its projected levels of growth in the coming years, management recognised that they needed to constantly look at improving their standards, practices and find the best new technology to help their operations grow.

An experienced partner delivering the right technology

The Ports of Auckland has been working with Honeywell since 1993. As a result of this longstanding working relationship, and Honeywell’s unique understanding of the port’s operations and technology history, the company was the first organisation the Ports of Auckland engaged to upgrade its in-straddle systems.

“It’s a simple case of when the straddle carriers aren’t moving, then the containers aren’t moving. So if the equipment isn’t working in harmony then the whole supply chain can become affected. We chose to work with Honeywell to ensure that our straddles were operating effectively now and into the future,” said Mr McBride.

In working with the Ports of Auckland, Honeywell deployed its advanced Thor™ VM1 vehicle mount computer which provides advanced mobile computing capabilities into rugged environments.
The need for advanced technology today to improve operations in the future

Central to the productive operation of any port is its ability to accurately and efficiently load and unload containers using straddle carriers. Straddles are non-road vehicles that pick and carry containers while straddling their load.

“At Ports of Auckland we have forty straddles in total, and on a busy day they are all used, and on top of that there are seven hoists with motor driven trolleys on board. The equipment we use has to be reliable, with maximum uptime and focus on workflow performance,” said Jess McBride, Senior Systems Engineer, Ports of Auckland.

Through extensive ongoing audits of its equipment and operations, Ports of Auckland identified the need to update the technology used in their straddles to ensure the safe and efficient operation of the vehicles through the shipping yard.

“When you’re looking after over 4.4 million tonnes of cargo, the port has to be a sharply focused operation and we rely heavily on the drivers and the technology that keep the straddles, hoists and cranes in communication. If there is any downtime with the technology, or the ability to communicate in real-time is lost, there are increased risks of collision or the wrong containers being picked for the wrong location, all of which goes against port productivity,” said Mr McBride.

“The VM1 vehicle mount computer was selected to upgrade the Ports of Auckland’s in-straddle systems based on its proven ability to operate reliably in the harshest conditions. Straddles transport and load / unload containers in trying conditions - there can be incredible amounts of vibrations within the cab of a straddle - where only the toughest of computing solutions will be able to function,” said Tony Repaci, Country Manager, Australia & New Zealand, Honeywell Sensing and Productivity Solutions.

Straddles can be operating in the port at all hours of the day – both at night-time and in harsh sunlight – meaning it was vital that any mobile computing solution had a highly visible screen adaptable to being read in a variety of settings. The VM1’s powerful touch screen is not only highly adaptable to a variety of lighting conditions, but it also offers a field replaceable front panel which reduces capital and maintenance cost for the Ports of Auckland. The VM1’s replaceable front panel integrates the two most wear and abuse prone components, the keyboard and touchscreen, into an easily-replaceable part; thus reducing costs through the ability to substitute spare front panels for spare computers.

Eliminating downtime, driving productivity

Given the demanding delivery and export schedules the Ports of Auckland has to meet every day, it is critical that all parts of the facility operate as seamlessly and productively as possible. For straddle drivers just starting their shifts at the port, getting the vehicle and its on-board equipment loaded and ready to function can add significant time to the straddle being able to operate. Importantly for management of the port, the VM1 has been programmed with auto-ignition so that when a straddle driver starts a vehicle, the mobile computer within the cabin is automatically turned on and loaded, saving the driver from having to separately initiate the computer’s functionality.

“For us, timing and efficiency is everything. We’re fully focused on how the technology can improve our operations and when a solution like Honeywell’s Thor™ VM1 vehicle mount computer comes onto the market, which can offer us time savings and improve the function of our straddles, we’re willing to invest for the sake of future productivity benefits,” said Mr McBride.

In addition to limiting equipment downtime within the straddle at the start of a driver’s shift for the Ports of Auckland, the VM1 also eliminates the issue of lost productivity caused by a dead vehicle battery. The VM1 unit can conserve battery life by being configured to automatically go into standby or hibernate at a selectable time after the ignition switch is turned off, saving battery for when it is needed most.

“Over the years Honeywell has helped us refine our technology, constantly working on how the hardware can become streamlined within our operation. The vehicle-mount computing solution that Honeywell has delivered for our straddles has undoubtedly improved our loading and unloading operations and helped improve the port’s overall efficiency,” said Mr McBride.