





Video Surveillance System at New Zealand Airport More than a Match for Howling Southerlies

Planning for a video surveillance system at Wellington International Airport on the outskirts of New Zealand's capital required systems integrator Nedax Systems (NZ) Ltd. to take into account the region's notorious wet and windy weather.

WELLINGTON International serves five million passengers and handles more than 110,000 takeoffs and landings a year. Air New Zealand, Qantas, Pacific Blue, Jetstar and several domestic carriers offer flights throughout the country and overseas to Sydney, Melbourne, Brisbane and Fiji.

Equipping the airport's 32,000-square meter main terminal with a video surveillance system was easy. Extending it to the runway and parking lot, where cameras would be exposed to the region's howling southerlies, called for a lot more ingenuity.

Ordinary poles and conventional camera housings would be no match for the strong gales that blow across Cook Strait and batter the southern tip of New Zealand's North Island. Dust, salt and condensation would obscure the lenses. Corrosion, too, had to be taken into consideration.

It was the perfect assignment for Nedax Systems' Managing Director Tony Phillips, a devoted yachtsman with 45 years of sailing experience and a healthy respect for the elements. A March Networks® Certified Solution Provider, Phillips started off by recommending Armageddon poles designed to withstand wind speeds of 100 knots (115.2 miles per hour).

He decided against conventional housings with wipers for March Networks' VideoSphere CamPX cameras, fearing the bulky enclosures would be ripped off the poles in a strong gale.

Instead, the Wellington-based systems integrator opted for a much more compact, custom-designed camera housing fabricated out of electropolished 316 marine grade stainless steel. Coming up with a way to keep the camera lenses clean was the trickiest part of the exercise.

"What are you going to do? Climb up there every day to wipe them?" asked Phillips. "Not very likely. So, we decided to reinvent the wheel."

The solution was a mains pressure water jet system that sprays and cleans the lens on command. The system is integrated with March Networks SiteManager software, allowing security staff in the airport's 24/7 monitoring center to spray a camera's lens whenever necessary. Nedax Systems staff, who remotely monitor system performance through a virtual private network, are also able to douse a lens if a live view from a camera reveals a buildup of dirt and grime. A detachable water ring was also designed to maintain optical clarity on the external PTZ domes.



A water jet system remotely operated through March Networks' Site Manager software sprays and cleans the camera lenses located in the airport's outdoor car park.





Wellington International Airport

Wellington International Airport in Wellington, New Zealand serves five million passengers and handles more than 110,000 takeoffs and landings a year with flights throughout the island nation and overseas to Australia and Fiji. The airport boasts a 32,300-square meter main terminal, a 1,936-meter runway and is served by several major carriers, including Air New Zealand, Qantas, Pacific Blue and Jetstar. www.wellington-airport.co.nz

“The move to IP has been great. We don’t have to pull co-ax cable back to the communications room. It has really worked out well. If we want to add a camera to the system, we just connect it to the network.”

Each camera housing was also equipped with a fan to combat condensation. It, too, is integrated and controlled through the SiteManager interface.

Nedax used the switched output relay on the back of the CamPX IP cameras and green CAT-5 cable with four pairs. Two pairs are used for delivery of power over Ethernet. The other two are used for the water jets and fans.

Cameras in the airport carpark monitor the entrances and exits and all of the self-serve user pay stations. Carpark staff in a central kiosk keep an eye on live video displayed on overhead LCD monitors using March Networks decode stations and SiteManager software.

Installed in 2008, the system has captured evidence of people breaking into cars and attempting to avoid paying for their parking by driving over the curb, said James Groombridge, Wellington International’s IT manager.

The hybrid March Networks video surveillance system consists of an equal number of analog and IP cameras, VideoSphere™ Edge encoders and recorders that, together, provide coverage of the main terminal and gates. Coverage of the airport’s 1,936-meter runway is due to be upgraded on a trial basis using March Networks’ MegaPX 720p or 1080p cameras for higher-quality capture of takeoffs and landings.

The system is monitored by airport security staff in an on-site 24/7 monitoring center equipped with four, 40-inch overhead LCD monitors and an equal number of March Networks decode stations. A Prima external RAID system with 16 hard drives provides 24 TB of storage and easily supplies airport security staff with 30 days of archived video.

Wellington International Airport began deploying video surveillance systems in 2005, using recorders supplied by Milan-based Cieffe S.p.A., a company acquired by

March Networks in early 2008. The installation of a campus-wide IP network that year facilitated the extension of the system to the carpark and the introduction of IP cameras.

“The move to IP has been great,” said Groombridge. “We don’t have to pull co-ax cable back to the communications room. It has really worked out well. If we want to add a camera to the system, we just connect it to the network.” ✨

Nedax Systems (NZ) Ltd.

Nedax Systems (NZ) Ltd. is a security systems integrator based in Wellington, New Zealand. Founded in 1987, Nedax New Zealand provides a broad range of security systems for private and public sector organizations in the Wellington region.