AUSTEC
building automation

# City of Gold Coast

Project Profile

**Market segment**
Government

**Location**
Gold Coast, Queensland, Australia

**Total area**
Unknown

**Project type**
New construction
and retrofit

**Protocol**
BACnet, Modbus

**Installation type**
HVAC

Gold Coast is Australia's sixth largest city, home to over 635,000 people and host to more than a million visitors each year. City facilities include sporting venues, aquatic centers, libraries, community halls, office buildings, and art galleries. Since 2014 Reliable Controls Authorized Dealer  Austec Building Automation has been a preferred supplier to the City of Gold Coast, maintaining and servicing building automation across 17 facilities in the city's portfolio.

## Total system objects
**19,000+**



8 MACH-Pro1™ controllers



24 MACH-ProCom™ controller



70 MACH-ProPoint™ Input/Output expansion modules



45 MACH-ProSys™ controllers



6 MACH-ProZone™ controllers

## Installed equipment



323 MACH-ProAir™ controllers



11 MACH-ProPoint™ Input expansion modules



11 MACH-ProPoint™ Output expansion modules



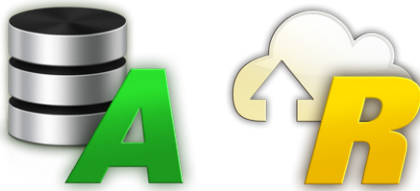13 MACH-ProView™ LCD Operator Display controllers

Project highlights:

- Austec significantly improved comfort conditions across the city's 17 buildings while progressively optimizing energy consumption and reducing peak load costs.

- By implementing a Reliable Controls enterprise building management solution, Austec empowered city managers with scalable control over energy efficiency and an efficient means to detect and respond to issues.

- RC-RemoteAccess software provides a flexible BACnet Secure Network solution that continuously protects the city's facilities against cyber threats.

- At the Gold Coast Aquatic Centre, Austec integrated the photovoltaic system and the pool's heat pumps using Reliable Controls devices, resulting in 12 percent savings on energy bills, a significant achievement considering no equipment was changed.

- Today Austec works closely with all levels of project stakeholders to focus and improve on the city's commitment to environmental sustainability through building automation.

Austec's contract with the City of Gold Coast is fully comprehensive, with regular monthly service calls and meetings to ensure all facilities in the city's network are operating efficiently and effectively. Facilities include new builds and retrofits all controlled with Reliable Controls software and devices. Many of the retrofit projects were tendered and won in the lead-up to the 2018 Commonwealth Games, which meant a condensed timeframe requiring significant planning and preparation.

Austec uses a complete Reliable Controls solution for building automation and an in-house-developed energy management platform for data and analytics.

Each site consists of a dedicated BACnet network that integrates Reliable Controls and third-party devices. Austec relies on RC-Toolkit and RC-Studio software for complete system engineering and RC-RemoteAccess software for data communications security. With its extensive portfolio of buildings, cybersecurity is a crucial concern for the City of Gold Coast. Thanks to RC-RemoteAccess software, a flexible BACnet Secure Network solution, Austec can create and manage encrypted BACnet networks without the need for additional routers or controllers, keeping the city's facilities safe from cyber threats and reducing their IT burden.

Before Austec's contract with the City of Gold Coast began, various sites in the portfolio were managed as standalone facilities without remote system access, which made diagnosing and responding to issues inefficient. Today RC-WebView software allows Austec to connect multiple independent building control systems into a single enterprise website that empowers city managers with scalable control over energy efficiency using a single point of access. The benefits of enterprise automation are significant, including stronger cybersecurity, optimized operational efficiency, shortened issue response time, improved management processes, easy scalability, and cleaner building data. RC-Archive software provides continuous downloads of building data logs, delivering a robust, dependable record of performance the city fully owns and controls.

Using the Austec Energy Management System, Austec collates site energy and water use data for easy visualization and integration, including for sub-tenant billing.

A range of MACH-Pro controllers are installed throughout the portfolio to control mechanical equipment and third-party devices and provide indoor air quality monitoring and fresh-air flushing, including MACH-Pro1, MACH-ProAir, MACH-ProCom, MACH-ProSys, MACH-ProView, and MACH-ProZone devices, with inputs and outputs expanded using more than 90 MACH-ProPoint modules.

With each new installation, Austec implements the latest strategies to ensure energy efficiency while maintaining occupant comfort and indoor-air quality. Some sites use peak-demand control based on previous years' data by connecting the facility's supply authority meter via Modbus to receive live readings. Once commissioned, Austec uses historical benchmark data to inform current strategies, resulting in significant energy savings.

Austec also devised a way to shed peak demand for electrical consumption at the Gold Coast Aquatic Centre, which has a 312 kW photovoltaic solar system on the roof but no batteries for excess energy storage. Austec integrated the photovoltaic system and the pool's heat pumps using MACH-Pro1 controllers, allowing the pool to maintain temperature when solar energy is abundant; as a result less energy is needed to heat the pool in the evenings. This strategy saved 12 percent on energy bills. Many of the sports venues in the city's portfolio use natural ventilation, which contributes to energy efficiency as well.

The city's facilities needed to be running smoothly and efficiently in the lead-up to and during the 2018 Commonwealth Games. Austec was on standby with staff and extra parts during the 2-week event.

The City of Gold Coast's vision of "inspired by lifestyle, driven by opportunity" informs strategic planning for the region, with the aim to protect the Gold Coast lifestyle and ensure its sustainability for future generations. By working in close collaboration with the City of Gold Coast to train and manage stakeholders at all levels across the portfolio, Austec helped bring its strategic vision to life and helped ensure everyone works towards sustainable outcomes. Austec is pleased to contribute to this vision with simple, sustainable, flexible building automation controls.

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