

GENESYS



BUILDING MANAGEMENT SYSTEM

CUSTOMISED SOLUTION for the AUTOMATION of HVAC, LIGHTING, SECURITY and OTHER BUILDING SYSTEMS.

Product Code: GSS-GM-201

GENESYS

ELECTRONICS DESIGN

CALL US ON +61 2 9496 8900

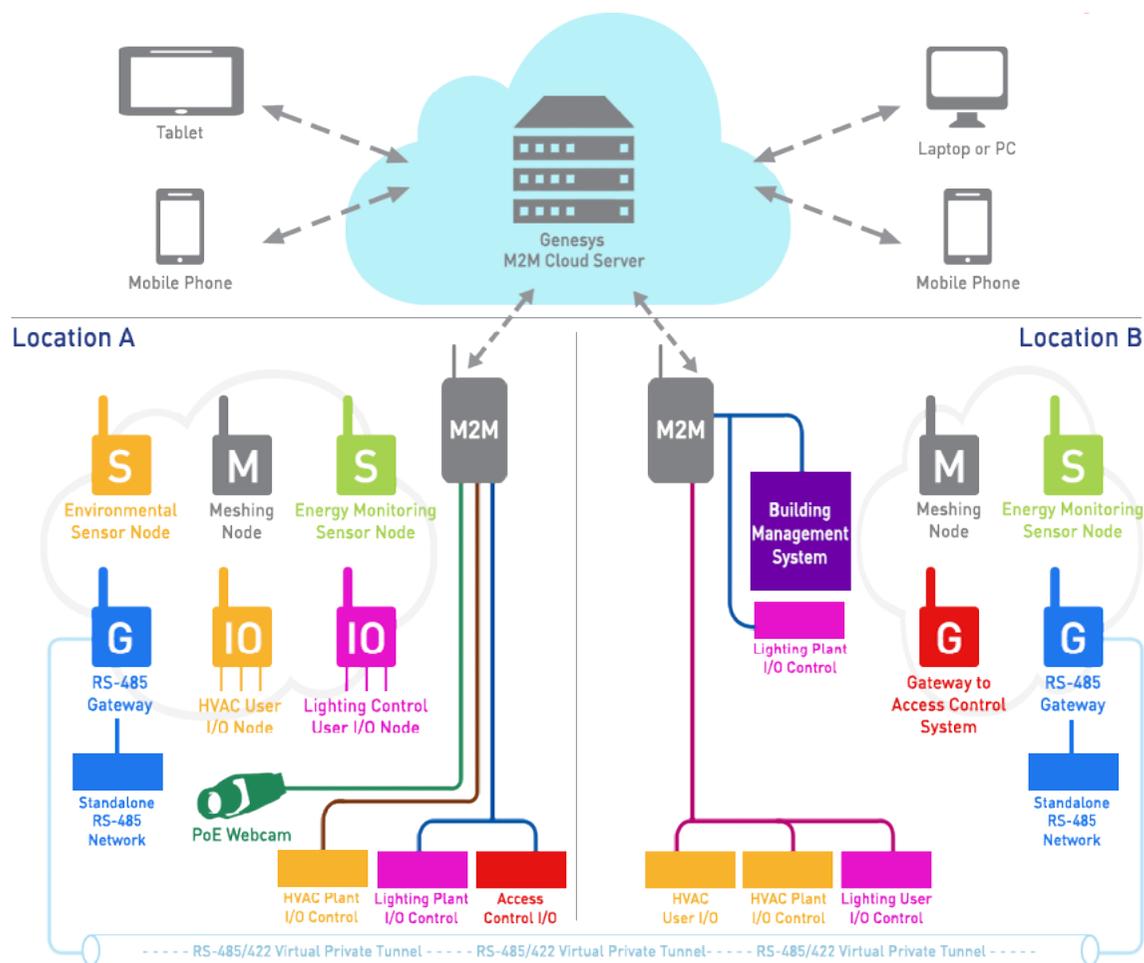
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BUILDING MANAGEMENT SYSTEM

Genesys' next-generation M2M platform will not only enable your building's systems to communicate with each other in ways you've never imagined, but also to join the **Internet of Things (IoT)**. What this means for consumers is the flexibility to monitor and control systems via the web, and to open up new possibilities for installing systems anywhere in the world, all seamlessly communicating as if they were in the same room.

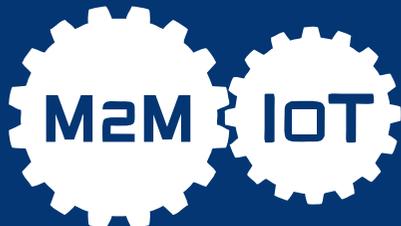
INSTALLATION EXAMPLE

Below is an example of a large-scale M2M installation, used to create a pair of 'smart buildings', where energy monitoring, access control, heating, ventilation, air-conditioning (HVAC) and lighting are controlled harmoniously by Genesys M2M infrastructure. This demonstration installation consists of two 'smart buildings', each featuring different, though related, equipment.



See Reverse Side for Symbol and Colour Key

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This example M2M installation consists of one M2M IoT Network Server for each building. In Location A, modern Ethernet-based access control systems and lighting systems are connected directly to the Server. Any commands sent or received by these devices are natively readable by the Server; and are added to a 'pool' of functions known to the Server.

The Server contains a 'smart relay', which will connect to the most basic of devices able to be switched electronically. Its inputs and outputs are then able to be added to the function pool. In this example, the smart relay is connected to old-fashioned HVAC infrastructure. Rounding up the wired interfaces Location A's Server utilises, it is connected to a Power over Ethernet web camera, which can send images or videos upon any available action in the function pool. The Server contains a 6LoWPAN wireless network module, which forms as the basis for all wirelessly connected equipment in Location A. This includes environmental sensor nodes, which track climate conditions for efficient HVAC operation; energy monitoring nodes, which track energy usage to fine-tune HVAC and lighting control; I/O nodes to add physical switches throughout the building to the function pool; and meshing nodes to ensure wireless signals are consistent throughout the building.

The M2M IoT Network Server links Location A's systems with those of Location B via the Internet, as if they were part of the same system. Location B's systems are similar in functional cross-section to those of Location A, however their physical connectivity and other characteristics are in some cases quite different. For example, Location B's building management system is a third-party system that is fully self contained, but can be monitored and managed by the Ethernet connection to Location B's M2M IoT Network Server.

An interesting feature of this example is the RS-485 virtual private tunnel that is configured between two stand-alone RS-485 networks; one in Location A and the other in Location B. These two stand-alone RS-485 device networks are "private virtual wire-connected" via the Genesys M2M IoT Network Servers. They remain functionally stand-alone and interoperate together as a collective pool of networked devices, and are optionally excluded from the higher-level M2M functionality.

Since Servers in both locations are linked to the M2M Cloud Server, both buildings' infrastructure can be remotely controlled anywhere in the world via Viztool as a web app or Android™ app.

TOMORROW'S INFRASTRUCTURE TODAY

By choosing Genesys M2M IoT for your next-generation control systems needs, you're investing in the most mature, reliable and locally supported M2M technology platform in Australia. Genesys M2M IoT is a continually growing product range with current products designed with forwards compatibility in mind.

So what are you waiting for? Contact us today to start building a smarter business. Genesys engineers will propose, design and install M2M systems and equipment to suit your needs.

KEY

PLANT, MODULES AND EQUIPMENT

-  HVAC
-  Energy Monitoring
-  Lighting
-  Access Control
-  RS-485 Tunnelling Gateway
-  Third Party Building Management System

PHYSICAL CONNECTIVITY

-  Ethernet
-  Power over Ethernet
-  RS-485
-  Direct Relay Connection
-  Wireless 6LoWPAN Mesh Network