

# Ness M1 automation solution

Light-footed electronic security wholesaler Ness Security Systems has installed a very clever home automation interface in a Gold Coast home, with Ness's neat M1 cross platform controller interfaced directly to a Crestron automation solution.

A NEW apartment construction for a Sydney businessman on the Gold Coast incorporated a Crestron whole-of-house automation system. This automation system included a Crestron touch screen to control all Video and Audio equipment within the apartment. The trend with many clients today is to integrate the automation and security system together as one. This client was no exception.

It was required that to minimize the interface between the family and all the subsystems within the house, only Crestron touch screens were to be used to operate all the subsystems. A Ness M1 panel was installed as the security system incorporating door reeds, movement sensors and thermal detectors.

There was nothing remarkable about the security installation as it followed the pattern for most security systems as far as the detection devices go. What

was notable, however, was the high level interface linking the Crestron and M1 systems via RS232 Serial Data.

The two systems are able to send and receive ASCII characters via their Serial ports. With the correct programming, this enabled the customer to perform functions on the automation system touch pad which caused the automation system to send commands to the M1 for Arm/Disarm and Bypassing.

Conversely, the M1 could send information back to the automation system regarding status and alarms which would be displayed on the touch screens. As the apartment was mainly used on weekends and holidays there was a requirement that any "non-urgent" events such as open/closing events by authorised users (e.g. cleaners, pool maintenance workers, onsite security staff etc) be transmitted to the owners.

There were to be no sirens permitted on this site, but the client still wanted an audible indication on site when the system was armed in "home" mode (i.e. user on premises with system armed). The Ness M1 was the ideal choice for this application with its onboard voice module and ability to communicate simultaneously via email (via add-on Ethernet module).

The system was configured in the following way; System is armed in "AWAY" mode, all zones active. System sends email to owner to notify that a particular user has armed the system. (However he did not want any notification when he was the user.)

If a detector is alarmed, the system will transmit the alarm to the central monitoring station and then send an email to the user.

System is "DISARMED". In this case an



M1 Front End

Crestron Touch Screen

Thermostat

email will be sent to the owner indicating which particular user has disarmed the system.

To minimise the number of Crestron touch screens installed, the client also required the premises' standard telephone to double as a systems keypad. Using the premises phone as a keypad, the system can also be armed in "Home" mode from a telephone on a bedside table.

There's also an option for "Owner is on premises with all zones active". In this case, if a detector is tripped, the system will announce a voice message that there is an alarm condition from the speaker mounted in the bedroom and will indicate in which room the alarm has occurred. The owner can disarm system from the bedside phone and investigate the alarm.

The above situation can be achieved with a basic M1 panel with the addition of an Ethernet module. With the power of the New Ness M1 system all the communications to other high level equipment, such as the Crestron automation controller in this installation, voice & telephone requirements are built into the system. They're accessed by basic programming into the system using the NessRP programming software and logic rules which make the system perform a particular function for a given input condition and are an installers dream.

The customer also had a requirement to be able to communicate and control

the system from his office in Sydney via his internet connection. With the Ness M1 Ethernet module, the client has the ability to log on with any standard internet browser worldwide. Once logged into the M1 system the client uses the "Virtual Keypad" java script to arm/disarm, view and change temperature settings, control lighting. With the use of the NessRP software users can make any programming changes (e.g. adding and deleting users) as well as view all events in the system log.

According to Ness, from the installer's viewpoint the installation was a dream. The NessRP was the easiest programming tool he had seen for year and the entire system was programmed

screen or keypad, via a standard telephone (onsite or dial in) and the ability to control your entire system via the internet is here with off-the-shelf products," says Mohan.

The beauty of the M1 system is that instead of installers being locked in by system architecture, there's plenty of room to move. For a start the M1 has "Whenever/And/Then" programming rules and this allows the panel to pretty much handle any operation its physical structure can integrate with.

Not only this, there's no need to chain rules together, so a single "Whenever" event can have one or more "And's" and "Thens" (conditions and commands). These rules utilize easy to understand text based references and installers can use them to control things like lighting using RS-232 serial or 2-way Power Line Control (PLC) ports.

In addition there's full support for On, Off, Dim All On & All Off commands, and the M1 can handle Sunset/Sunrise calculation and activation, can transmit and receive custom serial ASCII messages, can read temperature sensors and communicate with thermostats and is able to support Turn on Tasks, Lights, Outputs via Keypad or a Telephone Remote.

All this means the M1 can integrate industry standard systems and components for upgrades and expansion. All up the system has 528 possible automation rules relating to its 205 possible outputs. ■

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up within a few hours with minor changes and customization required by the client during commissioning dealt with in seconds. With the "rules" logic programming within the M1, any changes the client required could be done in seconds.

According to Ness' Peter Mohan, products such as the Ness M1 have the ability to bring security system into the fold of full integration with home automation.

"The ability to control your security and home automation from one touch



**Lighting Interface**



**Security Devices**



**Virtual Keypad via Internet Alarms via email**