Models:
GENII MPC: Mid Points Controller

GENII MPC
Genesis II
Mid Points Controller

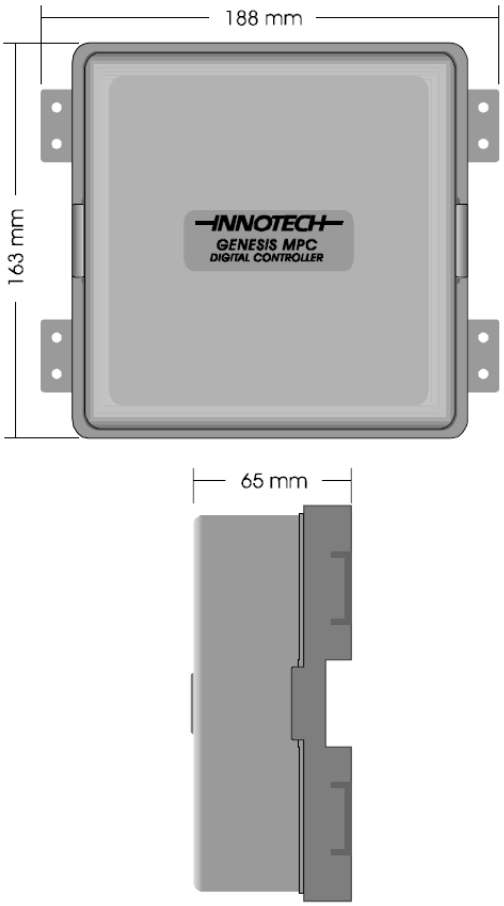
Overview
The Innotech GENII MPC is a state-of-the-art processing system that has the capability of controlling various types of industrial systems. Although the GENII MPC system is flexible and can be adapted to a variety of applications, it is primarily designed to control large scale heating, ventilation and air conditioning (HVAC) systems.

The GENII MPC Mid Points Controller is operationally tailored to the customer's specific application requirements by GEN2 Software applications and several types of hardware modules. Many types of software programs are used to configure the hardware to the customer's intended application and to assist in plant-monitoring, analysis, data exchange and troubleshooting.

Because of its flexibility, the GENII MPC can be connected in a number of different configurations, based on the system's operational requirements. In the simplest configuration, a single controller acts stand-alone for the system. More complex installations use multiple digital controllers sharing data between themselves and/or a computer. In these applications, communication between the digital controllers is facilitated by a Global Points system and communication with the computer is by a standard RS-485 network.

Features
- LED Indication of Digital Output status
- Opto isolated Digital Inputs
- Definable Analogue Input types
- Analogue Outputs selectable for 0-10VDC or heat valve (PWM) control using solid state relays
- 1 second scan rate
- 2 x RS485 network ports, global and net comms
- 1 x RS232 comm port
- Program resides in non-volatile Flash RAM
- Real Time Clock battery backed for approximately 5 years

Approved
The GENII MPC conforms to:
- EN 55011 Class B Group 1 & EN 50082-1 for CE Marking
- AS/NZS 2064:1997 for C-Tick Labelling
- FCC Title 47 CFR, Part 15 Class A for FCC Marking
- UL listed to UL916, File Number E242628



Application
The GENII MPC is designed to be mounted inside a control panel and offers an array of inputs and outputs enabling it to monitor and control all types of plant and equipment.

The creation of control strategies is made simple by the use of the GEN2Config configuration utility, a PC resident, Windows- based software package. This utility with its powerful Graphical User Interface, allows the user to create an entire strategy in block-diagram form, before downloading it to the GENII MPC where it is permanently stored in FlashRam. User access to the GENII MPC is via a PC on either the RS232 comm port, RS485 Net Comms or remotely via a modem when used in conjunction with a GENII MPI.

From a PC, the user can gain access to manipulate and interrogate the controller using tools from the GEN2 family of software products. Third party software can access using the data on the GENII MPC using the data on GEN2DDE Dynamic Data Exchange.

Specifications

Power Supply

- 24VAC ± 10% @ 50/60 Hz, 30VA
  (Option of 24VDC supply version available).

The operating voltage must meet the requirements of Safety Extra Low Voltage (SELV) to EN60730. The transformer used must be a Class 2 safety transformer that has the energy and voltage limiting characteristics as described in the National Electrical Code, ANSI/NFPA70. It must also be sized and fused in compliance with local safety regulations.

Inputs

Digital Inputs

- 4 x Opto Isolated Inputs
  24VAC/12VDC ± 15% Trigger signal.
  (Supplied by Class 2 transformer.)

Analogue Inputs

- 4 x Definable Inputs
  The Analogue Inputs require an Analogue Input Signal Conditioner (AISC) to determine the Input type. The AISC's must be ordered separately.

Outputs

Digital Outputs

- 8 x Normally Open relays
  2 amps @ 24VAC (Supplied by Class 2 transformer.)

Analogue Outputs

- 4 x Selectable Outputs
- 0-10VDC or high speed pulse for solid state relay control.

Battery

Contains a lithium battery, Dispose of Properly (in accordance with local regulations).

- Type CR-2032 Lithium Battery
- Nominal voltage 3 Volts
- Shelf life – 5 years, dependent on ambient temperature

To avoid the risk of explosion, replace battery with the correct type.

Temperature Ratings

- Storage 0 to 50°C non-condensing
- Operating 0 to 40°C non-condensing

Installation and Wiring

Refer to Genesis II Installation Manual.

Communications

RS232

- DB9 connection for modem and local PC access.

RS485 Net Comms

- 5 way plug in connector for network interrogation from a central PC.

RS485 Global Comms

- 5 way plug in connector for global data transfer between devices on the network.

FCC Class A Notice

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

Note – This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Modifications to this device, may void the authority granted to the user by the FCC to operate this equipment.

Remote Expansion Modules (REMs)

The GENII MPC Controller has the facility for remote points using Remote Expansion Modules (REMs). Each REM provides an array of points which can be connected to a sub network up to 500 metres in length. Depending on the types of REMs used, up to 15 remote modules can be connected to the controller. The types of REMs available are:

Genesis II MPC

Remote Expansion Modules

Remote Module	Description	Resource Count
GENII AI REM	Analogue Input Module	6
GENII AO REM	Analogue Output Module	5
GENII DI REM	Dry Contact Digital Input Module	1
GENII DO REM	Digital Output Module	1
GENII IDI REM	Opto Isolated Digital Input Module	1
GENII PI REM	Pulse Input Module	5
GENII CS REM	Control Station Module	4
GENII CSAH REM	Control Station After Hours Module	4
GENII CSFCAH REM	Control Station with 3 Speed Fan	4
GENII MZS REM	Multizone Station Module	5
GENII MZSAH REM	Multizone After Hours Station Module	5

Data Logging

The GENII MPC Controller is equipped with a powerful Data Logging ability. Data Logging can be assigned to hardware and software points and up to 300,000 time stamped readings are stored on the GENII MPC Controller. All data is stored in non volatile Flash RAM. When the memory is full new readings replace the oldest readings.

The GENII MPC Controller automatically logs User Access via the GENII MMI and Loss and Resumption of its power supply.

Associated Software

Gen2Alert is a utility that reports on alarms generated by GENII MPC Controllers. A GENII MPI (Modem/Printer Interface) is required to capture the alarms and forward the details via modem to a PC running this utility. Once an alarm has been received, Gen2Alert can immediately notify the PC user through its pop-up and sound facilities, or at a later time through its logging facilities.

GEN2Config is the configuration tool for Innotech's GENII MPC Controller. It allows you to internally configure a GENII MPC Controller by using a simple point-and-click approach on a PC running Windows. EasyBill is an automatic charging utility program for use with Innotech's GENII MPC Controller. Using EasyBill in conjunction with GENII MPC Controllers, a plant administrator is able to analyse plant usage and automatically calculate charges for that usage.

InnoGraph is Innotech's data log graphing and analysis tool. While it has been designed to specifically cater for the data log graphing capabilities of the GENII MPC Controller, it has the flexibility to display data log graphing information from other sources. InnoGraph allows multiple graphs to be displayed in multiple windows simultaneously. Complete with a host of configurable display options, statistical analysis of data points, analogue and digital value support, active cursors, colour printing capability, and comprehensive zooming and panning features, InnoGraph is your complete graphing package.

GEN2Mon is a monitoring and debugging utility designed to help with commissioning and trouble-shooting a GENII MPC Controller. It displays the configuration which resides on a GENII MPC Controller and allows the user to inspect or trend the value at any of the points in the configuration while the controller is running.

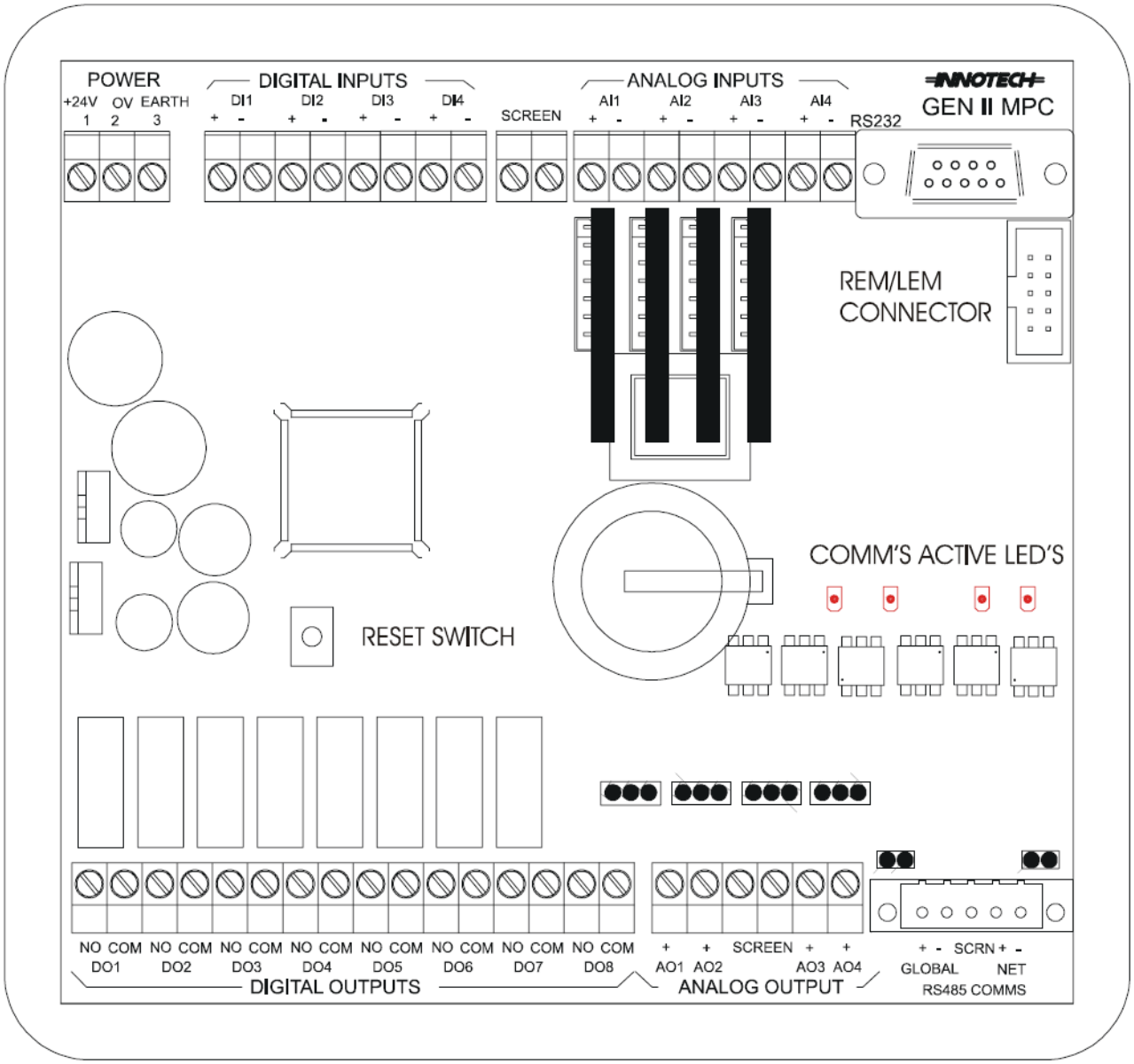
Gen2Simulator is a Windows-based software program that simulates an Innotech GENII MPC Controller. The Virtual GENII MPC Controller can be powered on, configured and interrogated in the same way as a physical GENII MPC Controller. Configurations can be downloaded and checked without requiring any hardware installation.

You can even simulate a GENII MPC Controller network in order to test global points processing. Gen2Simulator can be used in conjunction with any product from the Gen2 Software range.

Gen2Supervisor is a specialised dynamic monitoring utility for the GENII MPC Controller. It provides all the functionality that is available from the GENII MPC Controller display panel with greater ease-of-use and flexibility. It is aimed at those users who require some feedback or control of the GENII MPC system, but have no desire to be immersed in the technical details of a GENII MPC configuration.

Gen2Supervisor is a user-oriented product: no specialised knowledge of the GENII MPC Controller is required for its use. It allows the user to view the values of points of interest on a GENII MPC Controller, change its schedule information, or modify values accessible to the user.

GENXtract is the data log extraction utility for Innotech's GENII MPC Controller. It allows extraction of all or part of the history log data residing on a GENII MPC Controller into a specified data format while the controller is running.



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