PRODUCT DATASHEET
GENESIS GATEWAY

APPLICATION

The Genesis Network delivers full operational awareness and supervisory control over heat trace systems, with low total installed cost and maximum flexibility. Genesis Network connects all heat trace controllers via wireless mesh communications to the control room. In the control room, alarms and performance history are logged and displayed to operators, maintenance teams, and management via a user-friendly browser-based interface accessible from any PC or tablet.

The Genesis Network enables:

- **Increased up-time** resulting from site-wide visibility of all heat trace operating conditions and alarms
- **Optimized alarm settings** tuned to accurately flag outlier behavior and avoid nuisance alarms
- **Fewer maintenance hours** due to rapid diagnoses and troubleshooting of issues and sources of alarms
- **Streamlined maintenance and operations** resulting from the accurate and timely analysis and presentation of data relating to the heat trace system
- **Improved response** to upgrades, expansions, and maintenance activities and the related configuration changes

The Genesis Gateway is the access point between the control room server and wireless mesh network in the field. It manages all communications to and from the Genesis Bridges and network nodes. The Genesis Gateway securely controls the addition and removal of any node on the network. The gateway also manages the deployment and installation of software updates for all Genesis smart devices and controllers.

MAJOR COMPONENTS OF GENESIS NETWORK

- **Thermon Genesis Bridge** – node for wireless mesh communications
- **Thermon Genesis Gateway** – access point to/ from the control room
- **Thermon Genesis Server** – supervisory and data analytics software
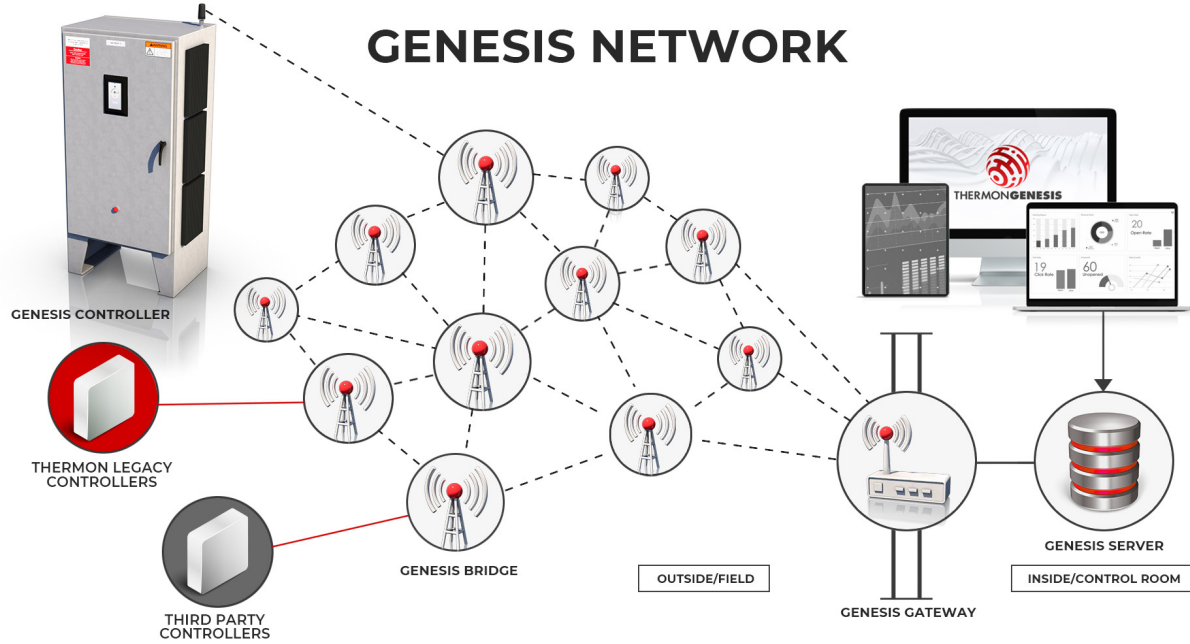
FEATURES & BENEFITS OF GENESIS NETWORK

- **Wireless Communication:** Reduces total cost of ownership by eliminating installation and maintenance of wiring, tray, and/or conduit.
- **Mesh Network:** Maximizes uptime by providing multiple and redundant communication pathways that automatically adjust.
- **Scalable:** Meets simple needs or supports the largest plants and heat trace circuit counts. Up to 1024 nodes.
- **Real-Time:** Superior response time when compared to a traditional Modbus network. Timely alarm reporting and tracking of temperature and current measurements in the control room enables efficiency with troubleshooting issues.
- **Software Updates:** Using smart IIoT technology, easily deploy new software to Genesis Network devices and controllers in the plant and add features over time to realize greater value.
- **Browser Interface:** Users can access the system from any browser (PC or tablet) on the plant network ensuring access from anywhere. Eliminates effort to keep client access points up to date.
- **Communication Options:** May be configured for either wireless (preferred) or wired communication or any combination of wired and wireless depending upon the needs of the site.

The Thermon Genesis™ Network consists of a control room server, a gateway, and a collection of field deployed bridges/nodes that form a wireless mesh communications network. Alternatively, the network can be made via a traditional wired Ethernet network. The Genesis™ Network connects all heat trace panels and controllers to the control room and gives visibility of all assets from a single dashboard and user interface that can be accessed from any browser.

GENESIS NETWORK

GENESIS CONTROLLER

THERMON LEGACY CONTROLLERS

THIRD PARTY CONTROLLERS

GENESIS BRIDGE

OUTSIDE/FIELD

GENESIS GATEWAY

GENESIS SERVER

INSIDE/CONTROL ROOM

GENESIS GATEWAY SPECIFICATIONS

Communications (Wired)	1 x Ethernet (10/100/1000) 1 x Ethernet (10/100) 4 x USB 2.0 (Host) 1 x CAN 1 x RS-485 (2-wire half duplex)
Communications (Wireless)	802.15.4 Radio (Mesh) – 2.4Ghz
Wireless Certifications	FCC, IC, CE, MIC, RCM, SIG
Range (Condition Dependent)	100 m (typical)
Max Mesh Nodes	1024
Supply Voltage	5–28 VDC
Max Supply Current	0.8 A
Storage Temperature	-40°C (-40°F) to 85°C (185°F)
Operating Temperature	-40°C (-40°F) to 70°C (158°F)
Enclosure Rating	IP20
Certifications/Approvals	CSA C US CE

PRODUCT DIMENSIONS

122 mm (4.75")
42 mm (1.75")
121 mm (4.75")
129 mm (5")
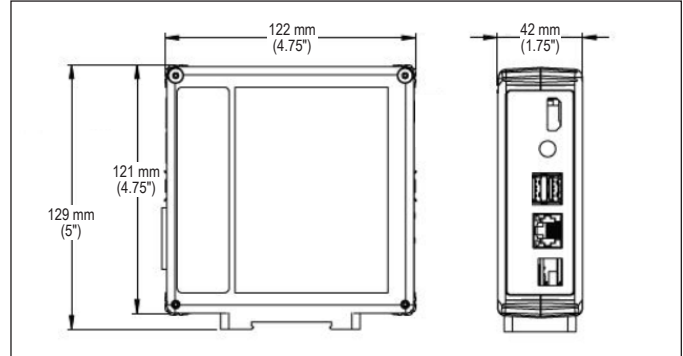
ORDERING INFORMATION

Part #	Description
GN-GW	**Genesis Gateway:** Genesis Gateway communication module; universal mains to 12 VDC power adapter; DIN-rail mountable; 2 dBi omnidirectional adjustable antenna.