

Building Automation Systems

A Product Brief

Mars International is a supplier to the Building Automation Systems industry providing custom electrical and mechanical assemblies and final products. Services include electrical and mechanical design, embedded software development, manufacturing engineering, and product delivery management.

Mars International designs and manufactures internetworking devices, controls, sensors, and displays for many industry segments including Energy Management, Access Control, HVAC-R, Chemical Metering, Lighting, Irrigation, Security, and more.

Product Applications

Mars International is well positioned to support the product needs of many devices for the BAS industry. Key manufacturing and development capabilities provide the infrastructure and the service to benefit the following product solutions and more.

Internetworking Devices

 Gateways, Routers, Gateways, Bridges, Aggregators, Direct Digital Controllers (DDC)

Controls

- Wireless switches
- Door controllers
- Fluorescent dimmers
- Garage door openers
- Motor controllers
- Wireless remotes
- Thermostats
- Daylighting controls
- Air handlers

Sensors

- Condensation
- Humidity
- Light
- Temperature
- Pressure
- Motion
- Occupancy / Vacancy
- Fluids
- Power monitoring
- Smoke / Gas

Displays

Key Manufacturing Capabilities

- Total product assembly
- Printed circuit board assembly
- Molded plastics enclosures, buttons, switches, etc.
- Precision metals casings, machined parts, etc.
- Electro-mechanical assembly
- Wiring assemblies

Key Development Capabilities

- Mixed signal design
- Printed circuit board layout
- Optimized embedded software
- Tooling design and construction
- Molding simulation and analysis
- Test procedure definition
- UL and FCC pre-certification

Key Technologies

- LAN communication protocol
 - Ethernet, ARCNET, MS/TP, PTP, LonTalk
- μProcessors / μControllers
- RF and IR communications
 –Z-Wave, Zigbee, WiFi (802.x)
- BAS networking technologies
 -BACnet, LonWorks



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Product Examples

Z-wave home automation gateway



Fluorescent lighting dimmer



Automated door controller



Garage door controller



Window covering motor controller



HVACR humidity transmitter



Condensation control system



Wireless wall switch

