SOLARAI

EB4 PLUS

Intelligent 4-Motor BACnet MS/TP Controller

HARDWARE FEATURES

- Universal: 110-240VAC
- 4 Motor Outputs
- Pluggable Connectors for Easy Installation
- 10 Contact Closure Inputs
  - Simple-Switch™ default bindings for onboard/network motors
  - Flexible Control Groups
  - Network Mappable (requires optional network)
  - Configurable Responses including Scene Control
- Optional programming through network or on-board MicroUSB
- Real Time Clock for Time-Based Schedules

WORKS WITH…

- Most 4-Wire AC Motors
- Roller Shades
- Venetian Blinds
- Louvers
- Rack Arm Systems
- Skylights
- Operable Windows
- And more…

NATIVE BACnet

- No gateway device required for BMS integration

Embedia's Solarai™ EB4 Plus is a BACnet MS/TP device capable of advanced independent or grouped control for up to four motorized systems. It is designed for unrivalled intelligence with predictive environmental control of roller shades, venetian blinds, operable louvers, and other devices using any standard 4-wire AC motor.

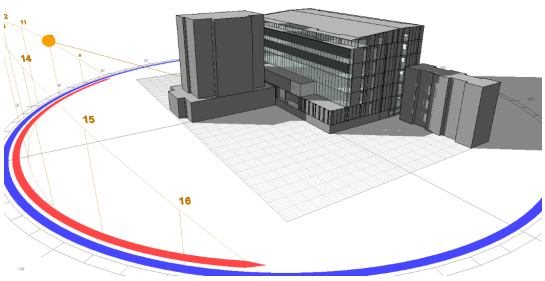
Each controller has 5 pairs of contact closure inputs with fully programmable, priority based, response profiles. Each input can be reconfigured to control any group of motors on the entire network. A simple dry contact switch, or any other device capable of closing a contact, can be used for advanced group and scene control.

The EB4 Plus implements a unique distributed intelligence architecture that does not rely on a central server or control unit for shade positioning or even advanced modelling. The resulting resiliency of the control system reduces maintenance down time, and effectively eliminates single points of failure. Network load is also significantly reduced allowing the system to scale to any size.

PRODUCT HIGHLIGHTS

- OUT-OF-THE-BOX FUNCTIONALITY
  - ZERO-CONFIG SIMPLE-SWITCH™ DEFAULTS
- CONFIGURABLE WITH MOBILE APP (ADD-ON REQ'D)
  - SENSOR RESPONSE
  - PRIORITIES
  - EXTERNAL INPUTS / CONTROLS INTEGRATION
- BACNET MS/TP INDUSTRY-STANDARD NETWORK
- SCALABLE (STANDALONE TO WHOLE BUILDING)
- UPGRADEABLE FEATURES (IN-FIELD UPGRADES)
- SCHEDULES
- SUN TRACKING - PREDICTIVE SOLAR CONTROL
- OPTIMIZES ENERGY EFFICIENCY
- MAXIMIZES OCCUPANT COMFORT
- ADVANCED ENVIRONMENTAL MODELING
  - ANTI-GLARE REGIONS
  - REFLECTED / INDIRECT GLARE CONTROL
  - OVERSHADOWING AND FIXED SHADES
- DISTRIBUTED INTELLIGENCE
  - SCALABLE ARCHITECTURE
  - ROBUST AND RESILIENT

Proprietary sun tracking algorithms utilize geographic location, system orientations, and other advanced modeling parameters to provide accurate, real-time, predictive control ensuring shades are always in the optimal position for both energy efficiency and occupant comfort.



BACnet® is a registered trademark of ASHRAE

Embedia

©Embedia Sales Corporation 2022-06-28

SOLARAI

EB4 PLUS

SIMPLE-SWITCH™ DEFAULTS

MOTOR CHANNEL	SWITCH INPUT ↕1	↕2	↕3	↕4	↕5
1	↻		↻		
2		↻	↻		
3			↻	↻	
4			↻		↻

COMPANION PRODUCTS

Motors
- Any 4-wire Standard Motor

Third-Party Devices
- Contact Closures
- Dry Contact Outputs
- Off-the-Shelf Switches
- A/V / BMS Outputs

SW7 (Simple-Switch™, multiple options)
- Push Button Switches
- Contact Closure, USB, or RF
- Standard "Decorator" Styling
- Custom Engraving Available

USB Addons
- USBIF-AV - serial integration
- USBIF-DCI12 - dry contact inputs
- USBIF-RF-Z - RF (mesh) receiver for wireless switches
- USBIF-WiFi - WiFi network

ControlPoint
- Sensor Inputs
- AV/BMS Integration
- BACnet MS/TP-IP Router (optional)

Control Panel Software
- Graphical User Interface for Advanced system Management (network requried)

WARRANTY

All Embedia products carry a standard 2-year product replacement warranty. Extended 5 and 10 year warranties are available.

For more information on any of our products or services, please visit us on the Web at: http://www.embedia.com

Technical Specifications

Parameter	Specification
Line Voltage Input	Universal 110-240 VAC at 50-60 Hz
Motor Outputs	4 Motor Output; 110-240 VAC (Matched to Line Voltage Input); Max. 10A Per Output (Fuse protected); Max. 15A Combined Total
Low Voltage Inputs	10 Contact Closure Inputs (5 pairs);
Dimensions	Controller Only —170.00mm (6.69") x 82.60mm (3.25") x 20.00mm (0.79")
Enclosure Options	Metal Enclosure; Standard NEMA 1—8" x 8" x 4" (200mm x 200mm x 100mm) ABS Plastic Enclosure; UL94-5VA Flame Rating—8.25" x 5" x 3" (209.55mm x 127mm x 76.2mm)
Communication Network	BACnet MS/TP; Maximum 127 Devices per Segment; Expandable using BACnet/IP Routers such as CP-IP-B
Network Wiring	1 x Twisted Pair + Ground suitable for RS/EIA/TIA-485 Communication; 1200m / 4000ft absolute max bus length (limiting to 600m / 2000ft recommended)

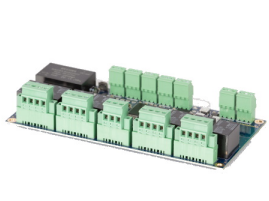
Ordering Information

Orderable Part Number	Description
PLUS-M4-M-B	EB4 Plus—4 motor BACnet MS/TP controller in 8" x 8" Metal Enclosure
PLUS-M4-P-B	EB4 Plus—4 motor BACnet MS/TP controller in Plastic Enclosure
PLUS-M4-X-B	EB4 Plus—4 motor BACnet MS/TP controller with no enclosure
MOUNT-ST-EBV2	Snap Track Mounting Kit for EBv2 type controllers (option for PLUS-M4-X-B)

PLUS-M4-M-B

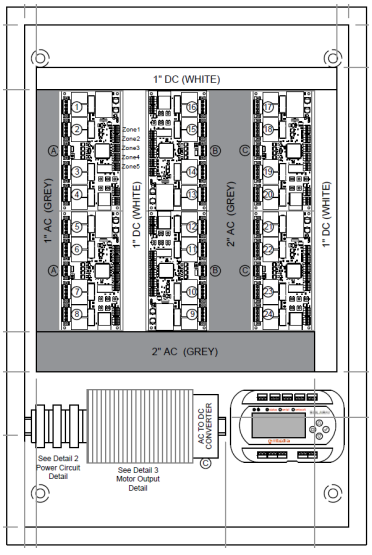
PLUS-M4-P-B

PLUS-M4-X-B

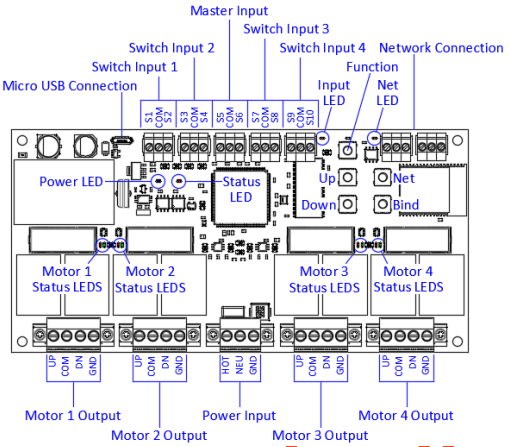


Mount-ST-EBV2

Custom Panels



Board Overview



Embedia offers a range of pre-designed panel layouts to accomodate multiple motor controllers and companion products. Custom design services are also offered. Embedia's manufacturing facility is a certified panel shop and all ordered panels will be certified and ready for on-site installation.

Intertek 3133701

Embedia

27-112 Freeport Cres. NE
Calgary, AB, Canada T3J 0S9
Phone: +1-403-456-6279