# MCS-NitroMag-N
## Description & Specifications
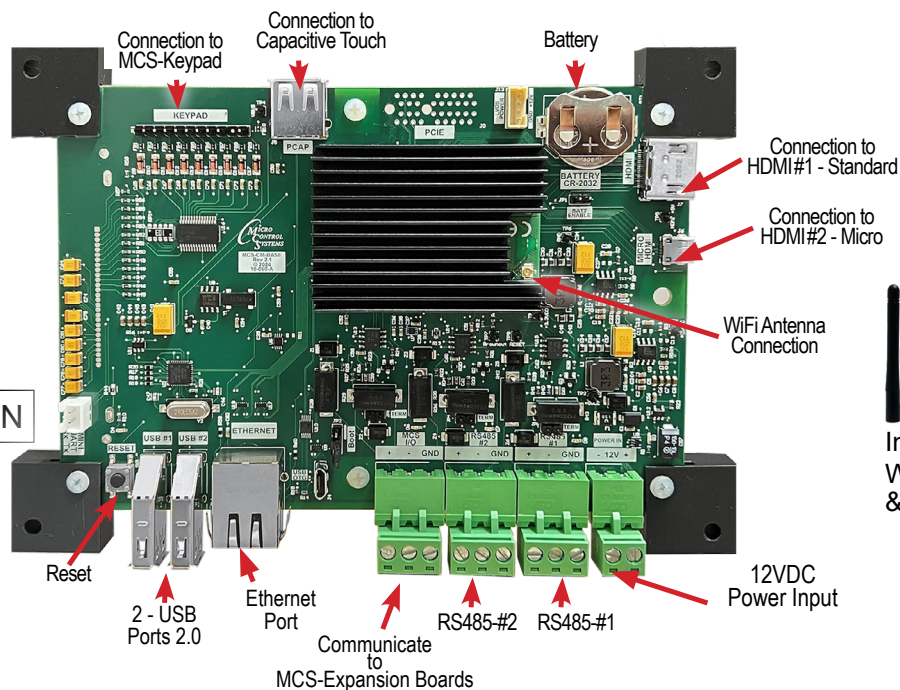


Connection to MCS-Keypad
Connection to Capacitive Touch
Battery
Connection to HDMI#1 - Standard
Connection to HDMI#2 - Micro
WiFi Antenna Connection
Included: WiFi Antenna w/cable & extended cable
Reset
2 - USB Ports 2.0
Ethernet Port
Communicate to MCS-Expansion Boards
RS485-#2
RS485-#1
12VDC Power Input

cULus File No: E169780
RoHS Compliant

Part # MCS-NitroMag-N

## Description

The **MCS-NitroMag-N** is a control system containing a processor, memory, eMMC Flash, and supporting power circuitry. The Broadcom quad-core processor delivers a blazing speed of 1.5GHz.

The MCS-NitroMag-N controller connects with MCS Expansion boards and Extension boards, allowing for a maximum of 144 SI inputs, 90 RO outputs, and 36 AO outputs.

With dimensions of 6.15"w x 4.24"h x 0.93"d (156mm w x 108mm h x 23.6mm d), it fits in a panel with room for additional expansion boards.

The MCS-NitroMag-N comes with a built-in WiFi interface for Ethernet connectivity, and an onboard WiFi antenna connection.

Includes a **Modbus interface** which enables it to act as a Modbus Master using the Modbus RTU protocol, which allows communication with up to 20 Modbus slave devices for parameter access.

*It features various connection ports for:*

- MCS-Keypad and Capacitive Touchscreen
- 2 HDMI ports (1 Standard & 1 Micro)
- WiFi antenna connection
- 12vdc power input connection
- Ethernet port (10 Mbps/100 Mbps/1Gbps)
- Two RS-485 Ports up to 115200 baud rate
- MCS-IO port for communicating with expansion boards

Ship Weight ..................... 2.00 lb (approx)
Box Dimensions............. 9" x 6-1/2" x 2-3/4" (approx)

## Specifications

Dimensions..................... 6.15"w, x 4.24"h, x 0.93"d
(156mm w, x 108mm h, x 23.6mm d)
Mounting......................... 4 screws w/mounting feet
Operating Temperature.... -4°F to +185°F (-20°C to +85°C)
Operating Humidity............ 0-95% Non-Condensing
Microprocessor ............... Broadcom BCM2711 quad core
Cortex (ARMv8) 64-bit SoC @ 1.5GHz

| INPUT | MINIMUM | NOMINAL | MAXIMUM |
|---|---|---|---|
| VOLTAGE | 10 | 12 | 12.5 |
| AMPS | | | 0.5 |

Flash Memory .................. 16 GB EMMC
Memory Chip.................... 2 GB DDR3
MCS-I/O Comm. Port. ..... 1 @ 38,400 baud
RS-485 Ports. ................ 2 @ go up to 115200 baud rate
Ethernet ......................... 10 Mbps/100 Mbps/1Gbps
HDMI ............................. 2 HDMI 2.0 ports-Standard and Micro
WiFi .............................. 2.4 GHz 8.02 b/g/n/ac wireless
USB ............................... 2 USB type B 2.0 ports 480Mbps signaling
Protocols............................ BACnet IP, BACnet MSTP, Modbus IP, Modbus RTU Slave, Modbus RTU Master (BTL certification pending)
Real Time Clock .............. Battery backup(Type BR2032)
Power Detection .............. Automatic power fail reset

## Packaging

- 4 (four) mounting feet with 4 screws,
- 2 Nylon standoffs
- WiFi Antenna w/cable & extended cable