# MXA-21

The MXA-21 is the first model of
the MXA family of enclosed 2U rack-mount controllers. The design of the MXA-21
was defined with input from Argonne National Labs, including the type of connectors
and the connector pinouts. The MXA-21 is an 8-axis motion controller with encoder
support for each axis. The controller functionality supports the same features of the
legacy MAXv and MAXnet family of controllers. The power input is 120VAC for convenience with all logic power internal to the enclosure.
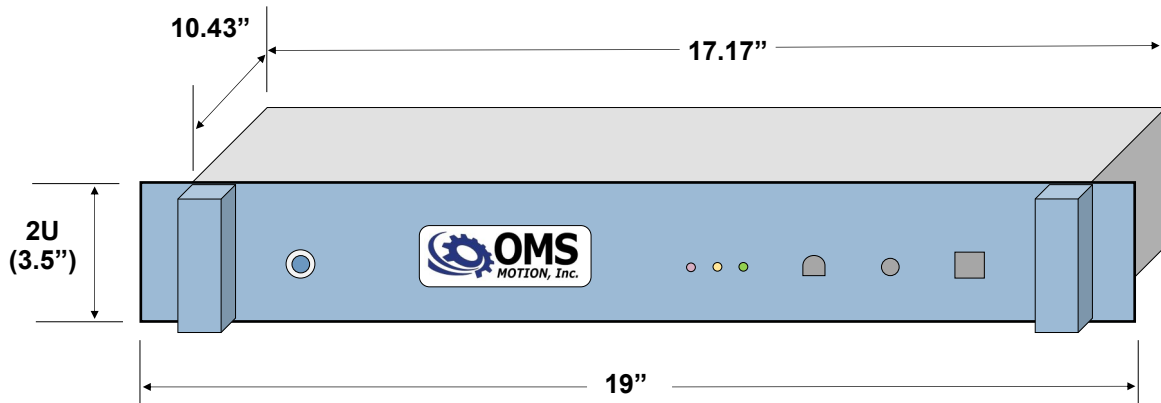
## OVERVIEW

- Enclosure for 2U 19" rack mount, communications and status on front, motion control signals on back
- 8-axis motion controller for Step & Direction motor control (stepper motors)
- Limit + & - for each axis as well as Home inputs
- Each axis control signals are on a RJ45 connector that connects to existing drives (StepPack)
- A separate 9-pin D-sub connector for the encoder for each axis (incremental, SSI or BiSS)
- Built-in logic power supply (120VAC) with power On/Off switch on back
- Start/Stop button on front panel with LED status
- 1G Ethernet TCP/IP or USB interfaces on the front panel for communications
- Command functionality of the legacy MAXv and MAXnet supported
- Status LEDs on front panel indicate status and health of the controller
- All new motion control design for advanced capability and longevity of design

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# DIMENSIONS



10.43"

17.17"

2U (3.5")

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19"

# CONTROL SIGNAL CONNECTORS

| Axis Control (RJ-45) | |
|---|---|
| **Pin** | **Function** |
| 1 | Step + |
| 2 | Step - |
| 3 | Direction + |
| 4 | Positive Limit |
| 5 | Negative Limit |
| 6 | Direction - |
| 7 | Home |
| 8 | Ground |
| | |

| Incremental Encoder (DB9) | |
|---|---|
| **Pin** | **Function** |
| 1 | Index + |
| 2 | Phase A+ |
| 3 | Phase B+ |
| 4 | +5VDC |
| 5 | Home |
| 6 | Index - |
| 7 | Phase A- |
| 8 | Phase B- |
| 9 | Ground |

| Absolute Encoder (DB9) | |
|---|---|
| **Pin** | **Function** |
| 1 | Clock + |
| 2 | Data + |
| 3 | *NC* |
| 4 | +5VDC |
| 5 | Home |
| 6 | Clock - |
| 7 | Data - |
| 8 | *NC* |
| 9 | Ground |

| | **ORDERING INFORMATION** |
|---|---|
| **MODEL #** | **DESCRIPTION** |
| MXA-21 | 8-Axis Motion Controller, 2U x 19" enclosed |
| PWRCBL | AC Power Cord (included) |
| USBCBL | USB Cable, 6ft (optional) |

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