

# MODULAR CONTROLLER SERIES

## CPU151 Compact Controller with Display and High-Speed I/O



- **Built-In I/O** - 8 digital in, 8 digital out; 2 flex inputs (digital, 4-20mA, or 0-10V)
- **Removable Connectors**
- **High-speed I/O** - 2-high-speed inputs, 2 high-speed outputs
- **Integrated Touch Display** - 1.4" color touchscreen for configuration and monitoring
- **Optional Custom Screens** - Enables simple HMI functionality
  - **Expandable I/O** - Up to 63 modules with OCS-I/O
  - **Advanced Ladder Programming**
  - **Comms Built-In** - CAN, Serial, and EtherNet
  - **MicroSD Card Slot** - For data logging and program loading
  - **MQTT & OCS360 Ready**
- **Integrated WiFi** - Supports programming and OCS360 connectivity
- **10-30VDC Operation** - Ideal for mobile and solar applications

## CPU250 Advanced Mid-Tier Controller with Rich, Built-In I/O



- **Extensive Built-In I/O** - 8 digital in, 10 digital out; 8 flex inputs (digital, 4-20mA, or 0-10V); 8 analog outputs (4x 4-20mA, 4x 0-10V)
- **Removable Connectors with LED Indicators** - Unique design simplifies wiring and diagnostics
- **High-speed I/O** - 4-high-speed inputs, 2 high-speed outputs
- **Expandable I/O** - Up to 119 modules with OCS-I/O (local or remote)
  - **Connectivity** - CAN, Serial, EtherNet, and WebMI screens
  - **MicroSD Card Slot** - For data logging and program loading
  - **10-30VDC Operation** - Ideal for mobile, solar, or battery-powered systems
  - **OCS360 Cloud Support**

## CPU260 - Controller with Display and High-Speed I/O



- **Integrated HMI Connect Display** - All-in-one system with remote screen support; no extra communications setup required
- **Extensive Built-In I/O** - 8 digital in, 10 digital out; 8 flex inputs (digital, 4-20mA, or 0-10V); 8 analog outputs (4x 4-20mA, 4x 0-10V)
- **Removable Connectors with LED Indicators** - Unique design simplifies wiring and diagnostics
- **High-speed I/O** - 4-high-speed inputs, 2 high-speed outputs
- **Expandable I/O** - Up to 119 modules with OCS-I/O (local or remote)
  - **Connectivity** - CAN, Serial, EtherNet, and WebMI screens
  - **MicroSD Card Slot** - For data logging and program loading
- **10-30VDC Operation** - Ideal for mobile, solar, or battery-powered systems
- **Future-Ready** - OCS360 cloud support coming soon...

## CPU300 - High Performance Remote HMI Controller



- **Integrated HMI Connect Display** - All-in-one system with remote screen support; no extra communications setup required
- **High-performance Dual-core CPU** - Fast processing for demanding applications
- **USB Host Port** - Supports storage, Wi-Fi, keyboard/mouse, or camera
- **Flexible I/O Expansion** - 1 local rack and up to 16 remote racks with access to 119 I/O modules
- **MicroSD Card Slot** - For data logging and program/screen loading, screen capture
- **Modern Protocols** - WebMI 2.0, MQTT, and OCS360 cloud platform
  - **Built-In Display** - For on-device settings/configuration
- **10-30VDC Operation** - Supports mobile, battery, and solar use

# MODULAR CONTROLLER COMPARISON



DIN-rail mount Modular Controller with Built-in I/O and Operator Interface. Local I/O expansion using OCS-I/O

DIN-rail mount Modular Controller with 34 Built-in I/O points and no Operator Interface. Local I/O expansion using OCS-I/O

Modular All-in-one Controller with support for add-on HMI Connect touchscreen(s). 34 Built-in I/O points and Local I/O expansion using OCS-I/O

Modular All-in-one Controller with support for add-on HMI Connect touchscreen(s) and Canvas Graphics. Local I/O expansion using OCS-I/O

| FEATURES                 |                                  | CPU151                                                                                               | CPU250                                                      | CPU260                                                     | CPU300                                                         |
|--------------------------|----------------------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------------|
| Controller               | Controller Class (processor)     | Micro (single-core)                                                                                  |                                                             | Prime (single-core)                                        | Canvas (dual-core)                                             |
|                          | Logic Memory & Scan Rate         | 128 K @ 1.2 mS/K                                                                                     | 2 MB @ 0.4 mS/K                                             | 2MB @ 0.02 mS/K                                            |                                                                |
|                          | Variables (Word-type/Bit-type)   | 5000 (1600 retentive)                                                                                | 50,000/32,768 (16,383 retentive)                            |                                                            |                                                                |
|                          | Floating-Point Support/PID Loops | Yes (32-bit)/4 Loops                                                                                 | Yes (32-bit)/8 Loops                                        | Yes (64-bit)/16 Loops                                      |                                                                |
| Operator Interface       | Graphics Class                   | No Operator Interface Functionality                                                                  |                                                             | Prime (via HMI Connect)                                    | Canvas (via HMI Connect)                                       |
|                          | HMI Connect Touchscreen Sizes    |                                                                                                      |                                                             | 4", 7", 10.1", 15" (IP65/4X) & 7", 10.1" (IP67)            |                                                                |
|                          | HMI Connect Connection Type      |                                                                                                      |                                                             | Graphics, Touch & Power in a single cable (≤8m)            |                                                                |
|                          | HMI Connect Touchscreens (max.)  |                                                                                                      |                                                             | Three (3) Identical touchscreens, using optional accessory |                                                                |
|                          | Number of Pages/Objects per Page |                                                                                                      |                                                             | 1023/1023                                                  |                                                                |
| I/O                      | Built-In I/O points, Total       | 8 DC In, 8 DC Out, 2 Flex                                                                            | 34 (8 DC In, 8 Flexible In, 10 DC Out, 8 Analog Out)        |                                                            | No Built-in I/O                                                |
|                          | Built-in High Speed I/O          | 2 In (500 kHz) & 2 Out                                                                               | 4 In (500 kHz) & 2 Out                                      |                                                            |                                                                |
|                          | Built-in Analog I/O              | 2 Flex In (4-20mA or 0-10V or DC)                                                                    | 0-8 In (4-20mA or 0-10V), 4 Out (4-20mA), 4 Out (0-10V)     |                                                            |                                                                |
|                          | Total I/O Memory                 | 2048 Digital In/2048 Digital Out/512 Analog In/512 Analog Out                                        |                                                             |                                                            |                                                                |
|                          | Local OCS-I/O Expansion          | 7 modules                                                                                            |                                                             |                                                            |                                                                |
|                          | Network OCS-I/O Expansion (max.) | 8 bases x 7 modules                                                                                  | 16 bases x 7 modules                                        |                                                            |                                                                |
| Communications           | Number of Ethernet Ports         | 1 (10/100Mbps)                                                                                       |                                                             |                                                            | 2 (10/100Mbps)                                                 |
|                          | Standard Ethernet Protocols      | EtherNet/IP (server), Modbus TCP (client/server), FTP (server); SMTP (client) for 250/260 only       |                                                             |                                                            | All Protocols listed on chart are standard                     |
|                          | Optional Ethernet Protocols      | BACnet IP                                                                                            |                                                             | BACnet IP & MQTT Sparkplug                                 |                                                                |
|                          | Remote Access                    | OCS360 Cloud Service                                                                                 | OCS360 Cloud Service, WebMI via HTML5, EnvisionRV           |                                                            |                                                                |
|                          | CAN Protocols                    | CsCAN                                                                                                | CsCAN (std), CANopen & SAE J1939 (opt)                      | CsCAN, CANopen & SAE J1939 (std)                           |                                                                |
|                          | USB Ports                        | USB-C (programming only)                                                                             |                                                             |                                                            | USB-C (prgm) & USB-A (host)                                    |
|                          | RS-232 & RS-485 Ports            | Shared RJ45 with RS-485 (half-duplex) and RS-232. Modbus/RTU (master/slave), ASCII & other protocols |                                                             |                                                            |                                                                |
| Physical Size & Mounting | Typical Mounting Location        | DIN-rail                                                                                             |                                                             | DIN-rail with Add-On HMI Connect touchscreen remote        |                                                                |
|                          | HeightxWidthxDPTH (in/mm)        | 4.75" H x 1.53" W x 3.62" D / 120.85mm H x 39mm W x 92.1mm D                                         | 4.5" H x 4.92" W x 1.97" D / 114.4mm H x 124.9mm W x 50mm D |                                                            | 4.63" H x 4.52" W x 2.92" D / 117.5mm H x 114.8mm W x 74.3mm D |
| Operating Specifications | Supply V                         | 10-30VDC, 12/24VDC                                                                                   |                                                             |                                                            |                                                                |
|                          | Operating Temperature/RH%        | -10° to 60°C / 5 to 95%, non condensing                                                              | -40° to 60°C / 5 to 95%, non condensing                     |                                                            | -10° to 60°C / 5 to 95%, non condensing                        |
|                          | Environmental Rating             | IP20                                                                                                 |                                                             | IP20 (HMI Connect touchscreens carry IP65/4X or IP67)      |                                                                |
| List Price               |                                  | Coming Soon                                                                                          | \$729                                                       | Coming Soon                                                | \$899                                                          |