

UNIStream™

Building Blocks

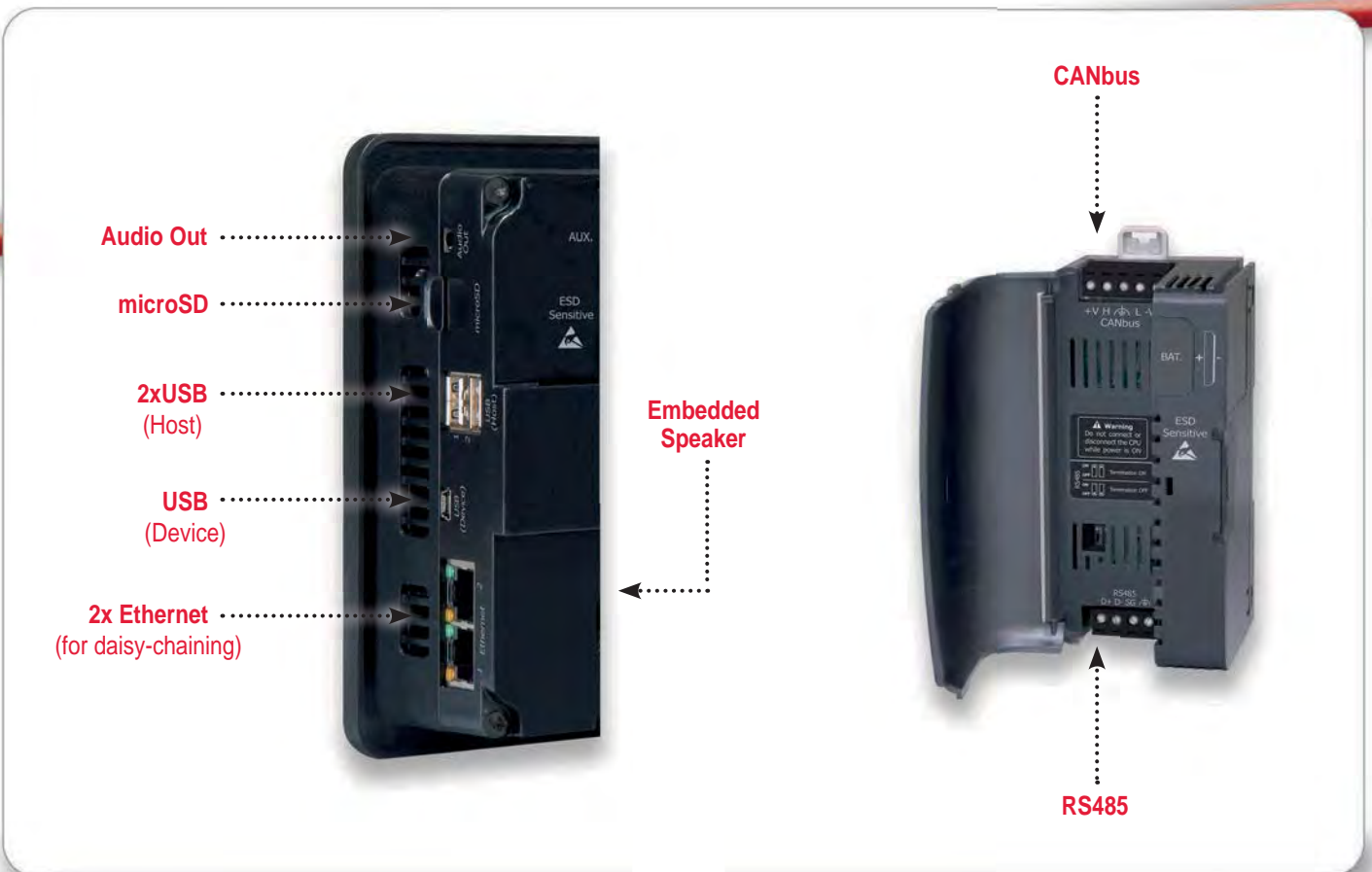
Completely modular in architecture, UniStream™ enables you to create a compact control device that matches your application requirements. Select any UniStream™ HMI panel, add a CPU, and add the right I/O and COM modules to fit your requirements. The result is an all-in-one controller that comprises the optimal configuration for your specific application.



All-in-One, simple configuration—saves on cabinet space and wiring costs

Use a Local Expansion Adapter to connect UniStream™ to additional I/O modules on a DIN rail.

Interfaces





| | CPU + 7" HMI Panel | CPU + 10.4" HMI Panel | CPU + 15.6" HMI Panel |
|--|---|--|-----------------------------|
| Part Number | USC-P-B10 and USP-070-B10 | USC-P-B10 and USP-104-B10 | USC-P-B10 and USP-156-B10 |
| Number of I/Os per CPU (On-board, local and remote) | Up to 2,048 | | |
| On-board Uni-I/O™ or Uni-COM™ Modules (All-in-One configuration) | Snap up to 3 slim modules ⁽¹⁾ | Snap up to 5 slim modules ⁽¹⁾ | |
| Local Uni-I/O™ Modules | The UniStream™ CPU supports a maximum of 16 slim Uni-I/O™ ⁽¹⁾ (including the on-board modules) | | |
| Remote I/O Expansion | Use EX-RC1 adapters to further extend the number of I/Os | | |
| Bit Operation | 0.13 µs | | |
| Ladder Memory | 1 MB | | |
| External Memory | microSD and USB Flash drive | | |
| Video | Show MPEG-4 videos on the HMI screen | | |
| Audio | Play MP3 audio files via internal speaker, or external speakers via audio-out jack | | |
| Power Supply | 12/24VDC | | |
| Backup Battery | CR2032, Back-up RTC values, system data and retained tags | | |
| Communication | | | |
| Ports | 2 Ethernet • 1 RS485 • 1 CANbus 2 USB host ports • 1 USB device port for programming | | |
| Protocols | MODBUS, CANopen, BACnet ⁽²⁾ Message Composer for 3 rd party protocols | | |
| HMI Panel | | | |
| Type | TFT, LCD, Touch HMI Panel | | |
| Size | 7" (16:9) | 10.4" (4:3) | 15.6" (16 : 9) |
| Resolution | 800x480 (WVGA) | 800x600 (SVGA) | 1366x768 |
| Colors | 65,536 (16bit) | | 16M (24bit) |
| Display Backlight Illumination | White LED | | |
| Environment | | | |
| Protection | IP66, IP65 and NEMA4X when panel-mounted ⁽³⁾ | | |
| Operating Temperature | -20°C to 55°C (-4°F to 131°F) | | 0°C to 50°C (32°F to 122°F) |

⁽¹⁾ 1 wide I/O modules width = 1.5 slim I/O modules width - see table " Digital Uni-I/O™ Modules"

⁽²⁾ Using a gateway model: GW-BAC1

⁽³⁾ UniStream™ complies with IP66 and NEMA4X only with the audio seal installed, please refer to the installation guide of the HMI panel for information.

UniStream™ HMI Panel

Technical Specifications

| | | | |
|----------------|-------------|----------------|-------------|
| Art No. 147263 | USP-070-B08 | Art No. 131129 | USP-070-B10 |
| Art No. 131083 | USP-104-B10 | Art No. 152618 | USP-104-M10 |
| Art No. 141762 | USP-156-B10 | | |

UniStream™ HMI Panels provide the foundation of an all-in-one PLC + HMI controller. To create an all-in-one device, snap a UniStream™ CPU-for-Panel and one or more Uni-I/O™ or Uni-COM™ modules onto the back of the panel.

Installation Guides are available in the Unitronics Technical Library at www.unitronicsplc.com.

| Power Supply | USP-070-B08 | USP-070-B10 | USP-104-B10 | USP-104-M10 | USP-156-B10 |
|--------------------------|-----------------------------|----------------------------|-----------------------------|-------------|----------------------------|
| Input voltage | 12VDC or 24VDC | | | | |
| Permissible range | 10.2VDC to 28.8VDC | | | | |
| Max. current consumption | 1.35A@12VDC, 0.65A@24VDC | 1.5A@12VDC, 0.75A@24VDC | 1.62A@12VDC, 0.81A@24VDC | | 2.5A@12VDC, 1.25A@24VDC |

| Display | USP-070-B08 | USP-070-B10 | USP-104-B10 | USP-104-M10 | USP-156-B10 |
|-------------------------------------|--|---------------------|---------------------|---|------------------|
| LCD type | TFT | | | | |
| Backlight type | White LED | | | | |
| Luminous intensity (brightness) | Typically 400 nits (cd/m ²), at 25°C | | | | |
| Backlight longevity ⁽¹⁾ | 30k hours | 50k hours | | | |
| Resolution (pixels) | 800 x 480 (WVGA) | 800 x 480 (WVGA) | 800 x 600 (SVGA) | | 1366 x 768 |
| Size | 7" | 7" | 10.4" | | 15.6" |
| Viewing area Height x Width (mm) | 154.08 x 85.92 | 152.4 x 91.44 | 211.2 x 158.4 | | 344.23 x 193.53 |
| Color support | 65,536 (16bit) | | | | 16M (24bit) |
| Surface treatment | Anti-glare | | | | |
| Touch screen | Resistive Analog | | | Capacitive multi-touch, 5-fingers | Resistive Analog |
| Actuation force (min) | > 80 g (0.176 lb) | | | | |

| System | |
|-----------------|--|
| Processor | 32 bit, 800MHz RISC Processor, with Graphic Accelerator |
| Internal memory | RAM: 512 MB ROM: 3GB system memory 1GB user memory |
| External memory | microSD or microSDHC card Size: up to 32GB Data Speed: up to 200Mbps |

| Audio ⁽²⁾ | |
|-----------------------------|---|
| Bit Rate | 192kbps |
| Internal speaker | Audio compatibility: mono MP3 files. Frequency range: 500Hz to 20KHz |
| External audio | Audio compatibility: stereo MP3 files. Interface: 3.5mm Audio-out jack - use shielded audio cable of up to 3 m (9.84 ft). Impedance: 32Ω No isolation |

| Video | |
|-----------------|---------------------------|
| Support Formats | MPEG-4 Visual , AVC/H.264 |

| Communication | |
|----------------------------------|--|
| Ethernet port | |
| Number of ports | 2 |
| Port type | 10/100 Base-T (RJ45) |
| Auto crossover | Yes |
| Auto negotiation | Yes |
| Isolation voltage | 500VAC for 1 minute |
| Cable | Shielded CAT5e cable, up to 100 m (328 ft) |
| USB device ⁽³⁾ | |
| Number of ports | 1 |
| Port type | Mini-B |
| Data rate | USB 2.0 (480Mbps) |
| Isolation | None |
| Cable | USB 2.0 compliant; < 3 m (9.84 ft) |

| | |
|-------------------------|------------------------------------|
| USB host | |
| Number of ports | 2 |
| Port type | Type A |
| Data rate | USB 2.0 (480Mbps) |
| Isolation | None |
| Cable | USB 2.0 compliant; < 3 m (9.84 ft) |
| Over current protection | Yes |

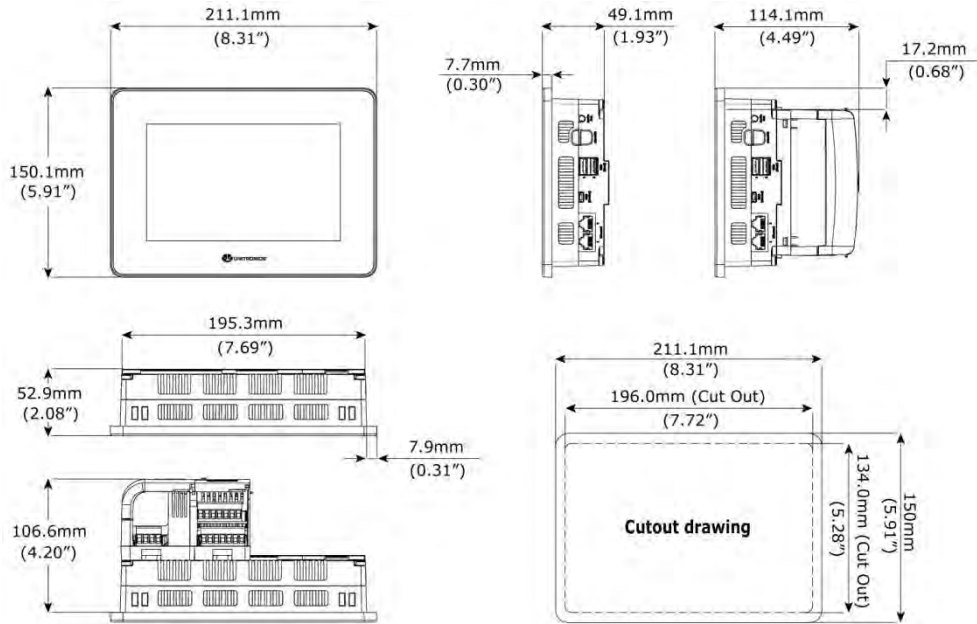
| On-board I/O or COM modules ⁽⁴⁾ | USP-070-B08, USP-070-B10 | USP-104-B10, USP-104-M10 USP-156-B10 |
|---|---------------------------------|---|
| Number of modules | Up to 3 | Up to 5 (up to 4 of them can be COM modules) |

Note that the numbers above relate to Uni-I/O and Uni-COM modules. You can mix Uni-I/O and Uni-COM modules with Uni-I/O Wide modules, considering that 1 Uni-I/O Wide module equals 1½ Uni-I/O module. For example, the USP-104-B10 and USP-104-M10 back panel can host 2 Uni-I/O and 2 Uni-I/O Wide modules in any order.

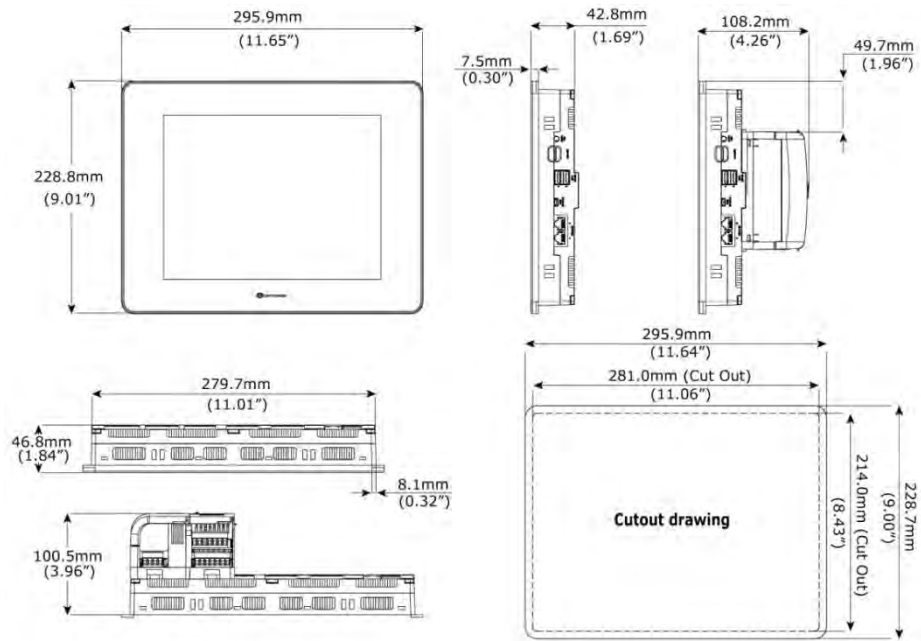
| Environmental | | |
|------------------------|--|-------------------------------|
| Protection | Front face ⁽²⁾ : IP65/66, NEMA 4X Rear side: IP20, NEMA1 | |
| | USP-070-B08, USP-070-B10, USP-104-B10, USP-104-M10 | USP-156-B10 |
| Operating temperature | -20°C to 55°C (-4°F to 131°F) | 0°C to 50°C (32°F to 122°F) |
| Storage temperature | -30°C to 70°C (-22°F to 158°F) | -20°C to 60°C (-4°F to 140°F) |
| Relative Humidity (RH) | 5% to 95% (non-condensing) | |
| Operating Altitude | 2,000 m (6,562 ft) | |
| Shock | IEC 60068-2-27, 15G, 11ms duration | |
| Vibration | IEC 60068-2-6, 5Hz to 8.4Hz, 3.5mm constant amplitude, 8.4Hz to 150Hz, 1G acceleration | |

| Dimensions | USP-070-B08 | USP-070-B10 | USP-104-B10 | USP-104-M10 | USP-156-B10 |
|-------------------|---------------------------|--------------------|--------------------|--------------------|--------------------|
| Weight | 0.7 Kg (1.54 lb) | 0.7 Kg (1.54 lb) | 1.45 Kg (3.20 lb) | 1.45 Kg (3.20 lb) | 3 Kg (3.60 lb) |
| Size | Refer to the images below | | | | |

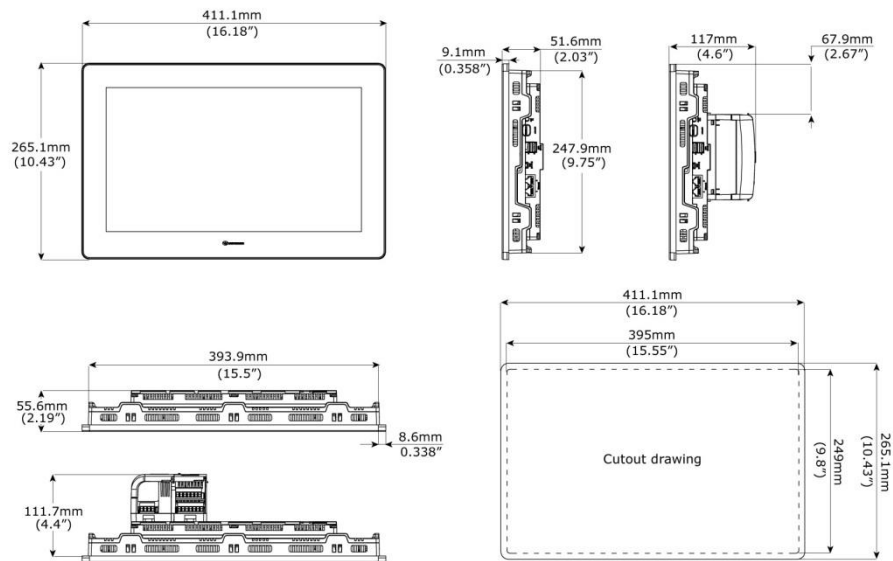
USP-070-B08 , USP-070-B10 7" Panel



USP-104-B10, USP-104-M10 10.4" Panel



USP-156-B10 15.6" Panel

**Notes:**

1. Panel's longevity is the typical operating time after which the brightness drops to 50% of its original level.
2. The audio outlet seal must be inserted in the outlet in order to comply with IP66 or NEMA 4X.
3. The USB device port is used to connect the device to a PC.
4. The panel back is molded into a DIN rail-like structure which provides the physical support for a UniStream™ CPU-for-Panel, Uni-I/O™ modules and Uni-Com™ modules. Details are provided in the UniStream™ HMI Panel installation guides.

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