

UNISTREAM™

Building Blocks

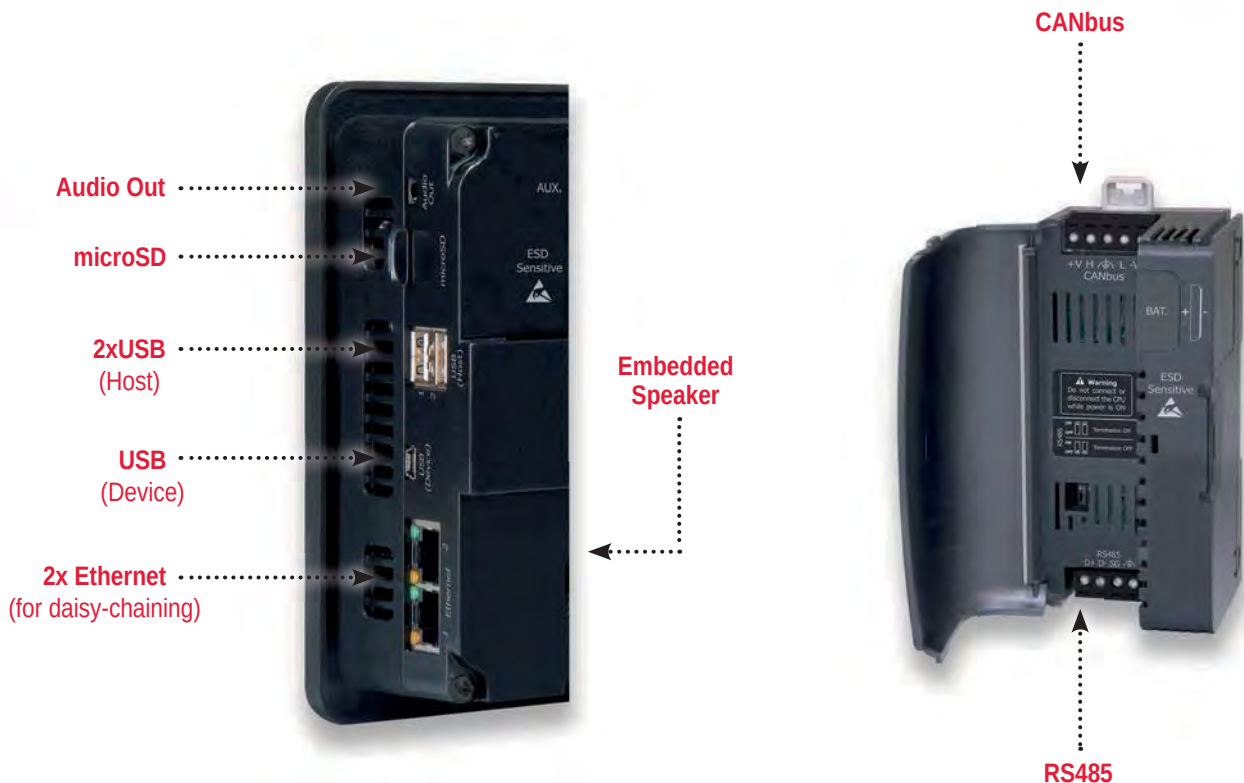
Completely modular in architecture, UniStream™ enables you to create a compact control device that matches your application requirements. Select any UniStream™ HMI panel, add a CPU, and add the right I/O and COM modules to fit your requirements. The result is an all-in-one controller that comprises the 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/m2), 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)

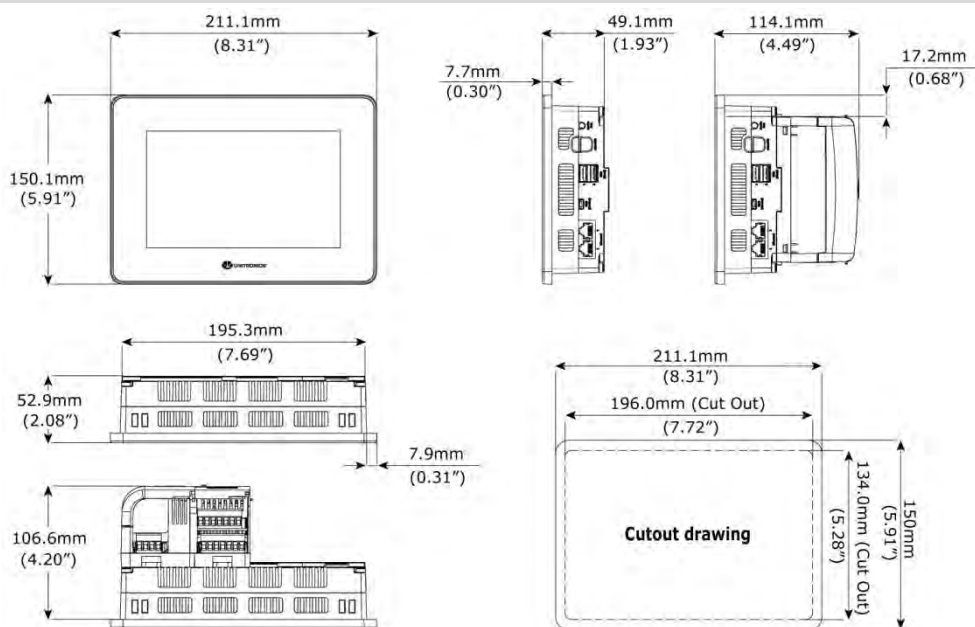
USB host	
Number of ports	2
Port type	Type A
Data rate	USB 2.0 (480Mbps)
Isolation	None
Cable	USB 2.0 compliant; < 3 m (9.84 ft)
Over current protection	Yes

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.		

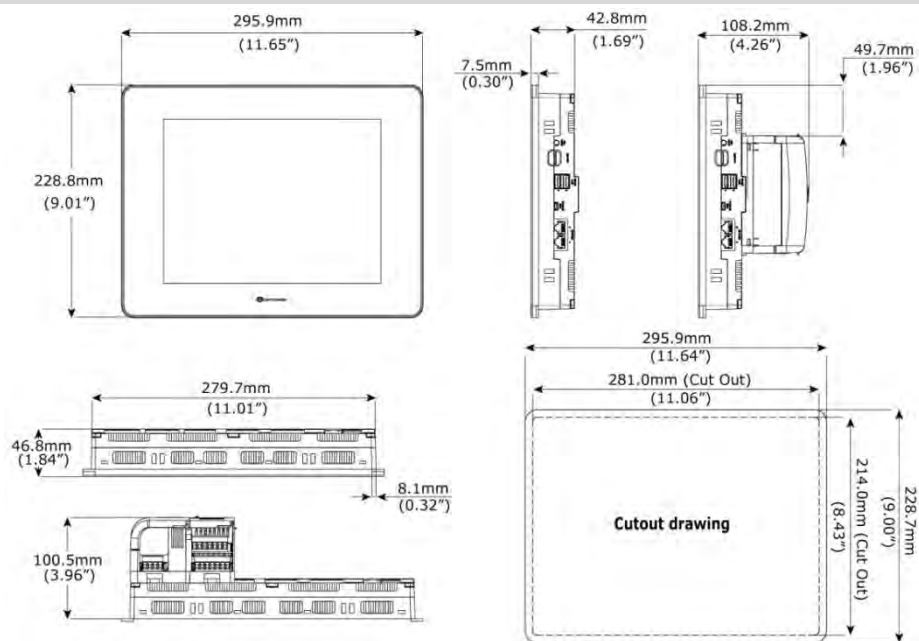
Environmental		
Protection	Front face ⁽²⁾ : IP65/66, NEMA 4X Rear side: IP20, NEMA1	
	USP-070-B08, USP-070-B10, USP-104-B10, USP-104-M10	USP-156-B10
Operating temperature	-20°C to 55°C (-4°F to 131°F)	0°C to 50°C (32°F to 122°F)
Storage temperature	-30°C to 70°C (-22°F to 158°F)	-20°C to 60°C (-4°F to 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				

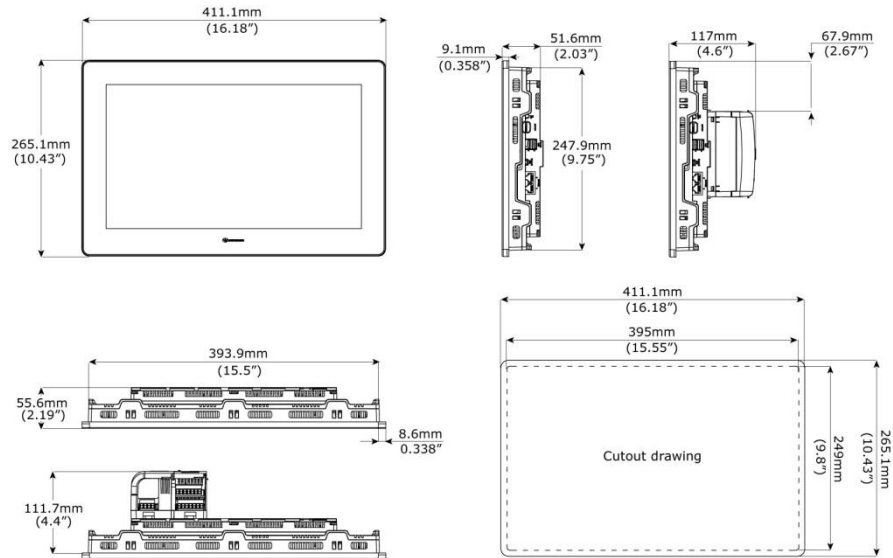
USP-070-B08 , USP-070-B10 7" Panel



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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