

# UniStream<sup>®</sup> HMI Panel

**Technical Specifications**  
**USP-070-B08 , USP-070-B10**  
**USP-104-B10 , USP-104-M10**  
**USP-156-B10**

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

Installation Guides are available in the Unitronics Technical Library at [www.unitronicsplc.com](http://www.unitronicsplc.com).

<b>Power Supply</b>	<b>USP-070-B08</b>	<b>USP-070-B10</b>	<b>USP-104-B10</b>	<b>USP-104-M10</b>	<b>USP-156-B10</b>
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

<b>Display</b>	<b>USP-070-B08</b>	<b>USP-070-B10</b>	<b>USP-104-B10</b>	<b>USP-104-M10</b>	<b>USP-156-B10</b>
LCD type	TFT				
Backlight type	White LED				
Luminous intensity (brightness)	Typically 400 nits (cd/m <sup>2</sup> ), at 25°C				
Backlight longevity <sup>(1)</sup>	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)				

<b>System</b>	
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

<b>Audio</b> <sup>(2)</sup>	
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

<b>Video</b>	
Support Formats	MPEG-4 Visual , AVC/H.264

<b>Communication</b>	
<b>Ethernet port</b>	
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)
<b>USB device</b> <sup>(3)</sup>	
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)

<b>USB host</b>	
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

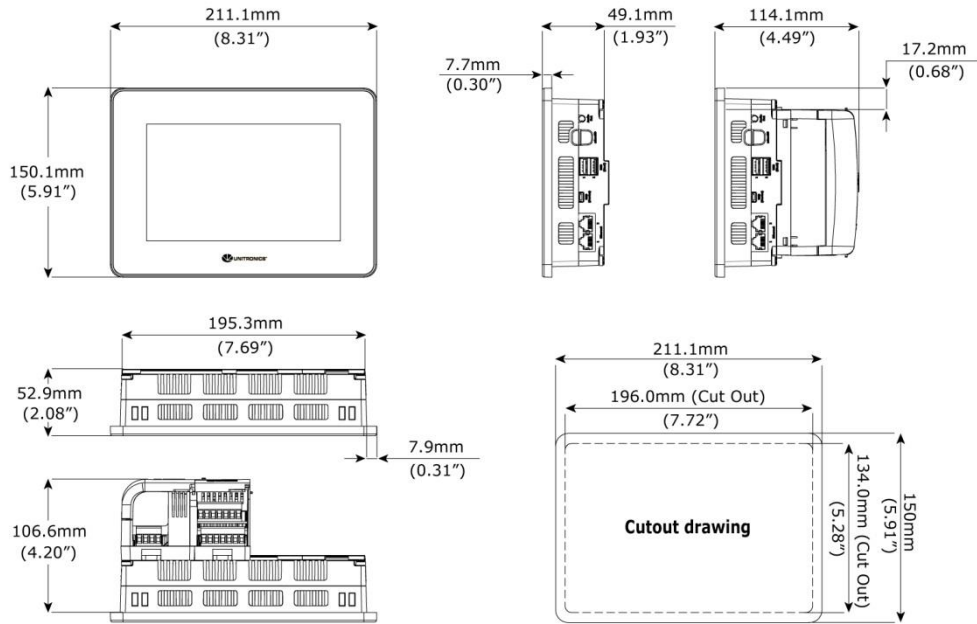
<b>On-board I/O or COM modules <sup>(4)</sup></b>	<b>USP-070-B08, USP-070-B10</b>	<b>USP-104-B10, USP-104-M10 USP-156-B10</b>
Number of modules	Up to 3	Up to 5 (up to 4 of them can be COM modules)

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.

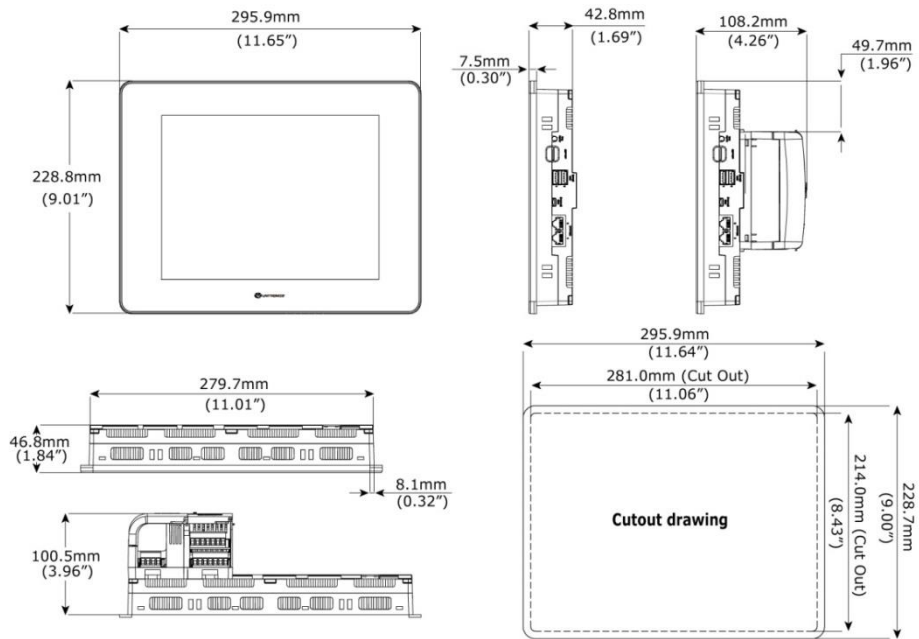
<b>Environmental</b>		
Protection	Front face <sup>(2)</sup> : IP65/66, NEMA 4X Rear side: IP20, NEMA1	
	<b>USP-070-B08, USP-070-B10, USP-104-B10, USP-104-M10</b>	<b>USP-156-B10</b>
Operating temperature	-20°C to 55°C (-4°F to 131°F)	0°C to 50°C (32°F to 122°F)
Storage temperature	-30°C to 70°C (-22°F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

<b>Dimensions</b>	<b>USP-070-B08</b>	<b>USP-070-B10</b>	<b>USP-104-B10</b>	<b>USP-104-M10</b>	<b>USP-156-B10</b>
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				

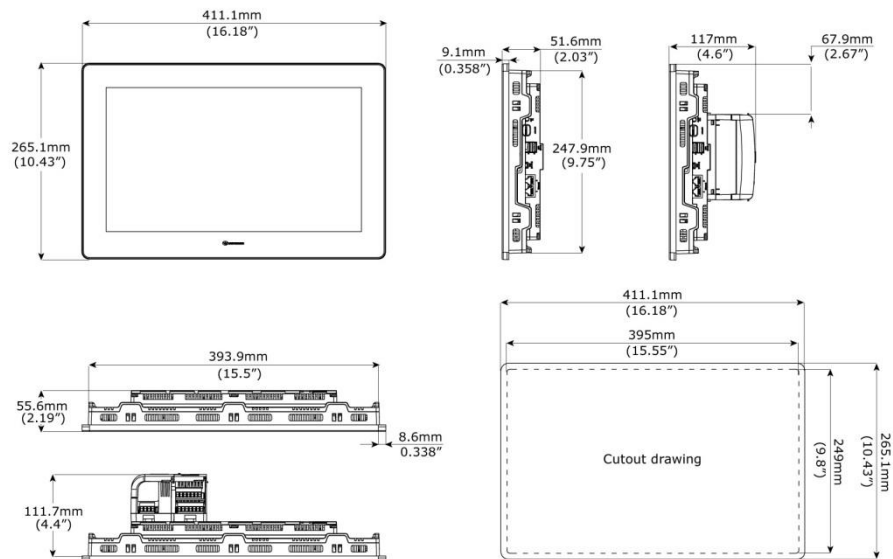
**USP-070-B08 , USP-070-B10 7" Panel**



**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<sup>®</sup> CPU-for-Panel, Uni-I/O<sup>™</sup> modules and Uni-Com<sup>™</sup> modules. Details are provided in the UniStream<sup>®</sup> HMI Panel installation guides.

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