WINSYSTEMS®

Product shown with heat sink and fan thermal option

Features

Industrial-rated Embedded Computer

- Compact form factor for space constrained applications
- 13th Generation Intel® Core™ Raptor Lake hybrid processors
- -40°C to + 85°C extended temperature range
- Extended product life cycle of 10+ years
- High MTBF
- Ruggedized locking pin header connectors
- Mini PCIe expansion

COM Express®

COM Top View

COM Bottom View

Carrier Top View
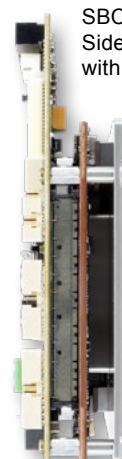

Carrier Bottom View

Product Description

WINSYSTEMS' SBC-477 PowerTier™ Series of rugged single board computers meet the needs of industrial applications where performance, power, reliability and space are critical. These embedded computers support a wide range of uses including industrial automation, energy management, transportation management and MIL/COTS.

The SBC-477 PowerTier Series delivers powerful computing in a compact footprint, powered by an 13th Gen Intel® Core™ Raptor Lake hybrid CPU – an i7, i5, i3, or Intel® Processor U300E, to achieve the balance of performance and power efficiency to fit your application's needs. They operate in an extended temperature range of -40° to +85°C with an appropriate thermal solution and support Windows 10/11, Linux Ubuntu, and other x86 real-time operating systems.
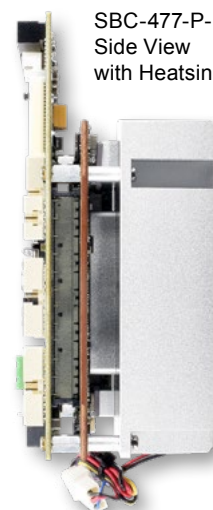
SBC-477 PowerTier™ Series

Technical Specifications

PART NUMBER	SBC-477 PowerTier Series			
PROCESSOR OPTIONS	13th Gen Intel® Core Raptor Lake Processors			
	Intel® Processor U300E Cores: 5 Speed: 1.1 (4.3) GHz Cache: 8 MB Base Power: 15W	Intel® Core™ i3-1315UE Cores: 6 Speed: 1.2 (4.5) GHz Cache: 10 MB Base Power: 15W	Intel® Core™ i5-1335UE Cores: 10 Speed: 1.3 (4.5) GHz Cache: 12 MB Base Power: 15W	Intel® Core™ i7-1365UE Cores: 10 Speed: 1.7 (4.9) GHz Cache: 12 MB Base Power: 15W
OPERATING SYSTEM	Windows 10/11 IoT, Linux Ubuntu, other x86 real-time OS			
SOFTWARE	• Custom configurable UEFI based AMI BIOS • System Management Libraries and Tools			
SECURITY	On-board discrete TPM 2.0 hardware security			
RAM	Up to 64 DDR5 5200 MT/s, in 2 sockets			
STORAGE	2x SATA ports with External Vertical Locking Connector			
DISPLAY	• Triple Display, UltraHD • 2x DisplayPort++, 1x VGA (Analog/CRT), LVDS interface (single ch 24-bit, dual ch 48-bit)			
AUDIO	HD Audio			
NETWORK	• 1x 1GB Ethernet • 1x 2.5Gb Ethernet			
EXPANSION	• Mini PCIe Expansion: 2x full length cards (Both sockets have PCIe and USB) • 1x SIM Card Expansion (One socket supports 4G/5G and SIM Card)			
I/O	• 8x GPIO (4 input/4 output) • 4x USB 2.0 (2 used for Mini PCIe) • 4x USB 3.0 • 2x mini PCIe • 2x RS-232 (w/ full modem signals) • 2x RS-422/485 • I2C			
POWER	• Input: Single +12V input +/- 5% (5mm pitch terminal connector) • Typical Power Use: 32W* *Average power use under a standard load.			
THERMAL SOLUTIONS	1 = Heat Spreader		3 = Heatsink & Fan	
MECHANICAL	• Dimensions: 125mm x 95mm x 35mm • Weight: 290 g / 10.23 oz		• Dimensions: 125mm x 95mm x 99mm • Weight: 490 g / 17.30 oz	
ENVIRONMENTAL	• Industrial Temperature: -40°C to +85°C (-40°F to +185°F) with appropriate thermal solution[1] • Humidity: 5% to 95% non-condensing • CE Compliant • RoHS Compliant [1] With model -3 or other adequate thermal solution			

SBC-477-P-R-**1**
Side View
with Heat Spreader

SBC-477-P-R-**3**
Side View
with Heatsink and Fan

Order Information

PART NUMBER	**SBC-477-P-R-T** P = Processor (U300, 1315UE, 1335UE, 1365UE) R = DDR5 SODIMM (16, 32, 64 GB) T = Thermal option (1 = heat spreader, 3 = heatsink + fan)
ACCESSORIES	CBL-SET-477-CNT-1 Set includes: 2x SATA HDD Signal and Power Cables 1x Dual USB 2.0 to 8-Pin Minitek Cables 2x DisplayPort to 20-pin Minitek Cable w/Latch 1x System-Misc Flying Leads to 20-Pin Minitek w/Latch 2x RJ-45 to 10-Pin Minitek Cable w/Latch 1x Dual Audio to 8-Pin Minitek Cable w/Latch 1x VGA to 10-Pin Minitek Cable w/Latch 3x Dual DB-9 to 20-Pin Minitek Cable 2x Dual USB 2.0 to 20-Pin Minitek Cable w/Latch 2x Dual USB 3.0 Panel Mount to 20-pin Locking Intl Style: Rt Angle Inner Exit 2x Dual USB 3.0 Panel Mount to 20-pin Locking Intl Style: Rt Angle Outer Exit 2x Dual USB 3.0 Panel Mount to 20-pin Locking Intl Style: Rt Angle Vertical Exit 1x LVDS 40-Pin Unterminated Ask us about storage and other options to complete your requirements.

Expansion and Configuration Options

WINSYSTEMS provides additional cables, expansion cards, power supplies, and solid state drives to complete your embedded computing solution including data acquisition, communications, location, and other features via Mini PCIe interfaces. Our engineers are available to guide you through product selection and configuration options.

OTHER PRODUCTS IN THIS FAMILY INCLUDE:
SBC-472-460 | SBC-472-TCA7 | SBC-472-TS570 | SBC-477-460 | SBC-477-TCA7 | SBC-477-TS570

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