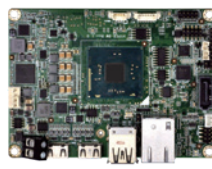


Pico-ITX Selection Guide

New


Model Name	HYPHER-RK39	HYPHER-BW	HYPHER-BT
CPU Socket	On board	On board	On board
CPU Type	Rockchip RK3399 (Dual-core Cortex-A72 up to 1.8GHz + Quad-core Cortex-A53 up to 1.5GHz)	Intel® Pentium®/Celeron® SoC	Intel® Atom™/Celeron® SoC
Chipset	SoC	Intel® Pentium®/Celeron® SoC	Intel® Atom™/Celeron® SoC
Memory	On board 2GB LPDDR3-1866	1 x 204-pin 1600/1333 MHz single-channel DDR3L SDRAM unbuffered SO-DIMM slot (system max. 8 GB)	1 x 204-pin 1600/1333 MHz single-channel DDR3L SDRAM unbuffered SO-DIMM slot (system max. 8 GB)
Display Interface	Dual independent display 1 x HDMI 1 x eDP	Dual independent display 2 x Mini HDMI	Dual independent display 1 x VGA 1 x iDP interface
Ethernet	LAN: Realtek RTL8211E	LAN: Realtek RTL8111GN controller	LAN: Intel® I211-AT PCIe GbE controller
iRIS Remote Management Module	N/A		
I/O Interface	1 x RS-232/422/485 1 x USB 3.1 Gen 1 (5Gb/s) Type A 1 x USB 3.1 Gen 1 (5Gb/s) Type C 1 x USB 2.0 Type A 1 x I ² C 1 x MIPI CSI interfaces for Camera 8 bit (4 in / 4 out)	1 x RS-232 1 x USB 3.1 Gen 1 3 x USB 2.0	1 x RS-232 1 x USB 3.1 Gen 1 3 x USB 2.0
Storage Interface	1 x Micro SD slot	1 x SATA 6Gb/s with 5V SATA power connector (no RAID)	1 x SATA 3Gb/s with 5V SATA power connector (no RAID)
Audio	1 x 2 pin for speaker (1.5W 8Ω) 1 x 10 pin (Line in / Line out)	10 pin header on board support 7.1 channel HD Audio by AC-KIT-892HD-R10	Realtek ALC662 HD Audio codec
Power Consumption	12V@1.2A	12V@1.52A (Intel® Pentium® processor N3710 with 8 GB 1600 MHz DDR3L memory)	12V@1.35A (Intel® Celeron® processor J1900 with one 8 GB 1333 MHz DDR3L memory)
Watchdog Timer	Yes	Software programmable and supports 1~255 sec. system reset	
Operating Environment	Temperature Range: -10°C ~ 50°C Relative Humidity: 10% ~ 90%, non-condensing	Temperature Range: -20°C ~ 60°C (-4°F ~ 140°F) Relative Humidity: 5% ~ 95%, non-condensing	
Expansion Slot	1 x Full-size PCIe Mini (reserved for WWAN)	1 x M.2 (B key)	N/A
CPU Cooler	Heatsink	Heatsink	Heat Spreader