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# Datasheet

## ADVANTECH

### MIO-5373

**3,5" Single-Board Computer with Intel® Whiskey Lake 8<sup>th</sup> Gen. Core i / Celeron® Processor**



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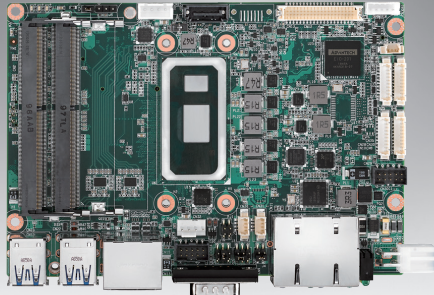
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# MIO-5373

## 8th Gen. Intel® Core™ i7/i5/i3/Celeron\* U-Series 3.5" SBC w/ MIOe

**NEW**



### Features

- 8th Gen. Intel® Core™ Processor with Quad/Dual Cores, TDP 15W
- Dual Channel DDR4-2400 up to 32GB, onboard eMMC up to 64GB
- Triple simultaneous displays by 48-bit LVDS/eDP+HDMI+DP
- 2 GbE, 4 USB3.1, CAN Bus, M.2 B-Key 2280 supports NVMe, DC-in 12-24V
- iManager & SW APIs, WISE-PaaS/DeviceOn

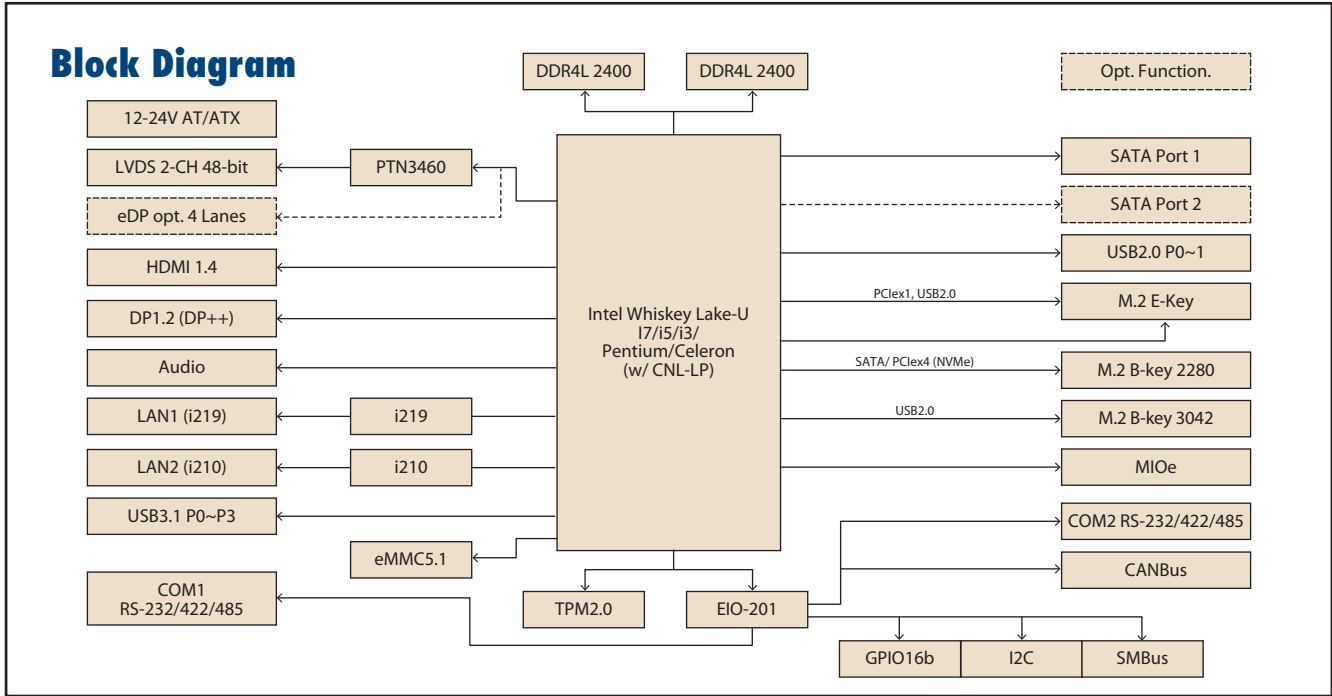


Windows 10 WISE-PaaS/DeviceOn iManager

### Specifications

	Processor	i7-8665UE	i5-8365UE	i3-8145UE	Celeron® 4305UE (by request)
Platform	Max. Frequency	4.40 GHz	4.10 GHz	3.90 GHz	-
	Base Frequency	1.70 GHz	1.60 GHz	2.20 GHz	2.00 GHz
	Core/Tread	4/8	4/8	2/4	2/2
	LLC	8MB	6MB	2MB	2MB
	CPU TDP	15W	15W	15W	15W
	Chipset	Intel® 300 Series Chipset (SoC Integrated)			
	BIOS	AMI EFI 256Mbit			
Memory	Technology	DDR4-2400	DDR4-2400	DDR4-2400	DDR4-2133
	Max. Capacity	32GB			
	Channel/Socket	Dual Channel/Dual Socket DDR4			
	ECC Support	N/A			
Graphics	Controller	Intel UHD GfX 620	Intel UHD GfX 620	Intel UHD GfX 620	Intel UHD GfX 610
	Max. Frequency	1.15 GHz	1.05 GHz	1.00GHz	1.00 GHz
	Base Frequency	300 MHz	300 MHz	300 MHz	300 MHz
	Graphics Memory	300 MHz			
Display I/F	3D/HW Acceleration	3D Acceleration: Direct3D 2015, OpenGL4.5, OpenCL2.1 HW Decode: HEVC/H.265 (8/10-bit), AVC/H.264, VP9, VP8, WMV9, MPEG2 HW Encode: HEVC/H.264, AVC/H.264, VP9, VP8, MPEG2			
	LCD	LVDS Dual Channel 48-bit up to 1920 x 1200 Option eDP1.4 up to 4096x2304@60Hz			
	HDMI/DP	1 Port HDMI 1.4 up to 4096x2160@30/24Hz 1 Port DP1.2 up to 4096x2306@60Hz			
Ethernet	Multiple Display	Triple simultaneous displays by LVDS/eDP+HDMI+DP			
	Controller	LAN1: Intel i219, LAN2: Intel i210-T			
External I/O	Speed	10/100/1000 Mbps			
	Ethernet	2 x RJ-45			
	VGA/HDMI/DP	0/1/1			
	USB3.1	4			
	COM Port	1 x RS-232/422/485			
	LED	Power status, HDD R/W			
	Power DC-Jack	1*(Optional)			
Internal I/O	SATA	1, up to 6Gb/s (600MB/s)			
	USB2.0	2			
	Serial Bus	SMBus, I <sup>2</sup> C (100K/400K)			
	COM Port	1 x RS-232/422/485 2 x GPIO 8b (default) or 2 x RS-232 (*by request)			
	GPIO	16-bit general purpose input output I/O			
	Audio	Realtek ALC-888S, Line-in/Line-out/MIC			
	Inverter	12V/5V/3.3V selectable			
	LPC/SPI Bus	LPC			
	CAN Bus	1 x CAN Bus 2.0			
	Fan	4-wire smart fan			
	Front Panel Control	Power-on			
Board Feature	Watchdog Timer	65536 level, 0-65535 sec			
	TPM	TPM2.0 (SLB9670XQ2.0)			
	iManager 3.0	Yes			
Storage	eMMC	eMMC5.1 default 32GB, up to 64GB			
Expansion	M.2	1 x M.2 E-key 2230 1 x M.2 B-key 2280 (SATA or NVMe PCIe2), 3042 LTE module (support USB2.0 only), optional M-key 2280 NVMe PCIe4.			
	MIO Extension	4 PCIe1 (x1/x2/x4), USB2.0, LPC, SMBus, Line-out, 12V/5V Power supply			
Power	Supply Voltage	Vin: 12V-24V +/- 10%; RTC Battery: Lithium 3V/ 210mAH			
	Connector	ATX 2x2-pin, optional: DC-Jack*			
	Power Management	AT, ATX			

\*Note: Support by request



## Specifications (Cont.)

Power	Max. Consumption	i7-8665UE: 30.10W (12V) i7-8665UE: 33.33W (24V)	i5-8365UE: TBD	i3-8145UE: TBD	4305U: TBD
	Idle Consumption	i7-8665UE: 6.61W (12V) i7-8665UE: 7.42W (24V)	i5-8365UE: TBD	i3-8145UE: TBD	4305U: TBD
Environment	Temperature	Operating: Standard: 0 ~ 60 °C (32 ~ 140 °F), Extend: -40 ~ 85 °C (-40 ~ 185 °F) Storage: -40 ~ 85 °C (-40 ~ 185 °F)			
	Humidity	Operating: 40 °C @ 95% relative humidity, non-condensing Storage: 60 °C @ 95% relative humidity, non-condensing			
	Vibration Resistance	3.5Grms			
Certification	EMC	CE, FCC Class B			
Mechanical	Dimensions	146 x 102 mm (5.7" x 4")			

## Ordering Information

Part Number	CPU	Max. Frequency	Core	eMMC	TPM2.0	Thermal solution	Operating Temp
MIO-5373U-U7A1	i7-8665UE	4.40 GHz	4	32G	Y	Passive	0 ~ 60 °C
MIO-5373U-U6A1	i5-8365UE	4.10 GHz	4	32G	Y	Passive	0 ~ 60 °C
MIO-5373U-U3A1	i3-8145UE	3.90 GHz	2	32G	Y	Passive	0 ~ 60 °C
MIO-5373UX-U7A1	i7-8665UE	4.40 GHz	4	32G	Y	Passive	-40 ~ 85 °C
MIO-5373UX-U6A1	i5-8365UE	4.10 GHz	4	32G	Y	Passive	-40 ~ 85 °C

\*Default BIOS supports 64 bits OS installation, BIOS for 32 bits OS installation is supported by project.

## Packing List

Part No.	Description	Quantity
	MIO-5373 SBC	1
	Startup Manual	1
1700006291	SATA cable 30cm	1
1700018785	A CABLE SATA 15P/1*4P-2.5 35cm	1
1700019584	A Cable 2*5P-2.0/Audio JACK*3 20cm	1
1700030404-01	RS-232 9P(M)/1*10P-1.25 20cm MIO-5373	1
1960091427N001	MIO-5373 heatsink for 0 ~ 60 °C	1
9689000002	mini Jumper pack	1
1960091427N011	MIO-5373 heatsink for -40 ~ 85 °C	1

## Optional Accessories

Part No.	Description
1970004423N000	Heat spreader

## Embedded OS/API

Embedded OS/API	Part No.	Description
WIN10	20706WX9HS0030	64-bit (UEFI mode only)
Software API	Download by website	SUSI V4.0

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