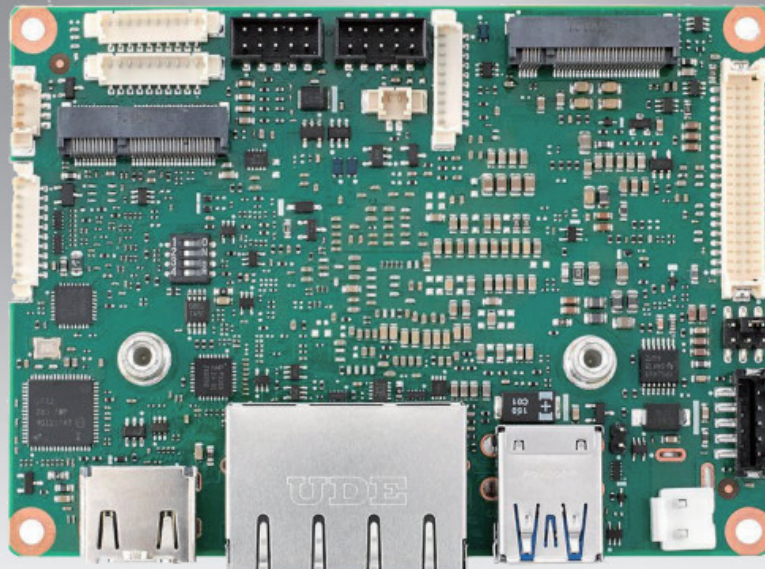


MIO-2363 Intel Atom x6000E Series Pico-ITX SBC User Guide

[Home](#) » [Intel](#) » MIO-2363 Intel Atom x6000E Series Pico-ITX SBC User Guide 

MIO-2363
Intel® Atom x6000E Series
Pico-ITX SBC

Preliminary



yocto
PROJECT



iManager WISE-DeviceOn



Contents

- [1 Features](#)
- [2 Specifications](#)
- [3 Block Diagram](#)
- [4 Ordering Information](#)
- [5 Packing List](#)
- [6 Optional Accessories](#)
- [7 Embedded OS/API](#)
- [8 Rear I/O View](#)
- [9 Documents / Resources](#)
 - [9.1 References](#)
- [10 Related Posts](#)

Features

- Intel Atom x6000E Series
- Onboard LPDDR4x-3733 up to 8GB and EMMC up to 128GB
- Support 12~24V wide voltage range and -40~85°C operating temperature
- Dual LAN, 2x USB3.2, 2x Full COM, I2C
- M.2 E-Key and B-Key for SATA storage, option to PCIe1 for RS-232 module
- Support iManager & Software APIs, WISE-DeviceOn, and EdgeAI Suite

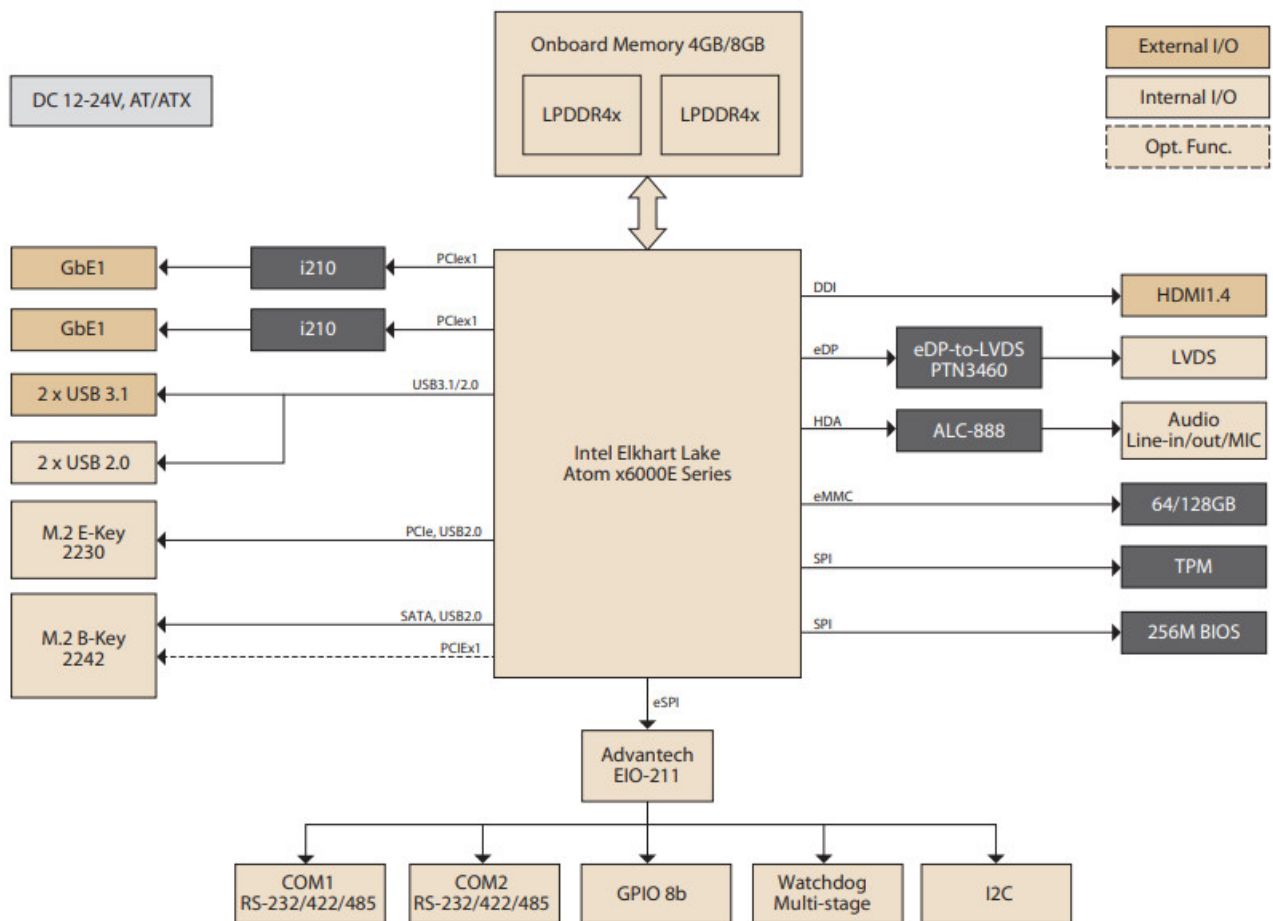
Software APIs:



Specifications

Platform	Processor	X6211E	X6213E	x6425E
	Max. Frequency	3.0GHz	3.0GHz	3.0GHz
	Base Frequency	1.3GHz	1.5GHz	2.0GHz
	Core/Tread	2	4	4
	LLC	L2	L2	L2
	CPU TDP	6W	9W	12W
	Chipset	Intel® Chipset (SoC integrated)		
	BIOS	AMI EFI 256Mbit		
Memory	Technology	LPDDR4x-3733		
	Max. Capacity	4GB	4GB	8GB
	Channel/Socket	Dual Channels / Onboard		
	ECC Support	IBECC	IBECC	IBECC
Graphics	Controller	Intel Gen11 Graphics Engines (SoC integrated)		
	Max. Frequency	750MHz	750MHz	750MHz
	Base Frequency	350MHz	500MHz	500MHz
	3D/HW Acceleration	DX12, OGL4.5, OCL1.2, Vulkan 1.1; HW encode HEVC/H.265, MPEG2, JPEG/MJPEG		
Display I/F	LCD	LVDS Dual Channel 18/24-bit LVDS		
	HDMI	Up to 2160 x 3840 @ 30Hz		
	Multiple Display	LVDS+HDMI		
Ethernet	Controller	2 x RJ-45, LAN1: Intel i210, LAN2: Intel i210		
	Speed	10/100/1000 Mbps		
External I/O	Ethernet	2 x RJ-45		
	VGA/HDMI/DP	-/1/-		
	USB3.2/USB2.0	2/-		
	Power DC-Jack	Optional		
Internal I/O	SATA	1 x SATA GenIII 6.0Gbps		
	USB2.0	2		
	Serial Bus	I2C		
	COM Port	2 x RS-232/422/485		
	GPIO	8-bit general purpose input output I/O		
	Audio	Realtek ALC888, Line-in/Line-out/MIC		
	Inverter	12V/5V		
	LPC/SPI Bus	eSPI		
	Front Panel Control	Power-on, Reset, Buzzer, SATA LED, CaseOpen		
Board Feature	Watchdog Timer	Programmable 1 ~ 255 sec/min		
	TPM	TPM2.0 (Infineon SLB 9670)		
	iManager 3.0	SW API for Hardware Monitor, Smart Fan Control, Brightness Control, I2C, GPIO, WDT		
Storage	eMMC	64GB	64GB	128GB
Expansion	M.2	E-Key 2230 (PCIe x1, USB2.0)		
		B-Key 2242 SATA module (SATA, USB2.0), option to 2242 RS-232 module (PCIe x1)		
Power	Supply Voltage	V _{in} : DC 12-24V +/- 10%; RTC Battery: Lithium 3V/210mAh		
	Connector	ATX 2pin 180D, optional DC-Jack		
	Power Management	AT, ATX		
	Max. Consumption	TBU		
Environment	Idle Consumption	TBU		
	Temperature	Operating: Standard: 0 ~ 60 °C (32 ~ 140 °F), Operating 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	3.5 Grms		
Certification	EMC	CE, FCC Class B		
Mechanical	Dimensions	100 x 72 mm (3.9" x 2.8")		
	Net Weight			

Block Diagram



Ordering Information

PN	CPU	Max F reque ncy	Core	Memo ry	eMMC	USB3. 2	GbE	RS232 /422/4 85	TPM2. 0	Therm al Soluti on	Operat ing Tempe rature
MIO-23 63AX-P 1A1	X6211 E	3.0GH z	2	4GB	64GB	2	2	2	Y	Passiv e	-40 ~ 8 5 °C
MIO-23 63AX-P 2A1	X6213 E	3.0GH z	4	4GB	64GB	2	2	2	Y	Passiv e	-40 ~ 8 5 °C
MIO-23 63AX-P 3A1	X6425 E	3.0GH z	4	8GB	128GB	2	2	2	Y	Passiv e	-40 ~ 8 5 °C

Packing List

Part No.	Description	Quantity
	MIO-2363 SBC	
	Startup Manual	
	MIO-2363 Passive H/S	
1700030406-01	M Cable 2*5P-2.0/USB-A 4P(F)*2 20cm	1
1700030404-01	COM port cable	2
1700019584-01	Audio cable	1
1700019705-01	Internal pwr cable	1

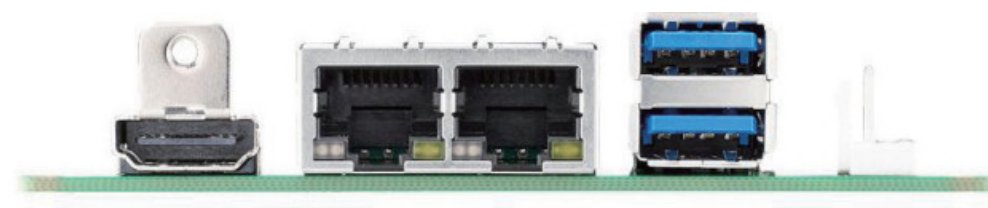
Optional Accessories

Part No.	Description
	MIO-2363 heatspreader

Embedded OS/API

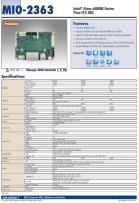
OS	Part No.	Description
Win10	TBD	64-bit (UEFI mode only)
Yocto BSP		
Software API	Download by website	

Rear I/O View



Online Download
www.advantech.com/products

Documents / Resources

	Intel MIO-2363 Intel Atom x6000E Series Pico-ITX SBC [pdf] User Guide MIO-2363 Intel Atom x6000E Series Pico-ITX SBC, MIO-2363, Intel Atom x6000E Series Pico-ITX SBC
---	---

References

- [A Advantech Co-Creating the Future of the IoT World](#)

Manuals+.