

# MIO-2361

## Intel® Atom™ E3900 series/ Pentium N4200/Celeron N3350 Pico-ITX SBC

**NEW**



Windows 10 iManager WISE-PaaS/DeviceOn

### Features

- Intel® Atom™ E3900 series/ Pentium N4200/Celeron N3350
- Onboard LPDDR4-2400 up to 8GB, eMMC up to 32GB
- LVDS 48-bit, HDMI up to 4K, Dual Displays
- M.2 E-key 2230, F/S mSATA, opt. mPCIe
- Dual GbE, USB3.0, 2 x RS-232/422/485, 12/24V input
- iManager3.0 & Software APIs, WISE-PaaS/DeviceOn

**Software APIs:**

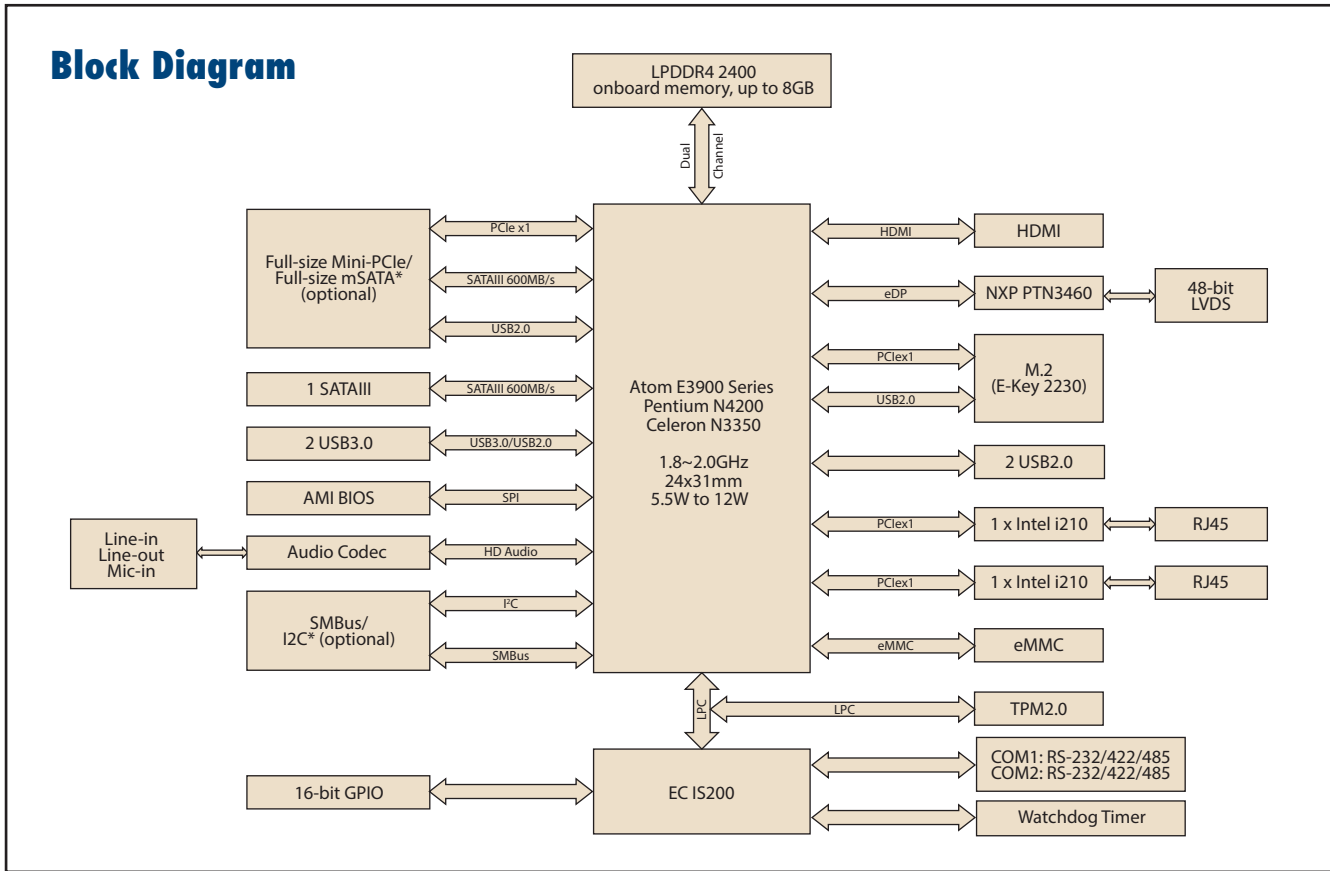
- GPIO
- SMBus/iC
- Watch Dog Timer
- Backlight On/Off
- Brightness
- Hardware Monitor
- System Info
- Thermal Protection
- Data Security

### Specifications

	Processor	Atom E3950	Atom E3940	Atom E3930	Pentium N4200	Celeron N3350
Platform	Max. Frequency	2.0 GHz	1.80 GHz	1.80 GHz	2.50 GHz	2.40 GHz
	Base Frequency	1.60 GHz	1.60 GHz	1.30 GHz	1.10 GHz	1.10 GHz
	Core/Tread	4/4	4/4	2/2	4/4	2/2
	LLC	2 MB	2 MB	2 MB	2 MB	2 MB
	CPU TDP	12W	9W	6W	6W	6W
	Chipset	Intel Atom SoC processor integrated				
	BIOS	AMI EFI 64 Mbit				
Memory	Technology	LPDDR4-2400MT/s				
	Max. Capacity	4GB	4GB	4GB	4GB	4GB
	Channel/Socket	Dual Channel/ Onboard LPDDR4				
Graphics	Controller	Intel® Atom SoC integrated				
	Burst Frequency	650 MHz	600 MHz	550 MHz	750 MHz	650 MHz
	Graphics Memory	2 GB	2 GB	2 GB	2 GB	2 GB
	3D/HW Acceleration	3D: DX12, OGL4.3, OGL ES3.0, OCL 1.2 HW Decode: HEVC/H.265, H.264, MVC, VP8, VP9, MPEG2, VC-1, WMV9 HW Encode: HEVC/H.265, H.264, MVC, VP8				
Display I/F	LCD	LVDS: Dual-Channel 48-bit, up to 1920 x 1200				
	HDMI/DP	HDMI 1.4b: up to 3840 x 2160 at 30Hz				
	Multiple Display	Dual display, HDMI+48-bit LVDS				
Ethernet	Controller	LAN1: Intel I210AT/IT LAN2: Intel I210AT/IT (*I210IT is for EW-series)				
	Speed	*Support PXE boot under UEFI 10/100/1000 Mbps				
External I/O	Ethernet	2 x RJ-45				
	VGA/HDMI/DP	0/1/0				
	USB3.0/USB2.0	2/0				
	COM Port	N/A				
	LED	N/A				
	Power DC-Jack	1*(Optional)				
	SATA	1, up to 6Gb/s (600MB/s)				
Internal I/O	USB2.0	2				
	Serial Bus	SMBus (default), I2C* (optional)				
	COM Port	2 x RS-232/422/485				
	GPIO	16-bit general purpose input output I/O				
	Audio	Realtek ALC-888S, Line-in/Line-out/MIC				
	Inverter	Y				
	SATA Power	Co-Function with Inverter				
	LPIC/SPI Bus	N				
	Fan	12V, 1A (2-wire)				
	Front Panel Control	Y				
Board Feature	Watchdog Timer	65536 level, 0-65535 sec				
	TPM	2.0				
	iManager 3.0	Y (Software APIs for Power Monitor, CPU Temp., Smart Fan, GPIO, WDT, SMBus, I2C, Backlight & Brightness Control)				
Storage	eMMC	32GB (default), 64GB* (optional, TBC)				
	M.2	E-Key 2230 (PCIe x1, USB2.0)				
Expansion	mPCIe/mSATA	1/1*(optional)				
	Supply Voltage	Vin: 12V or 24V +/- 10%; RTC Battery: Lithium 3V/ 210mAh				
	Connector	ATX 2-pin(180D), optional: DC-Jack (180D)				
Power	Power Management	AT, ATX				
	Max. Consumption	E3950: 26.27 W (12V) E3950: 26.51 W (24V)	E3940: TBD	E3930: TBD	N4200: TBD	
	Idle Consumption	E3950: 8.59 W (12V) E3950: 8.81 W (24V)	E3940: TBD	E3930: TBD	N4200: TBD	
	Temperature	Operating: Standard: 0 - 60 °C (32 - 140 °F), Extend: -40 - 85 °C (-40 - 185 °F) Storage: -40 - 85 °C (-40 - 185 °F)				
Environment	Humidity	Storage: 60 °C @ 95%relative humidity, non-condensing				
	Vibration Resistance	3.5Grms				
	Certification	EMC: FCC Class B				
Mechanical	Dimensions	100 x 72 mm (3.9" x 2.8")				

\*Note: Support by request

## Block Diagram



## Ordering Information

Part Number	CPU	Max. frequency	Core	Memory	eMMC	TPM2.0	Thermal solution	Operating Temp
MIO-2361EW-S1A1	Atom E3930	1.80 GHz	2	4G	32G	Y	Passive	-40 ~ 85° C
MIO-2361EW-S6A1	Atom E3940	1.80 GHz	4	4G	32G	Y	Passive	-40 ~ 85° C
MIO-2361EW-S7A1	Atom E3950	2.0 GHz	4	4G	32G	Y	Passive	-40 ~ 85° C
MIO-2361N-S1A1	Pentium N4200	2.50 GHz	4	4G	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-2361 SBC	1
	Startup Manual	1
1700006291	SATA cable 30cm	1
1700027546-01	A cable 1*5P-2.0/1*5P-2.0+SATA 15P 15cm MIO-2361	1
1701200220	RS-232 x 2 ports 2.0mm pitch 22cm	1
1700002172	USB cable 2.0 mm pitch USB-A(F) 17 cm	1
1700019705	AT power cable 12 cm	1
1960087918T001	29mm heatsink for E3900 series	1
	24mm heatsink for N4200/N3350 series	1

## Optional Accessories

Part No.	Description
1960089107N001	MIO-2361 Heat spreader
IDK-1110WP-50XGA1E	10.1" LED PANEL 500N
IDK-1115P-50XGA1E	15" LED PANEL 500N

## Embedded OS/API

Embedded OS/API	Part No.	Description
WIN10	20706WX9ES0026	64-bit (UEFI mode only)
Yocto	Support by request	Yocto BSP
Software API	Download by website	SUSI V4.0

## Rear I/O View

