

# MIO-2361

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

Preliminary



### Features

- Intel® Atom™ E3900 series/ Pentium N4200/Celeron N3350
- Onboard LPDDR4-2400 up to 4GB, eMMC up to 64GB (TBC)
- Dual independent display by 48-bit LVDS+HDMI
- M.2 E-key, mSATA/mPCIe for expansion
- Dual GbE, USB3.0, 2 x RS-232/422/485, 12/24V input
- iManager3.0 and Embedded Software APIs

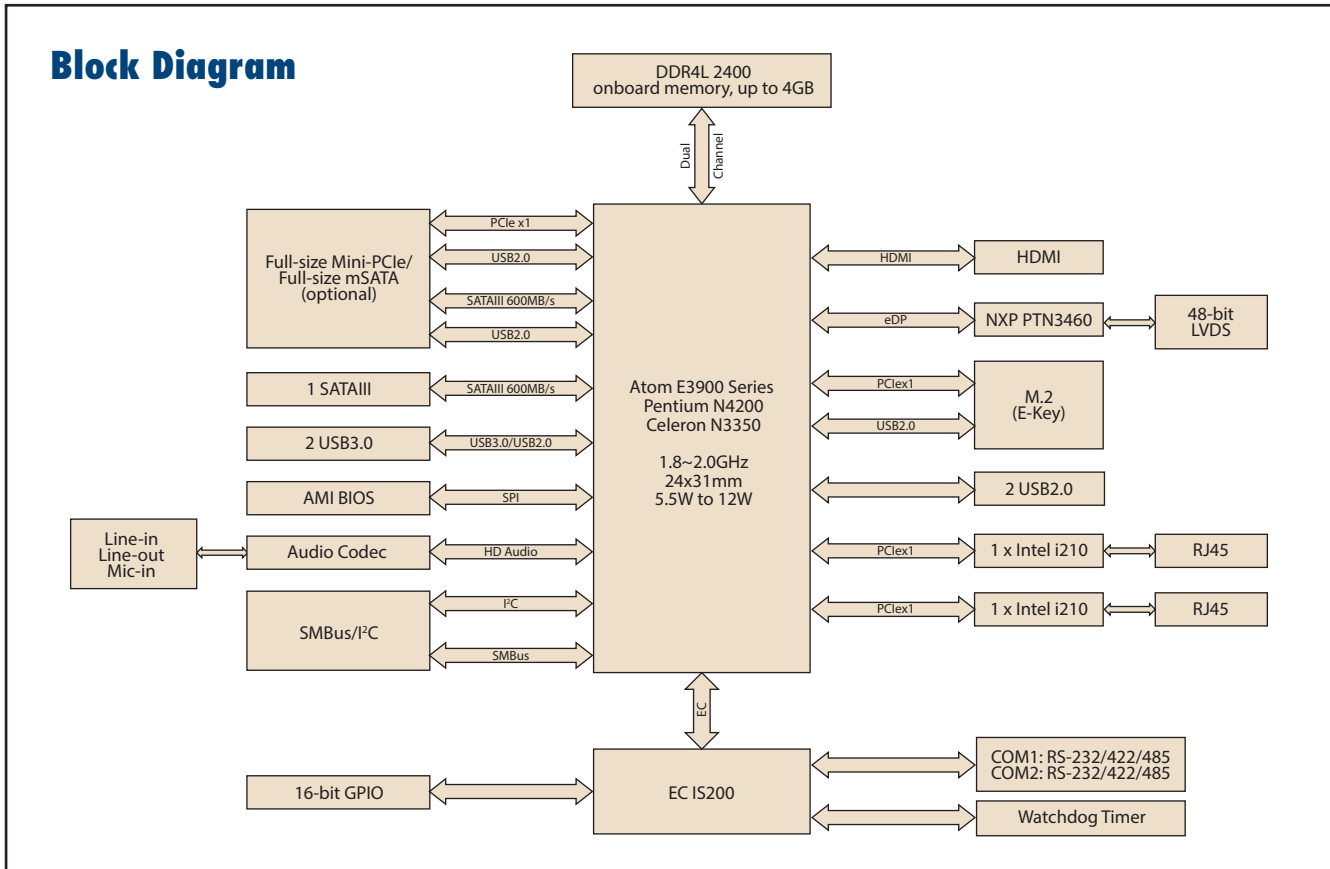


### Specifications

	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	Quad-Core	Quad-Core	Dual-Core	Quad-Core	Dual-Core	
	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	DX12, OGL4.4, OCL2.0 HW Encode: H.265/HEVC, H.264, MPEG2 HW Decode: H.264					
	Display I/F	VGA	N/A				
Ethernet	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					
External I/O	Controller	Intel® i210IT/i210AT					
	Speed	10/100/1000 Mbps					
Internal 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)					
Board Feature	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					
	LPIC/SPI Bus	N					
	CAN Bus	N/A					
	Fan	Y					
	Front Panel Control	Y					
Storage	Watchdog Timer	65536 level, 0-65535 sec					
	TPM	2.0					
Expansion	iManager 3.0	Y					
	eMMC	32GB* (optional)					
	M.2	E-Key (PCIe x1, USB2.0)					
Power	mPCIe/mSATA	1/1*(optional)					
	MI/O Extension	N/A					
Environment	Supply Voltage	Vin: 12V or 24V +/- 10%, RTC Battery: Lithium 3V/ 210mAH					
	Connector	ATX 2-pin(180D), optional: DC-Jack (180D)					
	Power Management	AT, ATX					
	Max. Consumption	E3950: 26.27 W (12V) E3950: 26.51 W (24V)	E3940: TBD	E3930: TBD	N4200: TBD	N3350: TBD	
	Idle Consumption	E3950: 8.59 W (12V) E3950: 8.81 W (24V)	E3940: TBD	E3930: TBD	N4200: TBD	N3350: TBD	
Mechanical	Temperature	Operating: Standard: 0 - 60 °C (32 - 140 °F), Extend: -40 - 85 °C (-40 - 185 °F) Storage: -40 - 85 °C (-40 - 185 °F)					
	Humidity	Storage: -40 - 85 °C (-40 - 185 °F) Storage: 60 °C @ 95%relative humidity, non-condensing					
	Vibration Resistance	3.5Grms					
Certification	EMC	CE, FCC Class B					
Dimensions		100 x 72 mm (3.9" x 2.8")					

\*Note: Support by request

## Block Diagram



## Ordering Information

Part Number	CPU	Core	Memory	eMMC	Thermal solution	Operating Temp
MIO-2361EW-S1A1	Atom E3930 1.80 GHz	2	4G	32G	Passive/Cooler	-40 ~ 85 °C
MIO-2361EW-S6A1	Atom E3940 1.80 GHz	4	4G	32G	Passive/Cooler	-40 ~ 85 °C
MIO-2361EW-S7A1	Atom E3950 2.00 GHz	4	4G	32G	Passive/Cooler	-40 ~ 85 °C
TBD	Atom E3950 2.00 GHz	4	4G	N/A	Passive/Cooler	-40 ~ 85 °C
MIO-2361N-S1A1	Pentium N4200 2.50 GHz	4	4G	N/A	Passive	0 ~ 60 °C
TBD	Celeron N3350 2.40 GHz	2	4G	N/A	Passive	0 ~ 60 °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	CPU heatsink for MIO-2361	1

## Optional Accessories

Part No.	Description
TBD	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	TBD	64-bit (UEFI mode only)
VxWorks	TBD	
Linux	TBD	Yocto BSP
Software API	TBD	SUSI V4.0

## Rear I/O View

