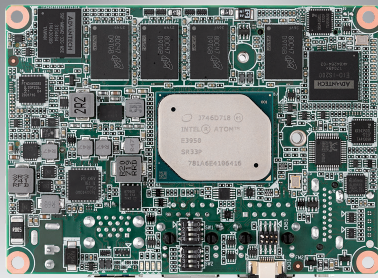


# MIO-2361

## 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

Software APIs:

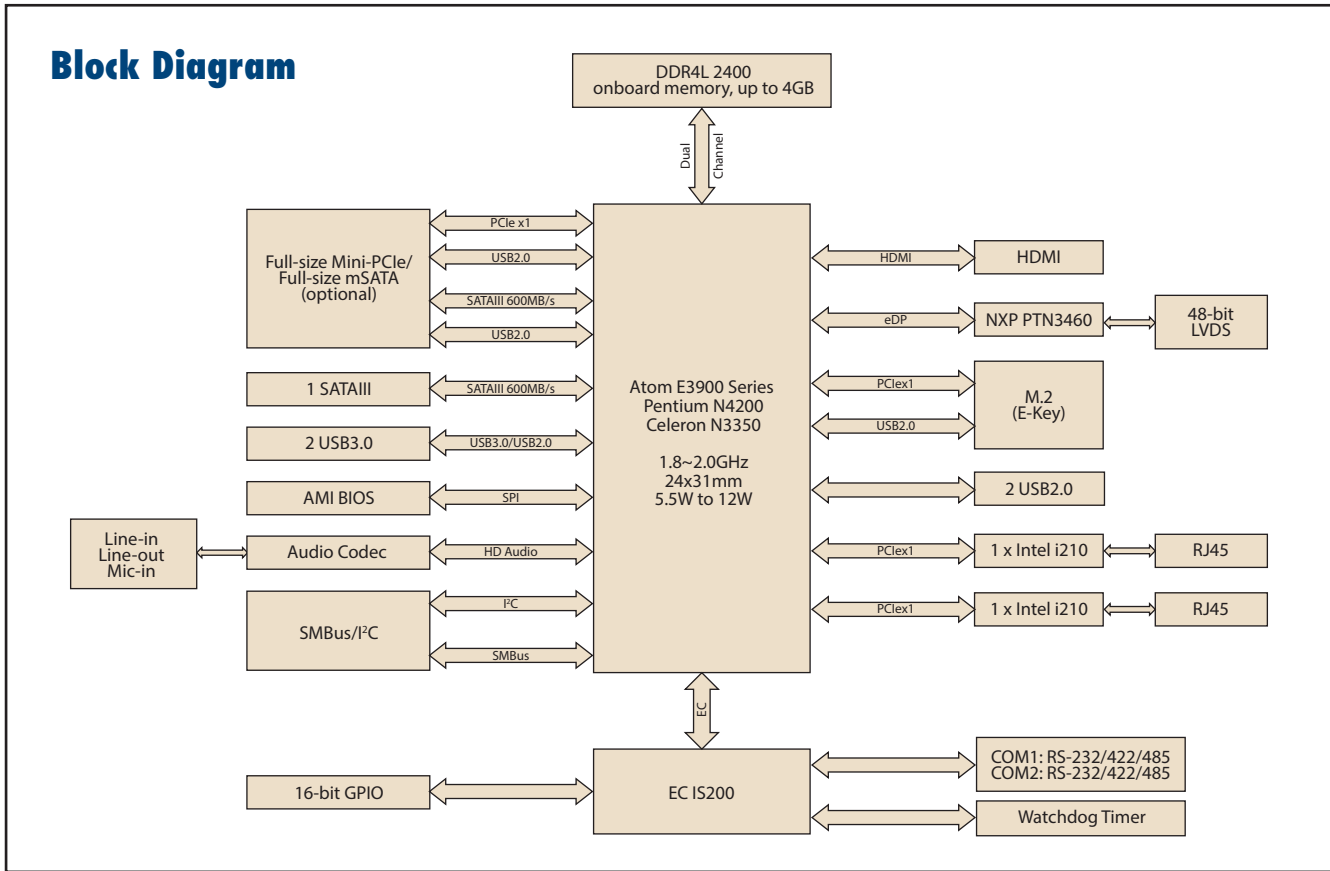


### Specifications

	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				
	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	Intel® i210IT/i210AT				
	Speed	10/100/1000 Mbps				
	Ethernet	2 x RJ-45				
External I/O	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)				
	USB2.0	2				
Internal I/O	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				
	Board Feature	Watchdog Timer	65536 level, 0-65535 sec			
TPM		2.0				
iManager 3.0		Y				
Storage	eMMC	32GB* (optional)				
	M.2	E-Key (PCIe x1, USB2.0)				
Expansion	mPCIe/mSATA	1/1*(optional)				
	MI/O Extension	N/A				
	Supply Voltage	Vin: 12V or 24V +/- 10%, RTC Battery: Lithium 3V/ 210mAh				
Power	Connector	ATX 2-pin(180D), optional: DC-Jack (180D)				
	Power Management	AT, ATX				
	Max. Consumption	E3950: 26.27 W (12V)	E3940: TBD	E3930: TBD	N4200: TBD	N3350: TBD
		E3950: 26.51 W (24V)				
	Idle Consumption	E3950: 8.59 W (12V)	E3940: TBD	E3930: TBD	N4200: TBD	N3350: TBD
E3950: 8.81 W (24V)						
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	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				
Mechanical	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

