

# MIO-5350

**Intel® Pentium N4200 Celeron N3350 & Atom™ E3950, E3940, E3930, DDR3L, VGA, HDMI/DP, 48-bit LVDS/eDP, 2GbE, Mini PCIe, mSATA/SD card, iManager, M.2 E Key, \*TPM 2.0, MIOe3.0**

**NEW**

## Features

- Intel® Pentium N4200 & Celeron N3350, Atom™ E3950, E3940, E3930, DDR3L 1867 MHz, up to 16GB
- DirectX11, OpenGL3.2, OpenCL1.2, multi-display: VGA+LVDS/eDP+ HDMI/DP\*
- Flexible design using integrated multiple I/O: MIOe to approach vertical applications & keep domain knowhow
- 2 Intel i210 GbE, rich I/O: 4COM, 2 SATA, 2 USB 3.0, SMBus/I<sup>2</sup>C, GPIO full-size Mini PCIe w/ SIM holder, full-size mSATA or SD card
- Supports iManager, SUSIAccess and Embedded Software APIs

### Software APIs:



### Utilities:



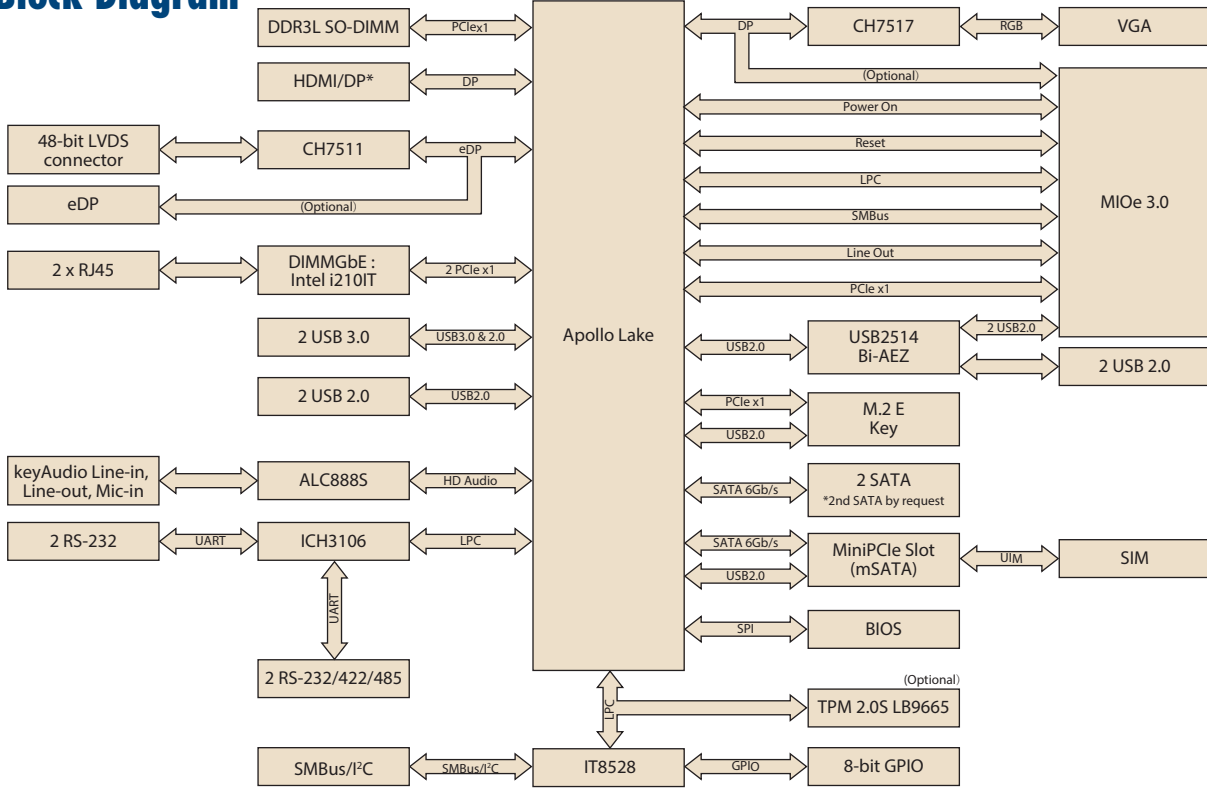
**iManager susiAccess** **CE FCC**

## Specifications

		Intel Pentium 4200	Intel Celeron N3350	Intel Atom E3950	Intel Atom E3940	Intel Atom E3930
Processor System	CPU	Intel Pentium 4200	Intel Celeron N3350	Intel Atom E3950	Intel Atom E3940	Intel Atom E3930
	Base Frequency	1.1 (Quad-Core)	1.1 (Dual-Core)	1.6 (Quad-Core)	1.6 (Quad-Core)	1.3 (Dual-Core)
	Burst Frequency	2.5	2.4	2	1.8	1.8
	L2 Cache	2	2	2	2	2
	BIOS	AMI UEFI BIOS at 64 Mb				
Memory	Technology	DDR3L 1867 MHz				
	Max. Capacity	8 GB				
	Socket	1 x 204-pin SODIMM				
Display	Controller	Intel Gen7 graphic engine				
	Graphic Features	DirectX11, OpenGL3.2, OpenCL1.2 HW Decode: H.264, MPEG2, MVC, VC-1, WMV9, MJPEG and VP8. HW Encode: H.264 (MPEG2 and MVC only for J1900)				
	VGA	2560 x 1600 at 60Hz				
	LVDS	48-bit LVDS up to WUXGA 1920 x 1200 at 60Hz Supports 3.3/5/12V for VDD power, 5/12V for inverter up to 2560 x 1600 at 60Hz				
	eDP*	up to 2560 x 1600 at 60Hz				
	HDMI / DisplayPort*	HDMI 1.4a for HD video playback, 1080P at 60Hz Displayport*, up to 2560 x 1600 at 60Hz				
	Multit-Display	VGA + HDMI/Displayport*, VGA+ LVDS/eDP*, HDMI/Displayport* +LVDS/eDP				
Ethernet	Speed	10/100/1000Mbps				
	Controller	Intel i210				
	Connector	2 RJ45				
Audio	Codec	Realtek ALC888S, High Definition Audio (HD), Line-in, Line out, Mic-in				
	Amplifier*	Optional via MIOe				
WatchDog Timer		Output System reset, Programmable counter from 1 ~ 255 minutes/ seconds				
Storage	SATA	2 (2nd SATA is by request), up to 3Gb/s (300 MB/s)				
	mSATA	1 x Full-size				
	SD slot*	1 (Shared with mSATA)				
Rear I/O	Ethernet	2 (10/100/1000Mbps)				
	VGA	1				
	HDMI / DisplayPort*	1				
	USB 2.0	2				
	USB 3.0	2				
	LED	Power, HDD				
Internal I/O	DC Jack*	1				
	Serial	2 x RS-232 from COM1/2, 2 x RS-232/422/485 from COM3/4 with auto flow control (ESD protection: air gap ±15kV, contact ±8kV)				
	USB 2.0	2				
	I <sup>2</sup> C	1 (Shared with SMBus pin)				
	SMBus	1				
Security	GPIO	8-bit (5V tolerance)				
	TPM2.0*	Support by request				
Expansion	Mini PCIe	1 x Full-size with SIM holder				
	MIOe	SMBus, 3 x USB2.0, LPC, 1 x PCIe x1, line out, DisplayPort*, +5 Vsb/+12 Vsb power, Power On, Rest				
Power	Power Type	Single 12V DC power input				
	Power Supply Voltage	12V ± 10%				
	Power Consumption (Typical)	TBD				
	Power Consumption (Max, test in HCT)	TBD				
	Power Management	ACPI				
Battery	Lithium 3 V / 210 mAH					
Environment	Operating	0 ~ 60 °C (32 ~ 140 °F) (Operating humidity: 40 °C @ 95% RH Non-Condensing)				
	Non-Operating	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing				
Physical Characteristics	Dimensions (L x W)	146 x 102 mm (5.7" x 4"), same as 3.5"				
	Weight	0.5kg (1.1lb), weight of total package				
	Height	Top Side: 19 mm; Bottom Side: 6.8 mm; PCB: 1.6 mm				

\* This specification is supported by request

### Block Diagram



### Ordering Information

Part No.	CPU	L2 Cache	Memory	LVDS	VGA	HDMI/DP	GbE	Audio	RS-232/422/485	RS-232	USB 3.0	USB 2.0	SATAII	Mini PCle	mSATA	MIOe	Power connector	Thermal Solution*	Operating Temp.
MIO-5350N Series	Intel N4200/ N3350 6W	2MB	SODIMM	48-bit	Yes	1	2	Yes	2	2	2	4	1	Full-size	Full-size	Yes	2x2pin	Passive	0°C-60°C
MIO-5350E series	Intel E3950/40/30 (12W/9W/6W)	2MB	SODIMM	48-bit	Yes	1	2	Yes	2	2	2	4	1	Full-size	Full-size	Yes	2x2pin	Passive	0°C-60°C

Note: passive=fanless

### Packing List

Part No.	Description	Quantity
2006525100	MIO-5251 SBC	1
1700006291	Startup Manual	1
1700006291	M Cable SATA 7P/SATA 7P 30cm C=R 180/90	1
1700018785	SATA 35cm power cable	1
1701200220	COM RS-232 Cable 2*10P-2.0/D-SUB 9P (M)*2 22CM	2
1700019584	Audio Cable 2*5P-2.0/JACK*3 20cm	1
9689000002	mini Jumper pack	1

### Rear I/O View

### Optional Accessories

Part No.	Description
1757003934	Adapter 100-240V 60W 12V 5A W/O PFC
1703100264	Internal 1 port USB cable 22.5cm

### Embedded OS/API

Embedded OS/API	Part No.	Description
Win10	2070013167	64bit (ENG/T-CH/S-CH/JP) 64bit (ENG/T-CH/S-CH/JP)
WEC2013		
Linux		Ubuntu 14.04
VxWorks		6.9.3.3
Android		Kit Kat 4.4
Software API		iManager 2.0