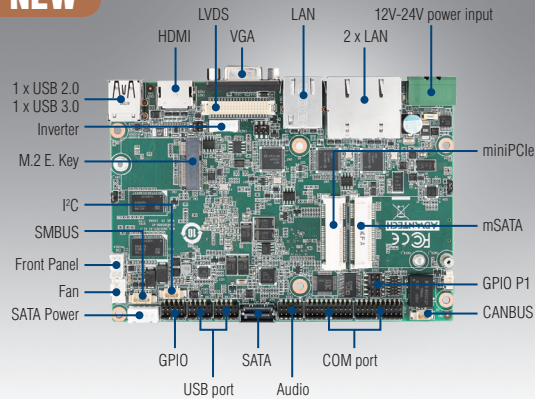


# MIO-5850

## Intel® Celeron J1900 & Atom™ E3825/ E3845, 3.5" SBC

**NEW**



WISE-PaaS/RMM iManager CE FCC

### Features

- Intel® Celeron J1900 & Atom™ E3825/E3845, DDR3L-1333MHz 2/4GB on board
- DirectX11, OpenGL3.2, OpenCL1.2, Dual display: HDMI, VGA, LVDS
- CPU bottom up design for system integration and rugged design for variable automation factory environments
- 3 Intel i210 GbE, rich I/O: 4COM, SATA, USB3.0, SMBus/I²C, 16 bit GPIO, full-size Mini PCIe/M.2 E Key, half size mSATA, 12-24V Power input, SIM Card holder, CANBUS with Isolation
- Supports iManager 3.0, RMM and Embedded Software APIs

#### Software APIs:



#### Utilities:

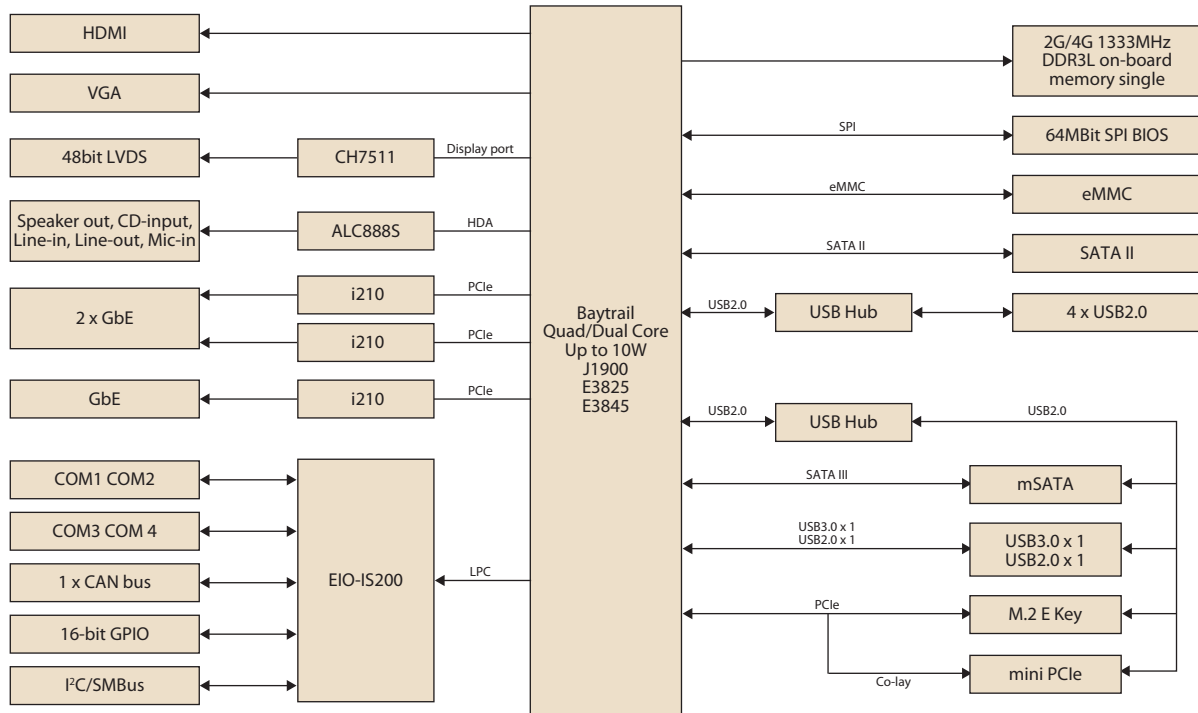


### Specifications

Processor System	CPU	Intel Celeron J1900	Intel Atom E3845	Intel Atom E3825
	Base Frequency	2 GHz (Quad-Core)	1.91GHz (Quad-Core)	1.33 GHz (Dual-Core)
	Burst Frequency	2.42 GHz	-	-
	L2 Cache	2MB	2MB	1MB
	BIOS	AMI UEFI BIOS at 64 Mb		
Memory	Technology	DDR3L 1333 MHz	DDR3L 1333MHz	DDR3L 1066 MHz
	Max. Capacity	On board 2/4GB		
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		
	HDMI	HDMI 1.4a for HD video playback, 1080P at 60Hz		
Ethernet	Mult-Display	VGA + HDMI, VGA+ LVDS, HDMI +LVDS		
	Speed	10/100/1000Mbps		
	Controller	Intel i210		
Audio	Connector	3 RJ45		
	Codec	Realtek ALC888S, High Definition Audio (HD), Line-in, Line out, Mic-in		
WatchDog Timer	Amplifier*	Output System reset, Programmable counter from 1 ~ 255 minutes/ seconds		
Storage	SATA	1, up to 3Gb/s (300 MB/s)		
	mSATA	1 x Half size		
	eMMC	16/32/64GB* (Optional)		
Rear I/O	Ethernet	3 (10/100/1000Mbps)		
	VGA	1		
	HDMI	1		
	USB 2.0	1		
	USB 3.0	1		
	DC Jack*	1		
Internal I/O	Serial	COM1/2 RS232/422/485 with auto flow control COM3/4 RS232 (ESD protection: air gap ±15kV, contact ±8kV)		
	USB2.0	4		
	CAN bus	1 (With 2500-VRMS Isolation)		
	I²C	1 (Shared with SMBus pin)		
	SMBus	1		
	GPIO	16 Bit (5V tolerance)		
Expansion	Mini PCIe	1 x Full size (default)		
	M.2 E key	1 x Full-size (by request)		
Power	Power Type	12V/24V DC Power input		
	Power Supply Voltage	12V ± 10%		
	Power Consumption (Typical)	MIO-5850J-U0A1E: 0.63A @12V (7.56W) MIO-5850J-U0A1E: 0.60@24V (14.4W)		
	Power Consumption (Max, test in HCT)	MIO-5850J-U0A1E: 1.74A @12V (20.88W) MIO-5850J-U0A1E: 3.57A @24V (85.68W)		
	Power Management	ACPI		
	Battery	Lithium 3 V / 210 mAh		
Environment	Operating	0 ~ 60 °C (32 ~ 140 °F), Extend: -40 ~ 85° C (-40 ~ 185° F)		
	Non-Operating	Storage: -40 ~ 85° C (-40 ~ 185° F)		
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: 2.0 mm		

\* This specification is supported by request

## Block Diagram



## Ordering Information

Part No.	CPU	L2 Cache	Memory	GbE	eMMC	RS-232/422/485	RS-232	USB 3.0	USB 2.0	SATAII	CAN bus	Mini PCIe	mSATA	M.2 E Key	Thermal Solution*	Operating Temp.
MIO-5850J-U0A1	Intel J1900 2GHz 10W	2MB	4GB	3	-	2	2	1	5	1	Yes	Full-size	Half size	by request	Passive	0 ~ 60 °C
MIO-5850JF-U0A1	Intel J1900 2Ghz 10W	2MB	4GB	3	32GB on board	2	2	1	5	1	Yes	Full-size	Half size	by request	Passive	0 ~ 60 °C
MIO-5850E-S3A1	Intel E3825 1.33GHz 6W	1MB	2GB	3	-	2	2	1	5	1	Yes	Full-size	Half size	by request	Passive	0 ~ 60 °C
MIO-5850EW-S0A1	Intel E3845 1.91GHz 10W	2MB	4GB	3	-	2	2	1	5	1	Yes	Full-size	Half size	by request	Passive (higher)	-40 ~ 85 °C
MIO-5850JZ-4GU0A1	Intel J1900 2GHz	2MB	4GB	3	-	2	2	1	5	1	Yes	Full-size	Half size	by request	Passive (higher)	-20 ~ 80 °C
MIO-5850JZ2-4GU0A1	Intel J1900 2GHz	2MB	4GB	3	-	2	2	1	5	1	Yes	Full-size	Half size	by request	Passive (higher)	-40 ~ 85 °C

Note1: J1900 and E3845/E3825 with different version BIOS and only for 64bit Win8/Win7, 32bit supported by T-P/N. (Default setting is Legacy boot)

Note2: passive=fanless

## Packing List

Part No.	Description	Quantity
	MIO-5850 SBC	1
2006585000	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
1700021705-01	A cable D-SUB 9P/1*3p-1.25+G-TEM 30cm	1
9689000002	mini Jumper pack	1
1960087101T001	Heatsink	1
TBD	Wide temp. heatsink	1

## Optional Accessories

Part No.	Description
1960089697N001	Heat spreader (16.7mm height)
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	20706WX6ES0009	64bit (ENG/T-CH/S-CH/JP)
WE7E	20706WE7ES0003	64bit (ENG/T-CH/S-CH/JP)
Software API		iManager 3.0