

Product Highlights

## Single Board Computer & Motherboards

3,5" Single Board Computer

2,5" Pico-ITX

PC/104 CPU Module

Mini-ITX Motherboards



02.10.2018

Single Board Computer & Motherboards

your specialist for innovative Embedded solutions

\*All information is without guarantee of correctness and completeness.

## Systems

- Custom
- Standard



## Kit Solutions

- Embedded Board
- Operating System
- Accessories e.g. Cable/Memory



## Distribution

- Embedded Boards
- Displays
- Power Supplies



## Features SBCs:

- Extended Temperature up to  $-40^{\circ}$  ...  $+85^{\circ}$   
(depends on Product and CPU)
- Long-Term Availability up to 15 Years
- For Industrial Applications e.g. 24/7 Usage
- PCN and EOL Notification
- Faster Time to Market
- Support (Customized BIOS..)
- Possibility for customization
- Fanless Designs possible



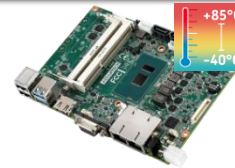
# 3,5" Single Board Computer

Size: 102 x 146 mm



# 3,5" Single Board Computer (SBC)

Intel® Core™ i CPU (Skylake & Kaby Lake)



Product	<a href="#">IB917</a>	<a href="#">IB916</a>	<a href="#">MIO-5272</a>	<a href="#">MIO-5391</a>	<a href="#">IB915</a>
Vendor	iBASE	iBASE	ADVANTECH	ADVANTECH	iBASE
Processor	Intel® Core™ i (7th Gen.) i7-7600U, i5-7300U, i3-7100U, Celeron® 3965U	Intel® Core™ i (7th Gen.) i7-7600U, i5-7300U, i3-7100U, Celeron® 3965U	Intel® Core™ i (6th Gen.) i7-6600U, i5-6300U, i3-6100U, Celeron® 3955U	Intel® Core™ (7th Gen.) i7-7820EQ, i5-7442EQ, i3-7102E	Intel® Core™ i (6th Gen.) i7-6600U, i5-6300U, i3-6100U, Celeron® 3955U
Chipset	SoC Kaby Lake	SoC Kaby Lake	SoC Skylake	Intel® QM175	SoC Skylake
Memory	32GB DDR4 max.	32GB DDR4 max.	16GB DDR3L max.	32GB DDR4 max.	16GB DDR3L max.
Graphic	48-bit LVDS, DP, HDMI	eDP, DP, HDMI	48-bit LVDS, HDMI, VGA	48-bit LVDS, HDMI	48-bit LVDS, eDP, DP
Storage	1x mSATA (shared) 2x SATA	1x mSATA (shared) 2x SATA	1x mSATA (shared) 2x SATA	1x mSATA (shared), 2x SATA	1x mSATA (shared) 2x SATA
Ethernet	2x 10/100/1000Mbit	2x 10/100/1000Mbit	2x 10/100/1000Mbit	2x 10/100/1000Mbit	2x 10/100/1000Mbit
I/O	4x USB 3.0, 2x USB 2.0, 1x RS232/422/485 3x RS232	4x USB 3.0, 2x USB 2.0, 1x RS232/422/485 3x RS232	2x USB 3.0, 4x USB 2.0, 2x RS232/422/485	4x USB 3.0, 2x USB 2.0, 4x RS232/422/485	4x USB 3.0, 2x USB 2.0, 1x RS232/422/485, 3x RS232
Audio	HD Audio	HD Audio	HD Audio	HD Audio	HD Audio
GPIO	x	x	x	X	x
Expansion	miniPCIe	miniPCIe	2x miniPCIe	miniPCIe, M.2	miniPCIe
Power	9-24 VDC	9-24 VDC	12 VDC	12 VDC	9-24 VDC

# 3,5" Single Board Computer (SBC)

Intel® Atom™ CPU (Gemini Lake)



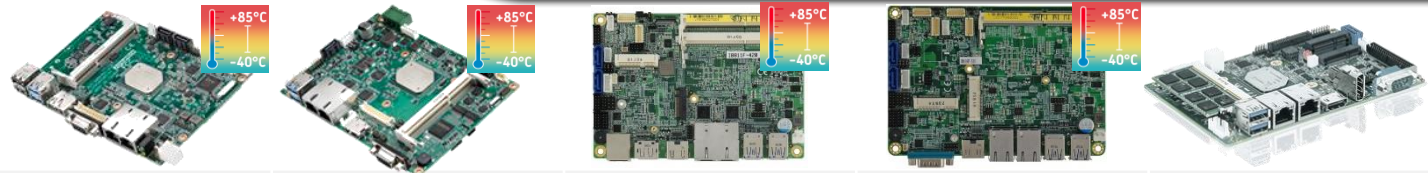
<b>Product</b>	<b><a href="#">IB822</a></b>
Vendor	iBASE
Processor	Intel® Celeron®, Pentium® J5005
Chipset	SoC Gemini Lake
Memory	16GB DDR4 max.
Graphic	48-bit LVDS/eDP, HDMI 2.0a, DisplayPort
Storage	M.2 (see Expansion) 2x SATA
Ethernet	2x 10/100/1000Mbit
I/O	4x USB 3.0, 2x USB 2.0, 1x RS232/422/485, 3x RS232
Audio	HD Audio
GPIO	x
Expansion	2x M.2 (Key B and Key E)
Power	12-24V DC-in

# 3,5" Single Board Computer (SBC)

Intel® Atom™ CPU (Apollo Lake)

# FORTEC

ELEKTRONIK AG



Product	<a href="#">MIO-5350</a>	<a href="#">PCM-9366</a>	<a href="#">IB811</a>	<a href="#">IB818</a>	<a href="#">3,5"-SBC-APL</a>
Vendor	ADVANTECH	ADVANTECH	iBASE	iBASE	Kontron
Processor	Intel® Atom™, Celeron®, Pentium® E39XX/N3350/N4200	Intel® Atom™, Celeron®, Pentium® E39XX/N3350/N4200	Intel® Atom™, Celeron®, Pentium® E39XX/N3350/N4200	Intel® Atom™, Celeron®, Pentium® E3950/N3350/N4200	Intel® Atom™, Celeron® E39XX/N3350
Chipset	SoC Apollo Lake	SoC Apollo Lake	SoC Apollo Lake	SoC Apollo Lake	SoC Apollo Lake
Memory	8GB DDR3L max.	8GB DDR3L max.	8GB DDR3L max.	8GB DDR3L max.	8GB DDR3L max.
Graphic	48-bit LVDS, VGA, eDP*, HDMI/DP*	48-bit LVDS, VGA, eDP*, HDMI/DP*	48-bit LVDS/eDP, HDMI	2x 48-bit LVDS, HDMI	48-bit LVDS, HDMI, DP
Storage	1x mSATA (shared) 2x SATA	1x mSATA (shared) 2x SATA	2x SATA	2x SATA 1x mSATA	1x SATA, eMMC
Ethernet	2x 10/100/1000Mbit	2x 10/100/1000Mbit	2x 10/100/1000Mbit	2x 10/100/1000Mbit	2x 10/100/1000Mbit
I/O	2x USB 3.0, 4x USB 2.0, 2x RS232/422/485, 2x RS232	2x USB 3.0, 4x USB 2.0, 2x RS232/422/485, 2x RS232	4x USB 3.0, 2x USB 2.0, 1x RS232/422/485 3x RS232	4x USB 3.0, 2x USB 2.0 1x RS232/422/485 3x RS232,	3x USB 3.0, 2x USB 2.0, 1x RS232/422/485 1x RS232
Audio	HD Audio	HD Audio	HD Audio	HD Audio	HD Audio
GPIO	8-bit	8-bit	x	8-bit (4-In/4-Out)	x
Expansion	miniPCIe (mSATA) M.2 Key E	miniPCIe (mSATA) M.2 Key E	miniPCIe M.2 Key B	miniPCIe (mSATA) miniPCIe (Half-Size)	2x miniPCIe
Power	12 VDC	12 VDC	9-36 VDC	12 – 24 VDC	12 VDC

# 3,5" Single Board Computer (SBC)

Intel® Atom™ CPU (Bay Trail)



Product	<a href="#">MIO-5251</a>	<a href="#">MIO-5850</a>	<a href="#">IB897 (IB898)</a>	<a href="#">3.5"-SBC-E38</a>	<a href="#">PCM-9365</a>
Vendor	ADVANTECH	ADVANTECH	iBASE	Kontron	ADVANTECH
Processor	Intel® Atom™, Celeron® E3825/E3845/J1900	Intel® Atom™, Celeron® E38xx/J1900	Intel® Atom™ E3845/E3827/E3815 (E3825/E3815)	Intel® Atom™ E3815	Intel® Atom™, Celeron®, E3825/N2930
Chipset	SoC Bay Trail	SoC Bay Trail	SoC Bay Trail	SoC Bay Trail	SoC Bay Trail
Memory	8GB DDR3L max.	4GB DDR3L max. (onboard)	8(4)GB DDR3L max.	1GB Memory (onboard)	4GB DDR3L max. (onboard)
Graphic	48-bit LVDS, VGA, eDP*, HDMI/DP*	48-bit LVDS, VGA, HDMI	48-bit LVDS, DP, CRT	48-bit LVDS, HDMI, VGA	48-bit LVDS (2xOptional), VGA, HDMI (optional)
Storage	1x mSATA 2x SATA, 1x MicroSD(shared)	1x mSATA, eMMC SATA	1x mSATA (shared) 2x SATA, 1x MicroSD (no)	CFast Socket, 1x SATA,	1x mSATA 1x SATA
Ethernet	2x 10/100/1000Mbit	<b>3x 10/100/1000Mbit</b>	2(1) x 10/100/1000Mbit	3x 10/100/1000Mbit	2x 10/100/1000Mbit
I/O	1x USB 3.0, 4x USB 2.0, 2x RS232/422/485, 2x RS232	<b>CAN-Bus</b> , USB 3.0, 4x COM	1x USB 3.0, 3x USB 2.0, 1x RS232/422/485 1x RS232	USB 3.0, 5x USB 2.0, 1x RS422/485 2x RS232	2x USB 3.0, 5x USB 2.0, 1x RS232/422/485, 3x RS232
Audio	HD Audio	HD Audio	HD Audio	HD Audio	HD Audio
GPIO	8-bit	16-bit	x	x	8-bit
Expansion	miniPCIe	miniPCIe	2(3) x miniPCIe	miniPCIe	miniPCIe
Power	12 VDC	<b>12-24V VDC</b>	<b>9-30 VDC</b>	19-36 VDC	12 VDC



# 3,5" Single Board Computer (SBC)

Estimated Product Life Cycle



	Product	Vendor	Platform	CPU	Product Status	Estimated (LTB) Last Time Buy	Estimated (LTS) Last Time Shipment
3,5"	MIO-5272 Refresh	Advantech	Intel Kabylake-U	i7/i5/i3-7xxxU, Celeron 3965U	MP	Q3/2031	Q1/2032
	MIO-5272	Advantech	Intel Skylake-U	i7/i5/i3-6xxxU, Celeron 3955U	MP	Q1/2030	Q3/2030
	MIO-5271	Advantech	Intel Haswell-U	i7/i5/i3-4xxxU, Celeron 2980U	MP	Q1/2020	Q3/2020
	MIO-5290	Advantech	Intel Ivy Bridge	i7/i5/i3-3xxxU, Celeron 1047UE	MP	Q4/2018	Q2/2019
	MIO-5350	Advantech	Intel Apollo Lake	E39xx, N4200, N3350	MP	Q1/2031	Q3/2031
	PCM-9366	Advantech	Intel Apollo Lake	E39xx, N4200, N3350		Q1/2031	Q3/2031
	PCM-9310	Advantech	Intel Braswell	N3xxx, x5-E8000	MP	Q3/2030	Q1/2031
	MIO-5251	Advantech	Intel Bay Trail	E38xx, J1900, N2930	MP	Q2/2028	Q4/2028
	PCM-9365	Advantech	Intel Bay Trail	E38xx, J1900, N2930	MP	Q2/2028	Q4/2028
	MIO-5270	Advantech	AMD eOntario	T16R, T40E, T56N	MP	Q2/2021	Q4/2021
	PCM-9376	Advantech	AMD eOntario	T16R, T40E, T56N	MP	Q2/2021	Q4/2021
	PCM-9375	Advantech	AMD Geode	LX800	MP	Q2/2019	Q4/2019
	PCM-9343	Advantech	DM&P	Vortec86DX	MP	Q2/2019	Q4/2019
	IB822	iBASE	Intel Gemini Lake		Development	Q2/2023	
	IB818	iBASE	Intel Apollo Lake	E39xx, N4200, N3350	MP / Development	Q3/2031	
IB811	iBASE	Intel Apollo Lake	E39xx, N4200, N3350	MP / Development	Q3/2031		
IB917	iBASE	Intel Kabylake-U	i7/i5/i3-7xxxU, Celeron 3965U	MP	Q1/2032		
IB916	iBASE	Intel Kabylake-U	i7/i5/i3-7xxxU, Celeron 3965U	MP	Q1/2032		
IB915	iBASE	Intel Skylake-U	i7/i5/i3-6xxxU, Celeron 3955U	MP	Q3/2030		
IB899	iBASE	Intel Braswell	N3xxx, x5-E8000	MP	Q1/2031		
IB898	iBASE	Intel Bay Trail	E38xx	MP	Q4/2028		
IB897	iBASE	Intel Bay Trail	E38xx	MP	Q4/2028		

**Note:**

- Right to change without notification.
- Within product lifecycle there may be revised design to extend lifecycle support.

# 2,5" Pico-ITX™ Single Board Computer

Size: 100 x 72 mm

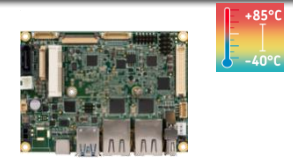


# 2,5" Pico-ITX™ Single Board Computer

Intel® Atom™ CPU (Apollo Lake)

# FORTEC

ELEKTRONIK AG



Product	<a href="#">MIO-2361</a>	<a href="#">MIO-2360</a>	<a href="#">MIO-3360**</a>	<a href="#">pITX-APL</a>	<a href="#">conga-PA5</a>
Vendor	ADVANTECH	ADVANTECH	ADVANTECH	Kontron	congatec
Processor	Intel® Atom™, Celeron®, Pentium® E3950/E3940/E3930/N3350/N4200	Intel® Atom™, Celeron® E3940/E3930/N3350	Intel® Atom™, Pentium® E39xx/N4200	Intel® Atom™, Celeron® E39XX/N3350	Intel® Atom™, Celeron®, Pentium® E3950/E3940/E3930/N3350/N4200
Chipset	SoC Apollo Lake	SoC Apollo Lake	SoC Apollo Lake	SoC Apollo Lake	SoC Apollo Lake
Memory	4GB DDR4 onboard	8GB DDR3L max.	8GB DDR3L max	8GB DDR3L max.	8GB DDR3L max. (onboard)
Graphic	48-bit LVDS, HDMI	24-bit LVDS, VGA, HDMI	48-bit LVDS, VGA	LVDS, DP	48-bit LVDS, DP++, eDP
Storage	1x mSATA (shared) 1x SATA	1x mSATA 1x SATA	SATA, mSATA opt.	SATA	1x mSATA (shared) 1x SATA, microSD
Ethernet	2x 10/100/1000Mbit	1x 10/100/1000Mbit	1x 10/100/1000Mbit	1x 10/100/1000Mbit	2x 10/100/1000Mbit
I/O	2x USB 3.0, 2x USB 2.0, 2x RS232/422/485	2x USB 3.0, 2x USB 2.0, 2x RS232/422/485, MIOe	USB 3.0, USB 2.0, COM, MIOe	2x USB 3.0, 2x USB 2.0, 1x RS232	2x USB 3.0, 2x USB 2.0, USB 3.0 Type C, 2x RS232/422/485
Audio	HD Audio	HD Audio	HD Audio	HD Audio	HD Audio
GPIO	16-bit	8-bit	x	x	3x Feature Connector
Expansion	1x miniPCle 1x M.2	1x miniPCle	1x miniPCle	1x miniPCle	1x miniPCle
Power	12 VDC	12 VDC	12 VDC	5 VDC	12 VDC

\*\*PIN-Header Version

# 2,5" Pico-ITX™ Single Board Computer

Intel® Atom™ CPU (Bay Trail)



Product	<a href="#">MIO-2263 (MIO-3260**)</a>	<a href="#">pITX-E38</a>	<a href="#">conga-PA3</a>	
Vendor	ADVANTECH	Kontron	congatec	
Processor	Intel® Atom™, Celeron® E3825/J1900 (E3825/N2930)	Intel® Atom™ E3845/E3826/E3815	Intel® Atom™ E3845/E3826	
Chipset	SoC Bay Trail	SoC Bay Trail	SoC Bay Trail	
Memory	8GB DDR3L max.	8GB DDR3L max.	4GB DDR3L max. (onboard)	
Graphic	24-bit LVDS, VGA, HDMI (HDMI*)	48-bit LVDS, DP	48-bit LVDS, DP++	
Storage	1x mSATA (shared) 1x SATA	1x mSATA (shared) 1x SATA, microSD	1x mSATA (shared) 1x SATA, microSD	
Ethernet	1x 10/100/1000Mbit	1x 10/100/1000Mbit	1x 10/100/1000Mbit	
I/O	1(0)x USB 3.0, 3(4)x USB 2.0, 1(2)x RS232/422/485 1(0)x RS232	1x USB 3.0, 3x USB 2.0, 2x COM	2x USB 3.0, 2x USB 2.0, 1x RS232	
Audio	HD Audio	Audio	Audio	
GPIO	8-bit	Kontron GPIO	Feature Connector	
Expansion	1x miniPCIe	1x miniPCIe	1x miniPCIe	
Power	12 VDC	5 VDC	12VDC	

\*\*PIN-Header Version

# 2,5" Pico-ITX™ Single Board Computer

Estimated Product Life Cycle



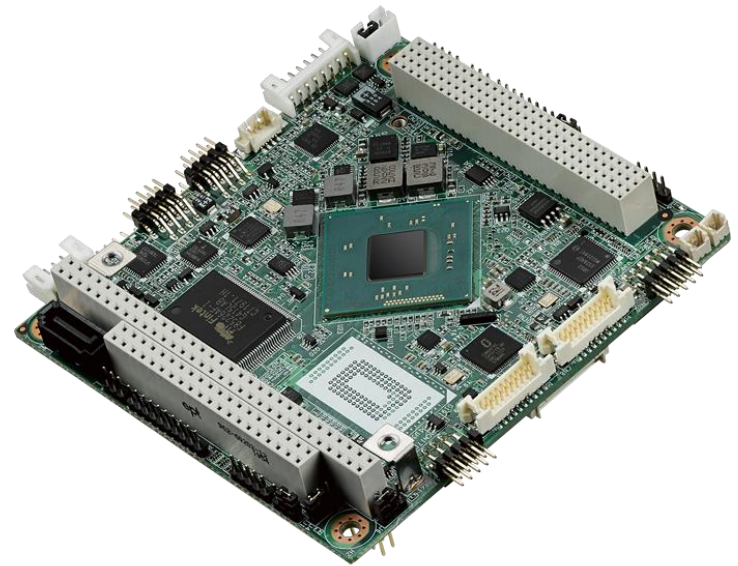
	Product	Vendor	Platform	CPU	Product Status	Estimated (LTB) Last Time Buy	Estimated (LTS) Last Time Shipment
2,5"	MIO-2360	Advantech	Intel Apollo Lake	E39xx, N4200, N3350	MP	Q1/2031	Q3/2031
	MIO-3360	Advantech	Intel Apollo Lake	E39xx, N4200, N3350	MP	Q1/2031	Q3/2031
	MIO-2263	Advantech	Intel Bay Trail	E38xx, J1900, N2930	MP	Q2/2028	Q4/2028
	MIO-3260	Advantech	Intel Bay Trail	E38xx, J1900, N2930	MP	Q2/2028	Q4/2028
	MIO-2270	Advantech	AMD eKabini	GX-415GA, GX-210JA	MP	Q3/2023	Q1/2024
	conga-PA5	Congatec	Intel Apollo Lake	E39xx, N4200, N3350	MP	tbd	tbd
	conga-PA3	Congatec	Intel Bay Trail	E38xx, J1900, N2930	MP	tbd	tbd

**Note:**

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- Within product lifecycle there may be revised design to extend lifecycle support.

# PC/104 CPU Modules

Size: 96 x 90(115) mm



# PC/104 CPU Module

Intel®, AMD® & Vortex™ CPUs



Product	<a href="#">PCM-3365</a>	<a href="#">PCM-3356</a>	<a href="#">Helix</a>	<a href="#">Aries</a>
Vendor	ADVANTECH	ADVANTECH	Diamond Systems	Diamond Systems
Processor	Intel® Atom™, Celeron® E3825/E3845/N2930	AMD® G-Series™ T16R/T40E	DM&P® Vortex86DX3®	Intel® Atom™ E3826/E3845
Chipset	SoC Bay Trail	A55E	SoC	SoC Bay Trail
Memory	8GB DDR3L max.	4GB DDR3L max. (optional 1GB onboard)	2GB DDR3 max.	2GG/4GB onboard
Graphic	48-bit LVDS, VGA, HDMI/DVI	18-bit LVDS VGA	24-bit LVDS, VGA	LVDS, VGA
Storage	1x SATA, 1x mSATA (shared with optional onboard Flash)	1x mSATA 1x SATA	1x SATA	1x SATA 1x mSATA (shared)
Ethernet	1x 10/100/1000Mbit	2 x 10/100/1000Mbit	1x 10/100/1000Mbit	2x 10/100/1000Mbit
I/O	6x USB 2.0, 1x RS232/422/485, 2x RS232	4x USB 2.0, 3x RS232/422/485	6x USB 2.0, 2x RS232/422/485, 2x RS232, Data Acquisition	1x USB 3.0, 3x USB 2.0, 4x RS232/422/485, Data Acquisition
Audio	Optional Audio Module	HD Audio	HD Audio	HD Audio
GPIO	8-bit	8-bit	x	X
Expansion	miniPCle (shared)	1 x miniPCle	1x miniPCle	1x miniPCle
Power	5 VDC	5 VDC	5 VDC	5 VDC

# PC/104 CPU Module

## Estimated Product Life Cycle



	Product	Vendor	Platform	CPU	Product Status	Estimated (LTB) Last Time Buy	Estimated (LTS) Last Time Shipment
PC/104	PCM-3365	Advantech	Intel Bay Trail	E38xx, J1900, N2930	MP	Q2/2028	Q4/2028
	PCM-3356	Advantech	AMD eOntario	T16R, T40E, T56N	MP	Q2/2021	Q4/2021
	PCM-3343	Advantech	DM&P	Vortec86DX	MP	Q2/2019	Q4/2019

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# Mini-ITX Motherboards

Size: 170 x 170 mm



# Industrial Mini-ITX Motherboards

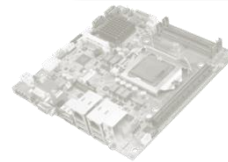
AMD® Ryzen CPU



<b>Product</b>	<a href="#"><b>MI988</b></a>
Vendor	iBASE
Processor	AMD® Ryzen™ V1807B / V1756B / V1202B
Chipset	SoC Ryzen™
Memory	32GB DDR4 max.
Graphic	48-bit LVDS/eDP, DP , HDMI
Storage	2x SATA, M.2 Key E
Ethernet	2x 10/100/1000Mbit
I/O	2x USB 3.1, 2x USB 3.0 2x RS232/422/485, 4x RS232
Audio	HD Audio
GPIO	8-bit
Expansion	miniPCle M.2 Key M
Power	12-24 VDC

# Industrial Mini-ITX Motherboards

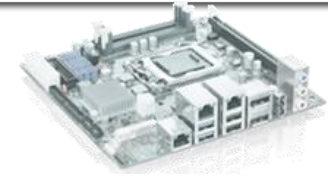
Intel® Core™ i CPU (8th Gen.)



Product	<a href="#">MI995</a>	<a href="#">AIMB-276</a>		
Vendor	iBASE	ADVANTECH		
Processor	Intel® Core™ i7/i5/i3, Xeon E3 (8th Gen.) FCBGA1440	Intel® Core™ i7/i5/i3 (8th. Gen.) LGA1151		
Chipset	Intel® CM246, QM370, HM 370	Intel® Q370		
Memory	32GB DDR4 max.	32GB DDR4 max.		
Graphic	eDP, HDMI, DisplayPort, DVI	48-bit LVDS/eDP, HDMI, 2x DP		
Storage	2x M.2m, up to 4x SATA	3x SATA,		
Ethernet	2x 10/100/1000Mbit	2x 10/100/1000Mbit		
I/O	2x RS232/422/485, 6x USB 3.1, 4x USB 2.0	6x USB 3.1, 4x USB 3.0 1x RS232, 1x RS232/422/485		
Audio	HD Audio	HD Audio		
GPIO	8-bit	8-bit		
Expansion	PCIe x16, miniPCIe, M.2	PCIe x16, M.2 Key E, M.2 Key B		
Power	ATX or 12V DC-in	12V or 12...24V		

# Industrial Mini-ITX Motherboards

Intel® Core™ i CPU (Kaby Lake & Skylake)



Product	<a href="#">AIMB-275</a>	<a href="#">AIMB-285</a>	<a href="#">MI991</a>	<a href="#">MI992</a>	<a href="#">miITX-SKL-S H110 / C236</a>
Vendor	ADVANTECH	ADVANTECH	iBASE	iBASE	Kontron
Processor	Intel® Core™ i7 / i5 / i3 (7th & 6th Gen.) LGA1151	Intel® Core™ i7 / i5 / i3 (7th & 6th Gen.) LGA1151	Intel® Core™ i7 / i5 / i3 (7th & 6th Gen.) LGA1151	Intel® Core™ i7 / i5 / i3, Intel® Xeon® (7th Gen.)	Intel® Core™ i7 / i5 / i3 (6th Gen.) LGA1151
Chipset	Intel® Q170 / H110	Intel® Q170 / H110	Intel® C236 / Q170 / H110	Intel® CM238 / HM175	Intel® H110 / C236
Memory	32GB DDR4 max.	32GB DDR4 max.	32GB DDR4 max.	32GB DDR4 max.	32GB DDR4 max.
Graphic	48-bit LVDS, HDMI, VGA, eDP, DP	48-bit LVDS, HDMI, VGA, DP	DVI-D, HDMI, DP	48-bit LVDS, DVI-D, HDMI, DP	48-bit LVDS/VGA, HDMI, DP (48-bit LVDS, 2(3)x DP)
Storage	3x SATA	1x mSATA (shared) 3x SATA	1x mSATA (shared) 3(4)x SATA	1x mSATA, 1.M.2, up to 4x SATA	1x mSATA (shared), (M.2) 3(4)x SATA
Ethernet	2x 10/100/1000Mbit	2x 10/100/1000Mbit	2x 10/100/1000Mbit	2x 10/100/1000Mbit	2(3)x 10/100/1000Mbit
I/O	6x USB 3.0, 2x USB 2.0, 1x RS232/422/485 1x RS232	4x USB 3.0, 4x USB 2.0, 2x RS232	4(6)x USB 3.0, 2(0)x USB 2.0, 1x RS232/422/485 3x RS232	6x USB 3.0, 4x USB 2.0, 6x COM	4(2)x USB 3.0, 2x USB 2.0, 1x RS(232)/422/485, 1(3)x RS232
Audio	HD Audio	HD Audio	HD Audio	HD Audio	HD Audio
GPIO	8-bit	x	x	8-bit GPIO	x
Expansion	miniPCIe, M.2 Key B	2x miniPCIe	2x miniPCIe	PCIe x16, 2x miniPCIe, 1x M.2	miniPCIe
Power	12-24 VDC	12 VDC	ATX	ATX	ATX

# Industrial Mini-ITX Motherboards

Intel® Core™ i CPU (Kaby Lake & Skylake)



Product	<a href="#">miTX-KBL-H (miTX-SKL-H)</a>	<a href="#">AIMB-205</a>	<a href="#">AIMB-232</a>	<a href="#">MI990</a>
Vendor	Kontron	ADVANTECH	ADVANTECH	iBASE
Processor	Intel® Core™ i7 / i5 / i3 (7th & 6th Gen.)	Intel® Core™ i7 / i5 / i3 (7th & 6th Gen.) LGA1151	Intel® Core™ i7 / i5 / i3 (7th & 6th Gen.) i7-6600U / i6-6300 / i3-6100U / 3955U / 3965U	Intel® Core™ i, Xeon (6th Gen.) E3-1505M / i7-6820EQ / i5-6440EQ / i3-6100E
Chipset	SoC	Intel® H110	SoC Kaby Lake & Skylake	Intel® CM236 / HM170
Memory	32GB DDR4 max.	32GB DDR4 max.	16GB DDR4 max.	32GB DDR4 max.
Graphic	48-bit LVDS, 2x DP	48-bit LVDS/eDP, VGA, DVI-D, DP	48-bit LVDS, HDMI, DP, eDP	48-bit LVDS, DVI-D, HDMI, DP
Storage	4x SATA	2x SATA	2x SATA	1x mSATA (shared) 4(2)x SATA
Ethernet	4(6)x 10/100/1000Mbit	2x 10/100/1000Mbit	2x 10/100/1000Mbit	2x 10/100/1000Mbit
I/O	4x USB 3.0, 4x USB 2.0, 1x RS422/485 1x RS232	4x USB 3.0, 6x USB 2.0, 1x RS232/422/485 7x RS232	6x USB 3.0, 2x USB 2.0	6x USB 3.0, 2x USB 2.0, 1x RS232/422/485, 5x RS232
Audio	HD Audio	HD Audio	HD Audio	HD Audio
GPIO	x	8-bit	X	x
Expansion	miniPCIe, M.2 Key M	miniPCIe, M.2 Key B	2x miniPCIe	2x miniPCIe
Power	12/24VDC	ATX	12 VDC	ATX

# Industrial Mini-ITX Motherboards

Intel® Atom™ CPU (Apollo Lake)



Product	<a href="#">AIMB-217</a>	<a href="#">MI811</a>	<a href="#">miTX-APL</a>	
Vendor	ADVANTECH	iBASE	Kontron	
Processor	Intel® Atom™, Celeron®, Pentium® N4200/N3350/x7-E3950	Intel® Celeron®, Pentium® N4200/N3350	Intel® Atom™, Celeron® E39xx/N3350	
Chipset	SoC Apollo Lake	SoC Apollo Lake	SoC Apollo Lake	
Memory	8GB DDR3L max.	8GB DDR3L max.	8GB DDR3L max.	
Graphic	VGA/eDP**, HDMI, DP++/48-bit LVDS**	eDP or 48-bit LVDS, HDMI, HDMI or DVI-D	48-bit LVDS, 2x DP	
Storage	2x SATA, 1x mSATA (shared)	2x SATA 1x mSATA	2x SATA, eMMC	
Ethernet	2x 10/100/1000Mbit	2 x 10/100/1000Mbit	2x 10/100/1000Mbit	
I/O	4x USB 3.0, 4x USB 2.0, 1x RS232/422/485, 5x RS232	4x USB 3.0, 4x USB 2.0 1x RS232/422/485 3x RS232	4x USB 3.0, 2x USB 2.0 1x RS422/485, 1x RS232, CAN Bus	
Audio	HD Audio	HD Audio	HD Audio	
GPIO	8-bit	8-bit	x	
Expansion	miniPCIe (shared) M.2 Key E	1 x miniPCIe	1x miniPCIe	
Power	12 VDC	12-24 VDC	12-24 VDC	

# Industrial Mini-ITX Motherboards

Intel® Atom™ CPU (Bay Trail)



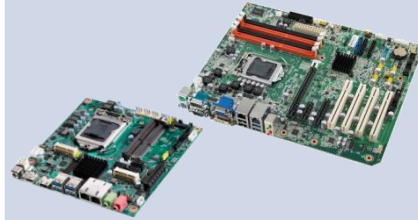
Product	<a href="#">AIMB-215</a>	<a href="#">MI805</a>	<a href="#">mITX-E38</a>	
Vendor	ADVANTECH	iBASE	Kontron	
Processor	Intel® Celeron® J1900/N2930/N2807	Intel® Celeron® J1900	Intel® Atom™ E3815/E3826/E3845	
Chipset	SoC Bay Trail	SoC Bay Trail	SoC Bay Trail	
Memory	8GB DDR3L max.	8GB DDR3L max.	8GB DDR3 max.	
Graphic	48-bit LVDS, VGA, DP or eDP	48-bit LVDS, VGA, DVI-D	48-bit LVDS, 2x DP	
Storage	2x SATA, 1x mSATA (shared)	1x mSATA, 2x SATA	2x SATA, eMMC, 1x SD Card Slot	
Ethernet	2x 10/100/1000Mbit	2x 10/100/1000Mbit	1x 10/100/1000Mbit	
I/O	1x USB 3.0, 7x USB 2.0, 1x RS232/422/485, 5x RS232	1x USB 3.0, 4x USB 2.0, 1x RS232/422/485, 5x RS232	1x USB 3.0, 8x USB 2.0, 6x COM	
Audio	HD Audio	HD Audio	HD Audio	
GPIO	8-bit	8-bit	x	
Expansion	2x miniPCle (1x shared)	1 x miniPCle	1x miniPCle	
Power	12 VDC	12-24 VDC	12 VDC	

## Embedded Boards



2,5" Pico-ITX™  
 3,5" Single Board Computer  
 PC/104  
 Slot SBC  
 Computer-on-Module

## Industrial Mainboards



Mini-ITX™  
 Micro-ATX  
 Flex-ATX  
 ATX

## Embedded Systems



Embedded Box PCs  
 Embedded Panel PCs  
 Embedded Server  
 Embedded Desktop PCs  
 Digital Signage Player  
 Industrial Monitors

## Accessories & IoT



Gateways  
 Switches  
 Router  
 Memory, CPUs  
 Cables  
 Power Supplies

### Available Features & Options:

Designed for Industrial Applications  
 Extended Temperature -40°C...+85°C  
 Design-in Support  
 Kits (Board with OS, Display & Cables)

Long-term Availability  
 Custom Design  
 Fixed Bill of Material  
 EOL / PCN Handling



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