

OUR GLOBAL COMPETENCE CENTRES



 APOLLO DISPLAY
TECHNOLOGIES



 DISTEC



 DISPLAY
TECHNOLOGY



FORTEC
ELEKTRONIK AG

Motherboards

Industrial Motherboards

- Mini-ITX Size: 170 x 170 mm
- Thin Mini-ITX Size: 170 x 170 mm
- UTX Size: 112 x 117 mm



The information contained in this document has been carefully researched and is, to the best of our knowledge, accurate. However, we assume no liability for any product failures or damages, immediate or consequential, resulting from the use of the information provided herein. Our products are not intended for use in systems in which failures of product could result in personal injury. All trademarks mentioned herein are property of their respective owners. All specifications are subject to change without notice.

Systems

- Custom
- Standard



Kit Solutions

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



Distribution

- Embedded Boards
- Displays
- Power Supplies



FEATURES

INDUSTRIAL MOTHERBOARDS

- 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
(Depends on Product and Processor)

MINI-ITX MOTHERBOARDS

AMD® RYZEN CPU



Product	MI988
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	miniPCIe M.2 Key M
Power	12-24 VDC

MINI-ITX MOTHERBOARDS

INTEL® CORE™ I DESKTOP CPU (8TH GEN.)



Product	MI995
Vendor	iBASE
Processor	Intel® Core™ i7/i5/i3, Xeon E3 (8th Gen.) FCBGA1440
Chipset	Intel® CM246, QM370, HM 370
Memory	32GB DDR4 max.
Graphic	eDP, HDMI, DisplayPort, DVI
Storage	2x M.2m, up to 4x SATA
Ethernet	2x 10/100/1000Mbit
I/O	2x RS232/422/485, 6x USB 3.1 4x USB 2.0
Audio	HD Audio
GPIO	8-bit
Expansion	PCIe x16, miniPCIe, M.2
Power	ATX or 12V DC-in

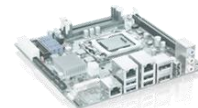
INTEL® CORE™ I MOBILE CPU (8TH GEN.)



AIMB-276
ADVANTECH
Intel® Core™ i7/i5/i3 (8th. Gen.) LGA1151
Intel® Q370
32GB DDR4 max.
48-bit LVDS/eDP, HDMI, 2x DP
3x SATA
2x 10/100/1000Mbit
6x USB 3.1, 4x USB 3.0 1x RS232, 1x RS232/422/485
HD Audio
8-bit
PCIe x16, M.2 Key E, M.2 Key B
12V or 12...24V

MINI-ITX MOTHERBOARDS

INTEL® CORE™ I DESKTOP CPU (7TH & 6TH GEN.)



Product	AIMB-275	MI991	AIMB-205	mITX-SKL-S H110 / C236
Vendor	ADVANTECH	iBASE	ADVANTECH	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 (6th Gen.) LGA1151
Chipset	Intel® Q170 / H110	Intel® C236 / Q170 / H110	Intel® H110	Intel® H110 / C236
Memory	32GB DDR4 max.	32GB DDR4 max.	32GB DDR4 max.	32GB DDR4 max.
Graphic	48-bit LVDS, HDMI, VGA, eDP, DP	DVI-D, HDMI, DP	48-bit LVDS/eDP, VGA, DVI-D, DP	48-bit LVDS/VGA, HDMI, DP (48-bit LVDS, 2(3)x DP)
Storage	3x SATA	1x mSATA (shared) 3(4)x SATA	2x SATA	1x mSATA (shared), (M.2) 3(4)x SATA
Ethernet	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	4(6)x USB 3.0, 2(0)x USB 2.0, 1x RS232/422/485 3x RS232	4x USB 3.0, 6x USB 2.0, 1x RS232/422/485 7x RS232	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
GPIO	8-bit	x	8-bit	x
Expansion	miniPCIe, M.2 Key B	2x miniPCIe	miniPCIe, M.2 Key B	miniPCIe
Power	12-24 VDC	ATX	ATX	ATX

MINI-ITX MOTHERBOARDS

INTEL® CORE™ I MOBILE CPU (7TH & 6TH GEN.)



Product	MI992	MI990
Vendor	iBASE	iBASE
Processor	Intel® Core™ i7-7820EQ, i5-7440EQ, i3-7100E, Xeon® E3-1505M v6 (7th Gen.)	Intel® Core™ i, Xeon (6th Gen.) E3-1505M / i7-6820EQ / i5-6440EQ / i3-6100E
Chipset	Intel® CM238 / HM175	Intel® CM236 / HM170
Memory	32GB DDR4 max.	32GB DDR4 max.
Graphic	48-bit LVDS, DVI-D, HDMI, DP	48-bit LVDS DVI-D, HDMI, DP
Storage	1x mSATA, 1.M.2 up to 4x SATA	1x mSATA (shared) 4(2)x SATA
Ethernet	2x 10/100/1000Mbit	2x 10/100/1000Mbit
I/O	6x USB 3.0, 4x USB 2.0, 6x COM	6x USB 3.0, 2x USB 2.0 1x RS232/422/485 5x RS232
Audio	HD Audio	HD Audio
GPIO	8-bit GPIO	x
Expansion	PCIe x16, 2x miniPCIe, 1x M.2	2x miniPCIe
Power	ATX	ATX

THIN MINI-ITX MOTHERBOARDS

INTEL® CORE™ I CPU (8TH GEN.)



Product	AIMB-286
Vendor	ADVANTECH
Processor	Intel® Core™ i7 / i5 / i3 Celeron®, Pentium® (8th Gen.) LGA1151
Chipset	Intel® H310
Memory	32GB DDR4 max.
Graphic	48-bit LVDS, HDMI, DP, eDP (optional)
Storage	3x SATA, M.2 Key B
Ethernet	2x 10/100/1000Mbit
I/O	3x USB 3.0, 4x USB 2.0 6x RS232, RS433/485 (optional)
Audio	HD Audio
GPIO	16-bit
Expansion	1x M.2 Key E
Power	12 VDC

THIN MINI-ITX MOTHERBOARDS

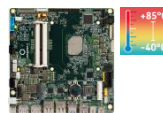
INTEL® CORE™ I CPU (7TH & 6TH GEN.)



Product	AIMB-285	AIMB-232	conga-IC175	conga-IC170
Vendor	ADVANTECH	ADVANTECH	congatec	congatec
Processor	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™ (7th Gen.) i7-7600U, i5-7300U, i3-7100U, Celeron® 3965U	Intel® Core™ i (6th Gen.) i7-6600U, i5-6300U, i3-6100U, Celeron® 3955U
Chipset	Intel® H110	U-Series Kaby Lake & Skylake SoC	U-Series Kaby Lake SoC	U-Series Kaby Lake SoC
Memory	32GB DDR4 max.	16GB DDR4 max.	32GB DDR4 max.	32GB DDR4 max.
Graphic	48-bit LVDS, HDMI, VGA, DP	48-bit LVDS, HDMI, DP, eDP	48-bit LVDS or eDP, 2x DP	48-bit LVDS or eDP, 2x DP
Storage	1x mSATA (shared), 3x SATA	2x SATA	1x M.2 (shared), 2x SATA	1x M.2 (shared), 2x SATA
Ethernet	2x 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 2x RS232	6x USB 3.0, 2x USB 2.0	4x USB 3.0, 4x USB 2.0 2x COM	4x USB 3.0, 4x USB 2.0 2x COM
Audio	HD Audio	HD Audio	HD Audio	HD Audio
GPIO	x	x	8-bit	8-bit
Expansion	2x miniPCIe	2x miniPCIe	PCIe x4, miniPCIe, M.2 Key B	PCIe x4, miniPCIe, M.2 Key B
Power	12 VDC	12 VDC	12-24 VDC	12-24 VDC

THIN MINI-ITX MOTHERBOARDS

INTEL® ATOM™ CPU (APOLLO LAKE)



Product	AIMB-217	MI811	conga-IA5	mITX-APL
Vendor	ADVANTECH	iBASE	congatec	Kontron
Processor	Intel® Atom™, Celeron®, Pentium® N4200/N3350/x7-E3950	Intel® Celeron®, Pentium® N4200/N3350	Intel® Atom™ E3950, E3940, E3930, Celeron® N3350, Pentium® N4200	Intel® Atom™, Celeron® E39xx/N3350
Chipset	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.
Graphic	VGA/eDP**, HDMI, DP++/48-bit LVDS**	eDP or 48-bit LVDS, HDMI, HDMI or DVI-D	48-bit LVDS or eDP(opt.), 2x DisplayPort	48-bit LVDS, 2x DP
Storage	2x SATA, 1x mSATA (shared)	2x SATA, 1x mSATA	2x SATA, (1x shared with M.2)	2x SATA, eMMC
Ethernet	2x 10/100/1000Mbit	2 x 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	3x USB 3.0, 2x USB 2.0, 2x COM 1x M.2, MicroSD Socket,	4x USB 3.0, 2x USB 2.0 1x RS422/485, 1x RS232, CAN Bus
Audio	HD Audio	HD Audio	HD Audio	HD Audio
GPIO	8-bit	8-bit	8-bit	x
Expansion	miniPCIe (shared) M.2 Key E	1 x miniPCIe	1x PCIe shared with miniPCIe,	1x miniPCIe
Power	12 VDC	12-24 VDC	12-24VDC	12-24 VDC

MINI-ITX MOTHERBOARDS

INTEL® ATOM™ CPU (BAY TRAIL)



Product	AIMB-215	MI805	conga-IA3	mITX-E38
Vendor	ADVANTECH	iBASE	congatec	Kontron
Processor	Intel® Celeron® J1900/N2930/N2807	Intel® Celeron® J1900	Intel® Atom™ E3826, E3845, Celeron® J1900, N2930	Intel® Atom™ E3815/E3826/E3845
Chipset	SoC Bay Trail	SoC Bay Trail	SoC Bay Trail	SoC Bay Trail
Memory	8GB DDR3L max.	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, DisplayPort, VGA	48-bit LVDS, 2x DP
Storage	2x SATA, 1x mSATA (shared)	1x mSATA, 2x SATA	2x SATA, 1x mSATA(1x shared SATA)	2x SATA, eMMC, 1x SD Card Slot
Ethernet	2x 10/100/1000Mbit	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	4x USB 3.0, 4x USB 2.0, 2x COM	1x USB 3.0, 8x USB 2.0, 6x COM
Audio	HD Audio	HD Audio	HD Audio	HD Audio
GPIO	8-bit	8-bit	8-bit	x
Expansion	2x miniPCIe (1x shared)	1 x miniPCIe	1x PCIe shared with miniPCIe, 2x miniPCIe (1x shared)	1x miniPCIe
Power	12 VDC	12-24 VDC	12-19 VDC	12 VDC

Industrial UTX Motherboards

Size: 112 x 117 mm



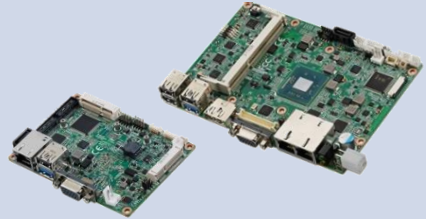



UTX MOTHERBOARDS

INTEL® ATOM™ CPU (APOLLO LAKE)



Product	AIMB-U117
Vendor	ADVANTECH
Processor	Intel® Atom™ E3950, E3930
Chipset	SoC Apollo Lake
Memory	8GB DDR3L max.
Graphic	eDP, 48-bit LVDS (optional) DP, HDMI
Storage	1x mSATA (shared) 1x SATA
Ethernet	2x 10/100/1000Mbit
I/O	4x USB 3.0, 1x RS422/485, 1x RS232 (Optional)
Audio	HD Audio
GPIO	8-bit
Expansion	miniPCle , M.2 Key E
Power	12-24 VDC

EMBEDDED

Embedded Boards	Industrial Mainboards	Embedded Systems	Accessories & IoT
 <p>2,5" Pico-ITX™ 3,5" Single Board Computer PC/104 Slot SBC Computer-on-Module</p>	 <p>Mini-ITX™ Micro-ATX Flex-ATX ATX</p>	 <p>Embedded Box PCs Embedded Panel PCs Embedded Server Embedded Desktop PCs Digital Signage Player Industrial Monitors</p>	 <p>Gateways Switches Router Memory, CPUs Cables Power Supplies</p>

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

CONTACT FORTEC GROUP

Headquarters

Germany



FORTEC Elektronik AG
Lechwiesenstr. 9
86899 Landsberg am Lech

Phone: +49 8191 91172-0
E-Mail: sales@fortecag.de
Internet: www.fortecag.de

Fortec Group Members

Austria



FORTEC Elektronik AG Office Vienna
Nuschinggasse 12
1230 Wien

Phone: +43 1 8673492-0
E-Mail: office@fortec.at
Internet: www.fortec.at

Germany



Distec GmbH
Augsburger Str. 2b
82110 Germering

Phone: +49 89 894363-0
E-Mail: info@distec.de
Internet: www.distec.de

Switzerland



ALTRAC AG
Bahnhofstraße 3
5436 Würenlos

Phone: +41 44 7446111
E-Mail: info@altrac.ch
Internet: www.altrac.ch

United Kingdom



Display Technology Ltd.
Osprey House, 1 Osprey Court
Hichingbrooke Business Park
Huntingdon, Cambridgeshire, PE29 6FN

Phone: +44 1480 411600
E-Mail: info@displaytechnology.co.uk
Internet: www.displaytechnology.co.uk

USA



Apollo Display Technologies, Corp.
87 Raynor Avenue,
Unit 1 Ronkonkoma,
NY 11779

Phone: +1 631 5804360
E-Mail: info@apollodisplays.com
Internet: www.apollodisplays.com