

Quick Installation Guide

Version: 1.0

ITX-i7435/ATX

FORM FACTOR Mini-ITX	CPU i7FCPGA 478 Pentium 2.26 GHz	CHIPSET Intel 915GME / ICH6M
MEMORY DDR2 2GB	IDE 1 x UDMA 100 2 x SATA	IO USB/Serial/LPT
Expansion Bus PCI Express x 16 Mini PCI	LAN Dual Intel PCI Express Giga LAN	AUDIO AC'97 Codec

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Technical Support

If you have any technical difficulties, please consult the user's manual first at: [ftp://ftp.arbor.com.tw/pub/manual](http://ftp.arbor.com.tw/pub/manual)
Please do not hesitate to call or e-mail our customer service when you still can not find out the answer.
<http://www.arbor.com.tw>
E-mail: info@arbor.com.tw

Part Number: 4041743501100P

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Packing List

Before you begin installing your single board, please make sure that the following materials have been shipped:

- ◆ 1x ITX-i7435/ATX Mini ITX Embedded board
- ◆ 1x I/O Bracket
- ◆ 1x CPU Cooler or Heatsink
- ◆ 1x CD-ROM (For Driver used)
- ◆ 1x Quick Installation Guide
- ◆ 1x Warranty Card

Optional

- ◆ 1 x Cable Kit (CBK-07-7435-00) contains the followings:
 - ◆ Ultra DMA100 IDE Flat cable x 1
 - ◆ USB cable, L = 250 mm x 2
 - ◆ Serial ATA cable x 1
 - ◆ Print cable x 1
 - ◆ LPT to FDD cable x 1

Ordering Information

ITX-i7435VL2G/ATX

Pentium M Socket 478 Mini-ITX M/B with CRT/LCD, Audio, SATA, CF, Dual PCIE Gb LAN and PCI ExpressX16 slot

ITX-i7435VL2G/ATX w/o CF

Pentium M Socket 478 Mini-ITX M/B with CRT/LCD, Audio, SATA, Dual PCIE Gb LAN and PCI ExpressX16 slot

Cable Kit

CBK-07-7435-00

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Specification	
Form Factor	Mini-ITX Embedded Board Size (170 x 170 mm)
Processor	i7 FC-PGA478 pin Pentium-M Up to 2.26GHz (FSB533MHz)
Chipset	NB : Intel 915GME SB: Intel ICH6M
System Memory	Support Two 240-pin DDRII SDRAM DIMM Socket Up to 2GB
VGA/LCD Controller	Intel® Graphics Media Accelerator (GMA) 900 graphics core with DVI, LVDS and CRT support (Support dual independent display)
Ethernet	Dual Realtek RTL8111B Gigabit Ethernet
I/O Chips	WINBOND W83627HG
BIOS	Phoenix-Award PnP Flash BIOS
Audio	ALC655 AC'97 Codec, supports MIC-in/Line-in/Line-out
Serial ATA	2 x Serial ATA with 150MB/s transfer rate
ATA/IDE	1 x Ultra DMA 100, support 2 IDE drives
Flash Disk	1 x Type II Compact Flash Disk Socket (Share IDE resource)
Serial Port	2 x COM ports COM 1: RS-232 COM 2: RS-232/422/485 Select
Parallel Port	Supports SPP/EPP/ECP mode
K/B and Mouse	1 x PS2 K/B and Mouse
USB Port	8 x USB 2.0
DIO	8 bit programmable Digital I/O
TV out	6-pin mini wafer
LCD	18/36 bit LVDS
Expansion Interface	PCI ExpressX16 slot for High-performance Graphics Card or PCI ExpressX1 device 1 x Mini PCI socket
Hardware Monitor Chip	Integrated in W83627HG
RTC	Support Real Time Clock
Power Input Connector	ATX Power Connector
Operation Temp.	0°C ~ 60°C
Watchdog Timer	255-level Reset
Dimension (L x W)	170 x 170 mm (6.7" x 6.7")

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Jumper/Connector Quick Reference

Jumpers

Label	Function
JBAT1	Clear CMOS
JRS1	COM2 RS-232/422/485 Select
JV/LCD1	LVDS1 LCD Voltage Select
JFSB1	Front side bus clock Select

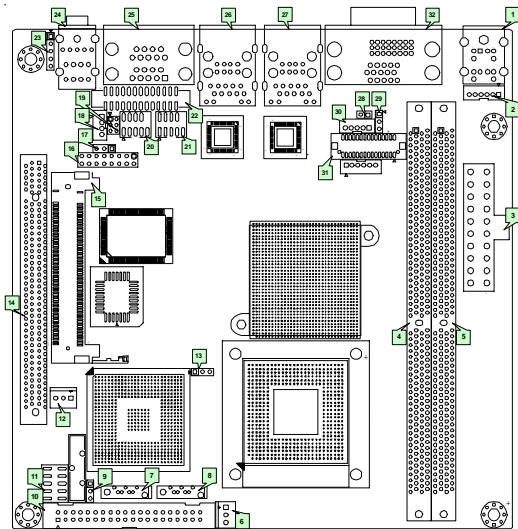
Connectors

ATXP1	ATX Power Connector
AUDIO1	Audio interface Port
CPUF1	CPU FAN Connector
SYSF1	System FAN Connector
DIMM1,2	240-pin DDR2 DIMM Socket
DIO1	Digital I/O Connector
IDE1	Primary IDE Connector
PCIE1	PCI ExpressX16 Interface Slot
MINIPCI1	Mini PCI Interface
LVDS1	LVDS LCD Panel Connector
INV1	LCD Inverter Connector
IR1	Infrared (IR) Connector
SATA 1, 2	Serial ATA 1, 2 Connector
LPT1	Parallel Port or Floppy Connector
CON1	RS-422/485 USB Connector
USB1, 2	USB Connector
KBM1/KBM2	PS/2 Keyboard and Mouse
VGA1	CRT Display & DVI Connector
LAN1, LAN2	Ethernet +USB Connector
JFRT1	Front Panel (Switches and Indicators)
CFD1	Compact Flash Socket
JPWR1	AT/ATX Power Type Selection

Note:

1. LPT/FDD select by BIOS
2. Compact Flash share by IDE1 resources, can not Hot swap

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01 KBM1	06 CPUF1	11 DIO1	16 JFRT1	21 USB2	26 LAN1	31 LVDS1
02 KBM2	07 SATA1	12 SYSF1	17 JV1	22 LPT1	27 LAN2	32 VGA1
03 ATXP1	08 SATA2	13 JFSB1	18 COM1	23 IR1	28 JPWR1	
04 DIMM1	09 JBAT1	14 PCIE1	19 JRS1	24 AUDIO1	29 JVLCD1	
05 DIMM2	10 IDE1	15 MINIFCH1	20 USB1	25 COM1	30 INV1	

01 Keyboard & PS/2 Mouse (KBM1)

Type: Standard Mini-Din connector

02 Keyboard & PS/2 Mouse (KBM2)

Type: 6-pin wafers connector

Pin	Description	Pin	Description
1	KB_DATA	2	GND
3	MS_DATA	4	KB_CLK
5	VCC	6	MS_CLK

03 ATX Power Connector (ATXP1)

04 05 DIMM1, DIMM2

06 12 CPU/System Fan Connector (CPUF1/SYSF1)

Type: Onboard 3-pin wafers connector

Pin	Description
1	GND
2	+12V
3	Fan_Detect

07 08 Serial ATA (SATA1/SATA2)

High speed transfer rates (150MB/sec)

Type: Standard 7-pin SATA connector

Pin	Description
1	GND
2	TX+
3	TX-
4	GND
5	RX+
6	RX-
7	GND

09 CMOS Setup (JBAT1)

Type: Onboard 3-pin header

CMOS Setup	JBAT1
Keep CMOS	1-2 ON
Clear CMOS	2-3 ON

10 IDE Connector (IDE1)

Type: Standard 2.54mm 40-pin box header

Pin	Description	Pin	Description
1	DIO1	2	DIO2
3	DIO3	4	DIO4
5	DIO5	6	DIO6
7	DIO7	8	DIO8
9	+5V	10	GND

11 Digital I/O Connector (DIO1)

Type: Onboard 2.54mm 2*5-pin header

Pin	Description	Pin	Description
1	VDD	2	VDD
3	TX1CLK+	4	TX2CLK+
5	TX1CLK-	6	TX2CLK-
7	GND	8	GND
9	TX1D0+	10	TX2D0+
11	TX1D0-	12	TX2D0-
13	GND	14	GND
15	TX1D1+	16	TX2D1+
17	TX1D1-	18	TX2D1-
19	GND	20	GND
21	TX1D2+	22	TX2D2+
23	TX1D2-	24	TX2D2-
25	GND	26	GND
27	NC	28	NC
29	NC	30	NC

31 LVDS LCD Connector (LVDS1)

Type: Onboard DF-13-30DP-1.25V

Pin	Description	Pin	Description
1	VDD	2	VDD
3	TX1CLK+	4	TX2CLK+
5	TX1CLK-	6	TX2CLK-
7	GND	8	GND
9	TX1D0+	10	TX2D0+
11	TX1D0-	12	TX2D0-
13	GND	14	GND
15	TX1D1+	16	TX2D1+
17	TX1D1-	18	TX2D1-
19	GND	20	GND
21	TX1D2+	22	TX2D2+
23	TX1D2-	24	TX2D2-
25	GND	26	GND
27	NC	28	NC
29	NC	30	NC

VDD could be selected by JVLCD1 in +5V or +3.3V.

32 CRT/DVI Connector (VGA1)

13 Front Side BUS Clock Select (JFSB1)

Type: onboard 1*3-pin header

JFSB1	1-2	2-3
Front side bus	400MHz	533MHz
Default setting:	400MHz	

14 PCI ExpressX16 Interface Slot (PCIE1)

15 Mini PCI Interface (MINIFCH1)

16 Switches and Indicators (JFRT1)

Type: Onboard 16-pin header

Pin	Description	Pin	Description
1	Power LED+	2	PWRBTN+
3	GND	4	PWRBTN-
5	GND	6	RESET+
7	HDD LED+	8	RESET-
9	HDD LED-	10	SPEAKER+
11	SMBCLK	12	SPEAKER-
13	SMBDATA	14	SPEAKER-
15	GND	16	SPEAKER-

17 COM1 Power Source Special Support (JV1)

Type: onboard 1*3-pin header

COM1 Power SourceSupport	JV1
Standard	2-3
POS: 5V on Pin1	1-2
Default setting:	Standard

18 RS-422/485 Output Connector (CON1)

Type: Onboard 2.0mm 4-pin wafers connector

Pin	RS-422	RS-485
1	TX+	DATA+
2	TX-	DATA-
3	RX+	N.C
4	RX-	N.C

RS-422/RS-485 Select by JRS1, share COM2 resource.

19 Serial Port Selection (RS232C/422/485) (JRS1)

The onboard COM2 port can be configured to operate in RS-422 mode or in different RS-422/485 modes.

Mode Selection	1-2	3-4	5-6
RS-232	ON	OFF	OFF
RS-422	OFF	ON	OFF
RS-485	OFF	OFF	ON

Default setting: RS-232

20 21 USB Connector (USB1/USB2)

Type: Onboard 2.54mm 10-pin header for two USB ports

Pin	Description	Pin	Description
1	+5V	2	+5V
3	USBD-	4	USBD-
5	USBD+	6	USBD+
7	GND	8	GND
9	GND	10	N.C

22 Parallel Port Connector (LPT1)

Type: Onboard 2.0mm 2*13-pin box header

Pin	Description	Pin	Description
1	STROBE	14	AFD
2	PTD0	15	ERROR
3	PTD1	16	INIT
4	PTD2	17	SLIN
5	PTD3	18	GND
6	PTD4	19	GND
7	PTD5	20	GND
8	PTD6	21	GND
9	PTD7	22	GND
10	ACK	23	GND
11	BUSY	24	GND
12	FE	25	GND
13	SELECT	26	Key(N/C)

LPT1: Floppy Drive Connector

LPT1 can be configured as a connector of floppy disk drive interface through BIOS setup

Type: Onboard 2.0mm 2*13-pin box header

Pin	Description	Pin	Description
1	NC	14	RWC-
2	RINDEX-	15	HEAD-
3	TRAKO-	16	DIR-
4	WP-	17	STEP-
5	RDATA-	18	GND
6	DSKCHG-	19	GND
7	NC	20	GND
8	NC	21	GND
9	NC	22	GND
10	DSB-	23	GND
11	MOB-	24	GND
12	WD-	25	GND
13	WE-	26	Key(N/C)

23 Infrared Connector (IR1)

Type: onboard 2.54mm 5-pin header

Pin	Description
1	+5V
2	NC
3	IRRX
4	GND
5	IRTX

24 Audio Interface Port (AUDIO1)

AC' 97 Audio



25 RS-232 Serial Port (COM1)

Type: Two D-SUB 9 connector

26 27 USB/LAN Connector (LAN1/LAN2)

This connector supports USB 2.0 x 4 (USB 0, 1, 2, 3) & Gigabit RJ-45 Ethernet Connector.

28 AT/ATX Power Mode Select (JPWR1)

Type: Onboard 1*2-pin header

JPWR1 Select	1-2
AT-MODE	SHORT
ATX-MODE	OPEN

Default setting: ATX MODE

29 LCD Voltage Selection (JVLCD1)

Type: Onboard 3-pin header

The voltage of LCD panel could be selected by JVLCD1 in 5V or 3.3V.

Mode	JVLCD1
3.3V	2-3
5V	1-2

Default setting: 3.3V

30 LCD Inverter Connector (INV1)

Type: Onboard 5-pin wafers connector

Pin	Description	Pin	Description
1	+12 V	2	GND
3	Backlight on/off	4	Brightness control
5	GND		