

# Quick Installation Guide

Version 1.0

## EmCORE-i315

386SX Onboard 40MHz CPU with  
4MB EDO, Ethernet, 2 serial port  
and DiskOnChip socket

Part Number:7003150010010

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## About this Quick Installation

This Quick Installation provides general information and installation instructions about the product. This Quick Installation is intended for experienced users and integrators with hardware knowledge of personal computers. If you are not sure about any description in this Quick Installation, please consult your vendor before further handling.

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# Warning

Single Board Computers and their components contain very delicate Integrated Circuits (IC). To protect the Single Board Computer and its components against damage from static electricity, you should always follow the following precautions when handling it :

1. Disconnect your Single Board Computer from the power source when you want to work on the inside
2. Hold the board by the edges and try not to touch the IC chips, leads or circuitry
3. Use a grounded wrist strap when handling computer components.
4. Place components on a grounded antistatic pad or on the bag that came with the Single Board Computer, whenever components are separated from the system

## Technical Support

If you have any technical difficulties, please consult the user's manual first at:

<ftp://ftp.arbor.com.tw/pub/install>

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](mailto:info@arbor.com.tw)

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## Specifications

### **System:**

- CPU + Chipset: 386SX Onboard 40MHz CPU, embedded in Ali M6117C Chipset
- System Memory: 4MB EDO RAM standard onboard

### **Multi I/O:**

- Serial: Two RS-232C/485 ports (COM 1/COM2)
- Parallel: Supports SPP, EPP and ECP mode
- 16-bit Digital I/O

### **LAN:**

- Chipset: Realtek 8019AS single chip, 10Mbps, NE2000 compatible

### **Flash Disk:**

- DiskOnChip2000 socket : supports 16MB ~ 1GB Flash Disks

### **Mechanical and Environmental:**

- Operating Temperature: -20 to 70°C
- Power: Single +5V @400mA

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## Packing list

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

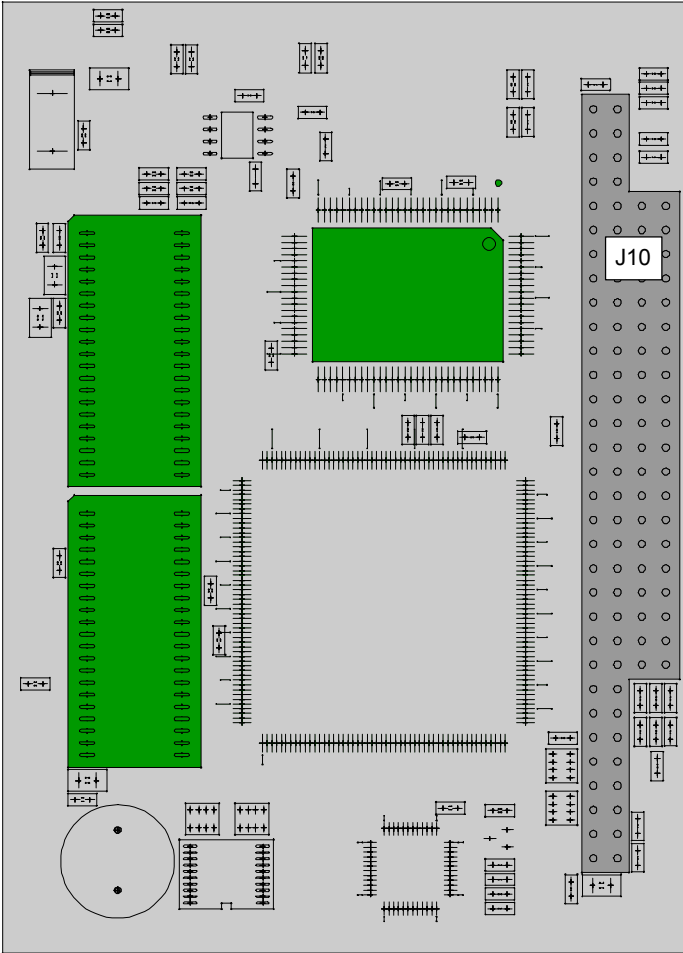
- > 1 x EmCORE-i315DL
- > 1 x Quick Installation Guide
- > 1 x CD driver
- > 1 x Warranty Card

## Ordering Codes

**EmCORE-i315DL** 386SX Onboard 40MHz CPU with 4MB EDO, Ethernet, 2 serial port and DiskOnChip socket

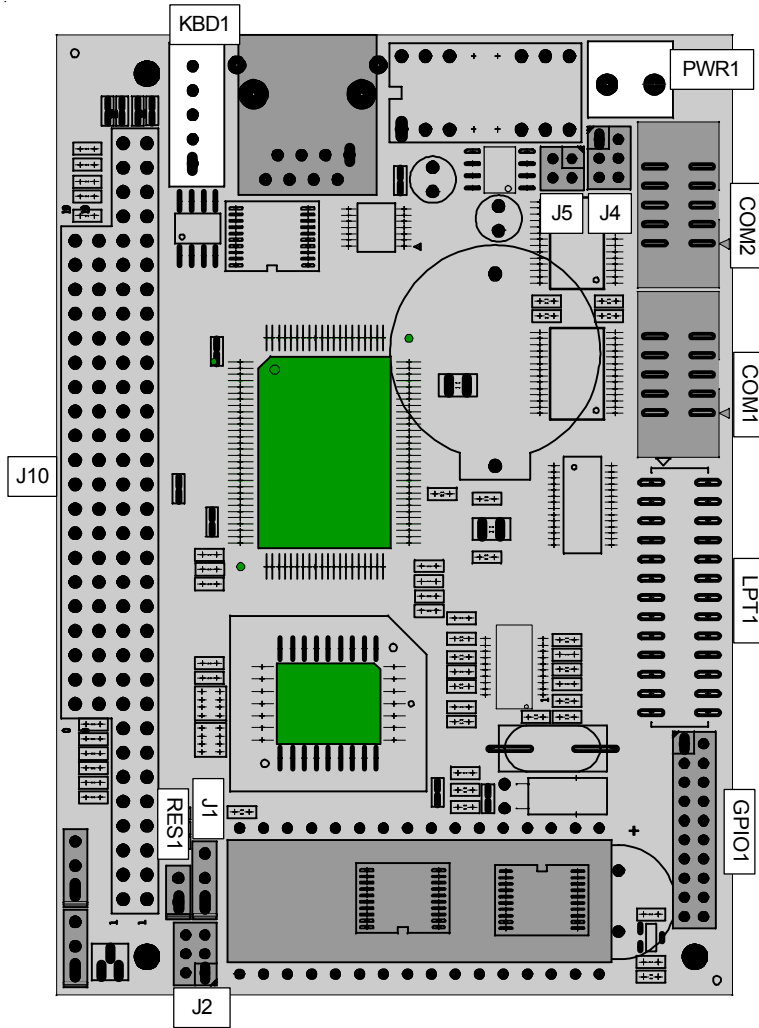
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**Board Layout Top View (Front)**

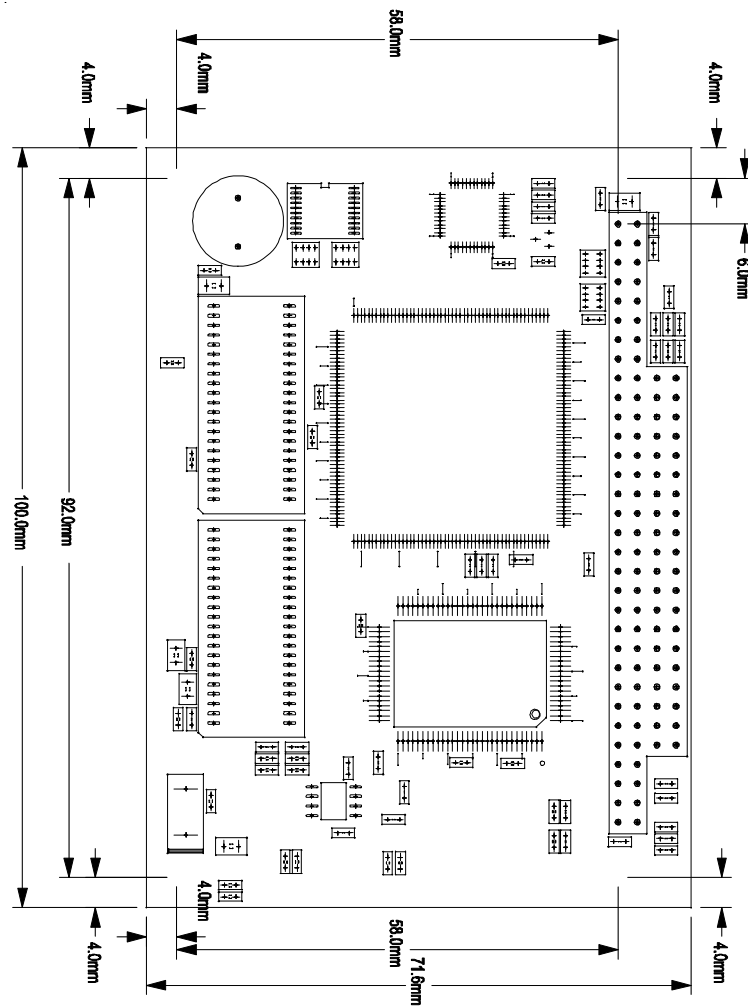


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Board Layout Top View (Back)



# Board Dimension





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## Jumper Quick Reference

### Jumpers

Lable	Function
J1	Clear CMOS
J4	RS-232& RS-485 Selection on COM1&COM2
J2	DOC, Flash and EEPROM address selection
RES1	Reset Function

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## Connector Quick Reference

### Connectors

Lable	Function
J10	PC104 Connector
GPI01	GPIO Connector
COM1	RS232 Serial Port: COM1
COM2	RS232 Serial Port: COM2
KBD1	Keyboard Connector
LAN1	10/100M LAN1 Connector
J3	10/100M LAN1 Connector FOR OEM
LPT1	Parallel Port
PWR1	2P Power Connector

## CMOS Jumper Settings

### CMOS Operation (J1)

Type : J1: onboard 3-pin header



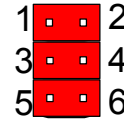
If the EmCORE-i315 refuses to boot due to inappropriate CMOS settings here is how to proceed to clear (reset) the CMOS to its default values.

CMOS Setup (J1)	J1	Status
Normal Operation	1-2	ON
Clear CMOS	2-3	ON
default setting	1-2 ON	

## DOC / Flash / EEPROM Selection

### DOC, Flash and EEPROM Selection (J2)

Type : J2: onboard 2x3-pin header



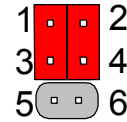
### Mode Setting (J2)

1-2	3-4	5-6	
ON	ON	ON	DOC D0000
OFF	ON	ON	DOC D8000
ON	OFF	ON	FLASH D0000
OFF	OFF	ON	FLASH D8000
OFF	ON	ON	FLASH D4000
OFF	ON	OFF	EPROM D0000
ON	OFF	OFF	EPROM D8000
OFF	OFF	OFF	ALL OPEN
Deafult setting			DOC D0000

## Serial Port Selection (RS232C/485)

### RS-232C/485 Mode select (J4)

Type : J4: onboard 6-pin(2\*3) header



### RS-422/485 Mode on COM1 & COM2

The onboard COM1 and COM2 port can be configured to operate in RS-485 modes. Jumper J4 switches between RS-232C or RS-485 mode. All of the RS-232C/485 modes are available on COM1 or COM2.

#### COM2

Pin Defined:	RS-232C	RS-485
Pin1 :	DCD	RTx+
Pin2 :	RXD	RTx-
Pin8 :	CTS	x
Pin9 :	RI	x

J4 Selection	1-3	2-4	3-5	4-6
RS-232C	ON	ON	OFF	OFF
RS-485	OFF	OFF	J5(1-2)	J5(3-4)

default setting RS-232C

## Reset System

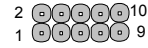
### Reset System (RES1)

Type: Onboard 2-pin header



Pin	Description
1	RST
2	GND

## COM1 & COM2 Connector



Connector : **COM1**  
Type : onboard 10-pin box header

**COM1  
&  
COM2**

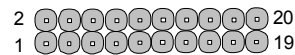
Pin	Description	Pin	Description
1	DCD1(485DATA1+)	2	RXD1(485DATA1-)
3	TXD1	4	DTR1
5	GND	6	DSR1
7	RTS1	8	CTS1
9	RI	10	NC

Connector : **COM2**  
Type : onboard 10-pin box header

Pin	Description	Pin	Description
1	DCD2(485DATA2+)	2	RXD1(485DATA2-)
3	TXD2	4	DTR2
5	GND	6	DSR2
7	RTS2	8	CTS2
9	RI	10	NC

## 16-Bit General Purpose I/O

Connector : **GPIO1**  
Type : onboard 20-pin box header



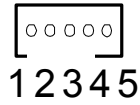
**GPIO1**

Pin	Description	Pin	Description
1	GND	2	VCC
3	GPI0	4	GPO0
5	GPI1-	6	GPO1
7	GPI2	8	GPO2
9	GPI3	10	GPO3
11	GPI4	12	GPO4
13	GPI5	14	GPO5
15	GPI6	16	GPO6
17	GPI7	18	GPO7
19	VCC	20	GND

## Keyboard Connector

Connector : **KBD1**

Type : onboard waver 5-pin



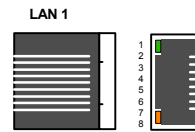
Pin	Description	Pin	Description
1	KB_CLK	2	KB_DATA
3	N/A	4	GND
5	Vcc		

## Fast Ethernet Connectors

LAN Port (10/100Mbps)

Connector : **LAN1**

Type : external RJ-45 on bracket



Pin	1	2	3	4	5	6	7	8
Description	TX+	TX-	RX+	NC	NC	RX-	NC	NC

Connector : **LAN1 (OEM)**

Type : Onboard 2x4 pin connector

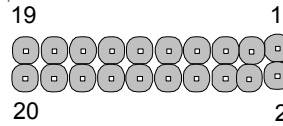


Pin	1	2	3	4
Description	TCT	TX-	RX+	NC
Pin	5	6	7	8
Description	RX-	NC	NC	NC

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## LPT1

Type : Onboard 20-pin header

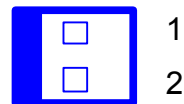


Pin	Description	Pin	Description
1	STROBE	14	AFD
2	PTD0	15	ERROR
3	PTD1	16	INIT
4	PTD2	17	SLIN
5	PTD3	18	GND
6	PTD4	19	GND
7	PTD5	20	GND
8	PTD6	21	GND
9	PTD7	22	GND
10	ACK	23	GND
11	BUSY	24	GND
12	PE	25	GND
13	SELECT	26	GND

## Power Connector

Connector:PWR1

Type : onboard 2-pin Wafer connector



Pin	Description
1	GND
2	Vcc