

ISA-2631CMLDN

**Half size ISA Vortex86 800MHz SBC
With PC/104, CRT/LCD and LAN**

Quick Installation Guide

Version 1.0

Form Factor Half size SBC	CPU Vortex86 800MHz	Chipset Vortex86
VGA/ LCD Controller XGI Volari Z9s	LAN Intergraded 10/100M Ethernet	I/O ISA/PC104/USB/IDE / LPT /COM

Specifications

Processor	Vortex86DX compatible x86
Chipset	Vortex86DX
BIOS	AMI adjustable from 33 ~ 300MHz
System Memory	256MB DDR2 onboard
VGA/LCD Controller	XGI Volari Z9s, 32MB On board
Display	VGA,TFT/TTL LCD,LVDS
Ethernet	Intergraded 10/100M Ethernet
Operation Temperature	-20°C to +70°C
IDE Interface	1x Channels Ultra-DMA 100, ,1x 40pin IDE
Serial Port	4 x Serial ports :3 x RS232 & 1x RS-232/422/485
K/B and Mouse	1 x PS/2 Keyboard/Mouse
Universal Serial Bus	4 x ports USB 2.0
Parallel Port	1 x SPP/EPP/ECP mode
Form Factor	185 mm X 122mm
GPIO	1 x 16-bit GPIO Port
Expansion Interface	1x CF ,PC/104 slot, PC/104+ slot (Optional)
Watchdog Timer Chipset	127-level Reset
RTC	Internal RTC
Debug Port	JTAG
Power	Single voltage +5V



Jumper/Connector Quick Reference

Jumpers Setting

Label	Function
JBAT1	CMOS Jumper Settings
	Clear CMOS
JRS1	COM1 RS232/422/485 Select
	RS232/422/485 Select

CMOS Jumper Settings(JBAT1)

Type: onboard 3-pin header

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

Default setting: Keep CMOS

COM2 RS-232 / 422/485 Select (JRS1)

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

JRS1 Select	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 mode

CRT Display Connector(J33)

Type: Onboard DB15 Connector

Pin	Description	Pin	Description
1	RED	2	GREEN
3	BLUE	4	N/C
5	GND	6	GND
7	GND	8	GND
9	+5V(Poly S/W)	10	GND
11	N/C	12	VDDAT
13	HSYNC	14	VSYNC
15	VDCLK		

Display type setup CRT /LCD

GPIOA	Description
1	VCC
2	GPIOA
3	GND

GPIOB	Description
1	VCC
2	GPIOB
3	GND

GPIOE	Description
1	VCC
2	GPIOE
3	GND

GPIOF	Description
1	VCC
2	GPIOF
3	GND

GPIO Port (GPIO1)

Type: onboard 2X10Pin Header (2.00mm)

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

Connector Quick Reference

Connectors

LABEL	Function
LPT1	Parallel Port
JVLCD1	LVDS LCD Connector
PC1	PC104 for ISA Interface
GPIO1	16BIT GPIO Connector
LAN1	Ethernet Connector
COM1	Serial Port 1
COM2/3/4	Serial Port 2/3/4
RS1	COM2 RS422/485 Connector
IDE1	Primary IDE Connector
PWR1	Big 4Pin Power Connector
JTAG1	JTAG Connector
USB	USB1/2/3/4 Connector
KB/MS1	PS/2 Keyboard and Mouse
HDLED1	Harddisk LED Connector
RST1	System Reset Connector
SPK1	System Speaker Connector
CF1	Compact Flash Socke

LVDS LCD Connector(J34)

Type: onboard 2*8-pin header(2.00mm)

Pin	Description	Pin	Description
1	VDD	2	VDD
3	GND	4	GND
5	TX1D0+	6	TX1D0-
7	TX1D1-	8	GND
9	GND	10	TX1D1+
11	TX1D2+	12	TX1D2-
13	TX1CLK+	14	GND
15	GND	16	TX1CLK-

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

Ethernet Connector(LAN1)

Type: onboard RJ45 Connector

Pin	Description	Pin	Description
1	TX+	2	TX-
3	RX+	4	D2+
5	D2-	6	RX-
7	D3+	8	D3-
9	LAN GND	10	Key

RS-232 Serial Port (COM1)

Type: onboard DB9 Connector

Pin	Description	Pin	Description
1	DCDA	2	SINA
3	SOUTA	4	DTRA
5	GND	6	DSRA
7	RTSA	8	CTSA
9	RIA	10	NC

RS-232 Serial Port (COM2/3/4)

Type: onboard 2X5 BOX HEADER(2.54mm)

Pin	Description	Pin	Description
1	DCDB	2	SINB
3	SOUTB	4	DTRB
5	GND	6	DSRB
7	RTSB	8	CTSB
9	RIB	10	NC

RS422/485 Connector(RS1)

Type: onboard 2.54mm pitch 4-pin (2*2) header

Pin	R422	R485
1	RX-	DATA+
2	RX+	DATA-
5	TX-	N.C
6	TX+	N.C

Enhanced IDE Connector(IDE1)

Type: onboard 40-pin 2.54mm box headers

Pin	Description	Pin	Description
1	IDE RESET	2	GND
3	DATA7	4	DATA8
5	DATA6	6	DATA9
7	DATA5	8	DATA10
9	DATA4	10	DATA11
11	DATA3	12	DATA12
13	DATA2	14	DATA13
15	DATA1	16	DATA14
17	DATA0	18	DATA15
19	GND	20	N/C
21	REQ	22	GND
23	IO RWITE	24	GND
25	IO READ	26	GND
27	IO READY	28	IDESEL
29	DACK	30	GND
31	IRQ14	32	N/C
33	ADDR1	34	ATA66 DETECT
35	ADDR0	36	ADDR2
37	CS#2	38	CS#3
39	IDEACTP	40	GND

Power Connector(PWR1)

Pin	Description
1	+5V
2	GND
3	GND
4	+12V

JTAG1

Type: onboard 2.0MM pitch 6-pin (6*1) header

Pin	Description
1	VCC
2	TCK
3	TDO
4	TDI
5	TMS
6	GND

USB Connector (USB1/2)

Type: onboard 2.0pitch 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

KB/MS Connector(KB/MS1)

Type: onboard PS2 Connector

Pin	Description
1	KBCLK
2	MSCLK
3	GND
4	KBDAT
5	MSDAT
6	VCC
7	GND
8	GND
9	GND

Parallel Port(LPT1)

Type: onboard 2x13 BOX HEADER(2.54mm)

Pin	Description	Pin	Description
1	#STB	2	#AFD
3	PD0	4	#ERR
5	PD1	6	#INIT
7	PD2	8	#SLIN
9	PD3	10	GND
11	PD4	12	GND
13	PD5	14	GND
15	PD6	16	GND
17	PD7	18	GND
19	#ACK	20	GND
21	BUSY	22	GND
23	PE	24	GND
25	SLCT	26	GND

HDLED1

Type: onboard 2.54mm pitch 2-pin (2*1) header

Pin	Description	Pin	Description
1	HD LED-	2	HD LED+

RST1

Type: onboard 2.54mm pitch 2-pin (2*1) header

Pin	Description	Pin	Description
1	RESET -	2	RESET+

SPK1

Type: onboard 2.54mm pitch 2-pin (2*1) header

Pin	Description	Pin	Description
1	Speak+	2	Speak-

LCD Connector(J35)

Type: onboard 44-pin 2.00mm box headers

Pin	Description	Pin	Description
1	VDD	2	VDD
3	LG2	4	LG3
5	LG4	6	LG5
7	NC	8	NC
9	LR0	10	LR1
11	LR2	12	LR3
13	LR4	14	LR5
15	GND	16	NC
17	NC	18	NC
19	NC	20	GND
21	NC	22	NC
23	LB0	24	LB1
25	LB2	26	LB3
27	LB4	28	LB5
29	NC	30	NC
31	LG0	32	LG1
33	GND	34	GND
35	NC	36	LCLK
37	NC	38	LDE
39	NC	40	LHSYNC
41	NC	42	LVSYNC
43	LBACKL	44	LVDDEN

VDD could be selected by JLCD1 in +5V or +3.3V

LCD Panel Voltage Selects(JLCD1)

Type: onboard 3-pin header

LCD Voltage	JLCD1
3.3V	1-2
5V	2-3

Default setting:3.3V

Compact Flash Connector (CF1)

Pin	Description	Pin	Description
1	GND	26	GND
2	DATA3	27	DATA11
3	DATA4	28	DATA12
4	DATA5	29	DATA13
5	DATA6	30	DATA14
6	DATA7	31	DATA15
7	CS#1	32	CS#3
8	GND	33	GND
9	GND	34	IO READ
10	GND	35	IO WRITE
11	GND	36	+5V
12	GND	37	IRQ15
13	+5V	38	+5V
14	GND	39	CSEL
15	GND	40	N/C
16	GND	41	IDE RESET
17	GND	42	IO READY
18	ADDR2	43	N/C
19	ADDR1	44	+5V
20	ADDR0	45	DASP
21	DATA0	46	DIAG
22	DATA1	47	DATA8
23	DATA2	48	DATA9
24	N/C	49	DATA10
25	GND	50	GND

Compact Flash Card (CFC)

- Compact Flash Socket : supports

Type I/II

- Capacity : up to 8GB CFC

- Note :**
1. CF shares First IDE Master resource.
 2. CF does not support Hot Swap.