EPIC SBC with Intel Atom™ D2550 1.86GHz/N2600 1.6GHz processor, DDR3, Dual VGA/LVDS, Dual GbE, USB 2.0, Dual PCIe Mini, mSATA, SATA 3Gb/s,Audio

NANO-CV-D25502/N26002 Quick Installation Guide

Version 1.0

Jul. 19, 2012

Package List

NANO-CV-D25502/N26002 package includes the following items:

- 1 x NANO-CV-D25502/N26002 Single Board Computer
- 1 x Audio cable
- 1 x SATA with 5Voutput cable kit
- 1 x RS-232 cable
- 1 x Power cable
- 1 x Enclosure heatsink
- 1 x Mini jumper pack
- 1 x Utility CD (within manual)
- 1 x QIG (Quick Installation Guide)
- 1 x One Key Recovery CD

Specifications

- CPU:

  Intel® dual core Atom™ D2550 1.86GHz processor

  Intel® dual core Atom™ N2600 1.6GHz processor

  Intel® dual core Atom™ N2800 1.86GHz processor (Optional)
- System chipset: Intel® NM10
- BIOS: UEFI BIOS
- System memory:

  1 x 1066MHz DDR3 SO-DIMM up to 4GB for D2550 and N2800

  1 x 800MHz DDR3 SO-DIMM up to 2GB for N2600
- Graphics Engine:

  GMA 3650 at 640MHz graphics core speed for D2550 and N2800

  GMA 3600 at 400MHz graphics core speed for N2600
- Display Output:

  1 x VGA

  LVDS1 integrated in CPU

  Single-channel 24-bit LVDS by D2550, resolution up to 1440x900

  Single-channel 18-bit LVDS by N2600 and N2800, resolution up to 1366x768
- Ethernet:

  Dual Realtek RTL8111E PCIe GbE controllers, LAN1 with ASF2.0 support
- Super IO: Fintek F81866
- I/O Interface:

  3 x RS-232
  1 x RS-422/485
  2 x SATA 3Gb/s with 5V power connector (SATA1 and mSATA shares SATA signal)
  6 x USB 2.0 (4 on rear, 2 by pin header)
  1 x 6-pin wafer for PS/2 KB/MB
- Expansion:

  1 x full-size PCIe Mini card slot with mSATA support (SATA1 and mSATA shares SATA signal)

  1 x half-size PCIe Mini card slot

- Digital I/O: 8-bit programmable I/O
- Audio: Realtek ALC662 HD Audio Codec (Line-in, Line-out, Mic)
- Fan connector

  1 x 4-pin CPU fan connector

  1 x 3-pin system fan connector
- Watchdog Timer:

  Software programmable supports 1~255sec. System reset
- Power supply: 9~28V, AT/ATX support
- Power consumption:

  12V@1.59A (Intel® Atom™ dual core D2550 CPU with 1333MHz 4GB DDR3 memory)

  12V@1.23A (Intel® Atom™ dual core N2600 CPU with 1333MHz 4GB DDR3 memory)
- Temperature cperation:

  -20°C~60°C with free air, -20°C~70°C with force air for D2550

  -20°C~70°C with free air, -20°C~75°C with force air for N2600/N2800
- Humidity: Operation: 5%~95% non-condensing
- Dimensions: 115mm x 165mm
- Weight: GW: 850g/NW: 350g

Ordering Information

- NANO-CV-D25502-R10：
  EPIC SBC with Intel Atom D2550 1.86GHz,DDR3, dual VGA/ LVDS,dual GbE,USB 2.0,SATA 3Gb/s,mSATA and Audio
- NANO-CV-N26002-R10：
  EPIC SBC with Intel Atom N2600 1.60GHz,DDR3,dual VGA/ LVDS,dual GbE,USB 2.0,SATA 3Gb/s,mSATA and Audio
- NANO-CV-N28002-R10：
  EPIC SBC with Intel Atom N2800 1.86GHz,DDR3,dual VGA/ LVDS,dual GbE,USB 2.0,SATA 3Gb/s,mSATA and Audio (by project support, MOQ 100pcs / lot)
- 32001-008600-100-RS：Dual ports USB cable
- 32205-002700-100-RS：RS-232 cable
- 32205-003800-100-RS：RS-422/485 cable, 200mm
- 32000-133200-RS：PS/2 KB/MS Y cable

Jumpers setting and Connectors

LABEL	FUNCTION
JP2	Clear CMOS
JP1	AT/ATX Power Mode Setting
JP3	LVDS1 Voltage Selection
MSATA_SW1	MSATA / Mini PCIE Select
F_PANEL1	PWR & RST BUTTONS AND INDICATORS
VGA1 VGA2	VGA 15-pin Female Connector
LAN1 LAN2	LAN Connectors
KB_MS1	KEYBOARD & MOUSE Connectors
USB_CON2 USB_CON3	External 2 Port USB 2.0 Connectors
USB4	Internal Pin-header 2 USB 2.0 Connectors
COM1 COM2 COM3 COM4	Internal Serial Port Connectors
AUDIO1	HD Audio Connector
SATA1 SATA2	Serial ATA Connectors
SATA_PWR1 SATA_PWR2	SATA Power Connector
CPU_FAN1 SYS_FAN1	CPU & SYS Fan Connector
SATA_PWR1	SATA Power Connector
CPU_FAN1 SYS_FAN1	CPU and System Fan Connector
LVDS1 LVDS2	LVDS1 and LVDS2 Panel Connector
INV1 INV2	LVDS1 and LVDS2 Panel Backlight +12V Power Source
DIO1	Digital I/O Connector
CN2	Power & HDD LED Connector
M_PCIE1 M_PCIE2	Mini PCI-E Card Connector

JP2 : CMOS Setup Keep / Clear	
JP2	DESCRIPTION
Short 1-2 (default)	Keep CMOS Setup (Normal Operation)
Short 2-3	Clear CMOS Setup

JP3 : LVDS1 Voltage Selection	
JP3	DESCRIPTION
Short 1-2 (default)	+3.3V LVDS
Short 2-3	+5V LVDS

JP1 : AT/ATX Power Mode setting	
PIN NO.	DESCRIPTION
Short 1-2 (default)	ATX Power Mode
OFF	AT Power Mode

MSATA_SW1 : AT/ATX Power Mode setting	
MSATA_SW1	DESCRIPTION
OFF (default)	Auto-Detect
Short 1-2	Mini-PCIE

F_PANEL1 : External Switches and Indicators panel					
Function	PIN	DESCRIPTION	Function	DESCRIPTION	PIN
	1	NC	PWR_LED	PWRLED	6
PWR_BTN	2	PWRBTSW#		PWRLED	7
	3	GND		GND	8
HDD_LED	4	+V5S	RESET	RESET+	9
	5	HDD_LED-		GND	10

VGA1, VGA2 : 15-pin Female Connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	RED	2	GREEN
3	BLUE	4	NC
5	GND	6	GND
7	GND	8	GND
9	VCC	10	GND
11	NC	12	DDCDAT
13	HSYNC	14	VSYNC
15	DDCCLK		

LAN1, LAN2: RJ45 LAN Connector			
PIN NO.	**DESCRIPTION**	**PIN NO.**	**DESCRIPTION**
1	LAN1_MDI0+	7	LAN1_MDI2+
2	LAN1_MDI0-	8	LAN1_MDI2-
3.	LAN1_MDI1+	9	LAN1_MDI3+
4.	LAN1_MDI1-	10	LAN1_MDI3-

KB_MS1: 6-pin header KS/MS Connector	
PIN NO.	**DESCRIPTION**
1	VCC
2	Mouse Data
3	Mouse Clock
4	Keyboard Data
5	Keyboard Clock
6	GND

USB_CON2, USB_CON3 : External USB Connector			
PIN NO.	**DESCRIPTION**	**PIN NO.**	**DESCRIPTION**
1	USB_VCC	2	USB_VCC
3	DATA-	4	DATA-
5	DATA+	6	DATA+
7	GND	8	GND

USB4,USB5 : Internal USB Connector			
PIN NO.	**DESCRIPTION**	**PIN NO.**	**DESCRIPTION**
1	USB_VCC	2	GND
3	DATA-	4	DATA+
5	DATA+	6	DATA-
7	GND	8	USB_VCC

COM4 : Internal Serial Port Connector	
PIN NO.	**DESCRIPTION**
1	**RXD485#**
2	**RXD485+**
3	**TXD485+**
4	**TXD485#**

CON1, COM2, COM3 : Internal Serial Port Connectors	
PIN NO.	**DESCRIPTION**
1	**DATA CARRIER DETECT (DCD)**
2	**DATA SET READY (DSR)**
3	**RECEIVE DATA (RXD)**
4	**REQUEST TO SEND (RTS)**
5	**TRANSMIT DATA (TXD)**
6	**CLEAR TO SEND (CTS)**
7	**DATA TERMINAL READY (DTR)**
8	**RING INDICATOR (RI)**
9	**GND (GND)**
10	**GND (GND)**

AUDIO1 : Audio Line-In/Out MIC Connector			
PIN NO.	**DESCRIPTION**	**PIN NO.**	**DESCRIPTION**
1	SPK_R	2	LINE1_R
3	AUD_GND	4	AUD_GND
5	SPK_L	6	LINE1_L
7	AUD_GND	8	AUD_GND
9	MIC1_R	10	MIC1_L

SATA1, SATA2 : Serial ATA Connector			
PIN NO.	**DESCRIPTION**	**PIN NO.**	**DESCRIPTION**
1	GND	5	RX-
2	TX+	6	RX+
3	TX-	7	GND
4	GND	8	N/C

SATA_PWR1 : SATA Power Connector	
PIN NO.	**DESCRIPTION**
1	+5V
2	Ground

CPU_FAN1: CPU Fan Connector	
PIN NO.	**DESCRIPTION**
1	FANIO
2	+12V (PWM)
3	Ground

LVDS1: LVDS Connector			
PIN NO.	**DESCRIPTION**	**PIN NO.**	**DESCRIPTION**
1	GND	2	GND
3	LVDS_DATA0	4	LVDS_DATA0#
5	LVDS_DATA1	6	LVDS_DATA1#
7	LVDS_DATA2	8	LVDS_DATA2#
9	LVDS_CLK	10	LVDS_CLK#
11	LVDS_DATA3	12	LVDS_DATA3#
13	GND	14	GND
15	LDDC_DATA	16	LDDC_CLK
17	VCC_LCD	18	VCC_LCD
19	VCC_LCD	20	VCC_LCD

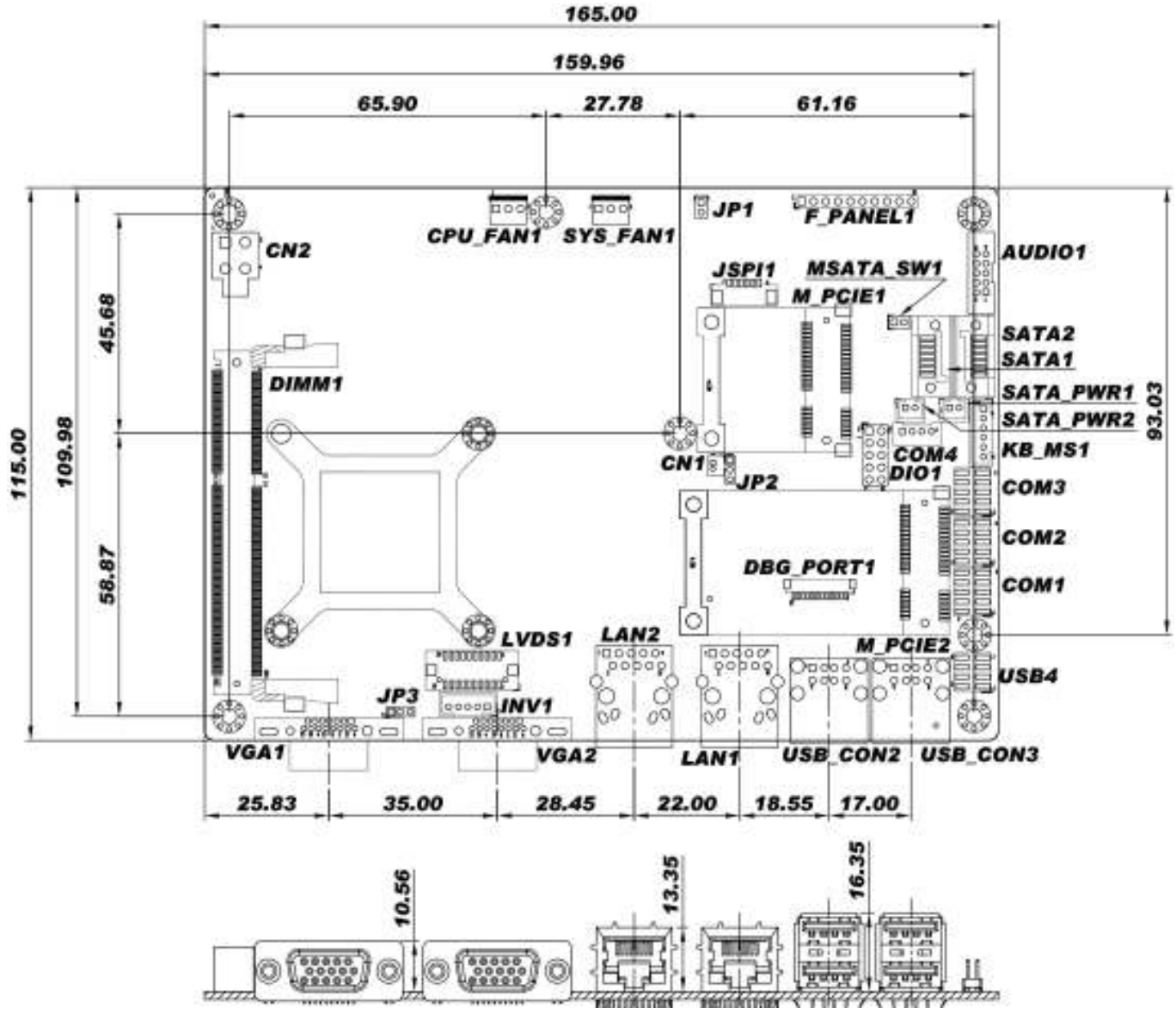
INV1 : 5-pin Header Inverter Connector	
PIN NO.	**DESCRIPTION**
1	LCD_BKLTCTL
2	GROUND
3	+12V
4	GROUND
5	BACKLIGHT ENABLE

DIO1 : Digital Input			
PIN NO.	**DESCRIPTION**	**PIN NO.**	**DESCRIPTION**
1	Ground	2	VCC
3	Output 3	4	Output 2
5	Output 1	6	Output 0
7	Input 3	8	Input 2
9	Input 1	10	Input 0

CN3 : +12V Power Connector	
PIN NO.	**DESCRIPTION**
1	GND
2	GND
3	+12V
4	+12V

M_PCIE1/ M_PCIE2: Mini PCI-E Card Connector			
PIN NO.	**DESCRIPTION**	**PIN NO.**	**DESCRIPTION**
1	PCIE_WAKE#	2	VCC3
3	N/C	4	GND
5	N/C	6	1.5V
7	N/C	8	N/C
9	GND	10	N/C
11	PCIE_CLK#	12	N/C
13	PCIE_CLK	14	N/C
15	GND	16	N/C
17	N/C	18	GND
19	N/C	20	N/C
21	GND	22	PCIRST#
23	PCIE_RXN	24	VCC3
25	PCIE_RXP	26	GND
27	GND	28	1.5V
29	GND	30	SMBCLK
31	PCIE_TXN	32	SMBDATA
33	PCIE_TXP	34	GND
35	GND	36	USBD-
37	GND	38	USBD+
39	VCC3	40	GND
41	VCC3	42	N/C
43	GND	44	N/C
45	N/C	46	N/C
47	N/C	48	1.5V
49	N/C	50	GND
51	N/C	52	VCC3

Board Layout: Jumper and Connector Locations



（**Unit:mm**）