

**EPIC with Intel® Core™2 Duo/Solo Processor, SATA, Dual
PCIe GbE,CFII, IDE, USB 2.0 and Audio**

NANO-9452

Quick Installation Guide

Version 4.0

Jun. 22. 2011

Packing List

NANO-9452 package includes the following items:

- 1 x NANO-9452 single board computer
- 2 x RS-232 Cable
- 1 x IDE Cable
- 1 x SATA Power cable
- 2 x SATA cable
- 1 x Power cable
- 1 x KB/MS cable
- 1 x mini jumper pack
- 1 x Utility CD
- 1 x QIG (quick installation guide)



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Specifications

- CPU: Socket M Intel® Core™2 Duo, Core™ Duo/ Solo with 667 MHz FSB
Intel® Celeron M with 533MHz FSB (Yonah core)
- System Chipset: Intel® 945GME + ICH7M
- BIOS: AMI BIOS
- System memory
 - 1x 200-pin SO-DIMM DDR2 400/533/667 MHz up to 2GB
- Ethernet: Dual PCIe Realtek RTL8111E GbE Controller with ASF2.0 remote control support
- I/O
 - 6 x USB 2.0
 - 2 x SATA
 - 1 x IDE
 - 3 x RS-232
 - 1 x RS-232/422/485
 - 1 x PS/2 for KB/MS
 - 1 x LPT
 - 1 x CFII
- Expansion: 1 x PCI-104 (PCI Bus)
- Super I/O: IT8712F
- Digital I/O: 8 bit digital I/O, 4-bit input/ 4 output by super I/O
- Audio
 - 5.1 channel audio kit with Realtek ALC655 AC'97 codec
 - 7.1 channel HD audio kit with Realtek ALC888 codec supports dual audio streams
- Display Integrated
 - VGA Integrated in Intel® 945GME
 - NTSC/ PAL TV Out
 - 480p/720p/1080i/1080p HDTV-out
 - 18/ 24 bit dual channel LVDS
- Watchdog Timer: Software programmable 1-255 sec. by super I/O
- Power supply: 12V only, AT/ATX support

- Power Consumption
12V@2.99A
(Intel Core™2 Duo T2500 2.0GHz, 2GB 800 MHz DDRII)
- Temperature: Operation:0~60°C (32~140°F)
- Humidity: Operation: 5%~95% non-condensing
- Dimension: 165mm x 115mm

Ordering Information

NANO-9452-R40

EPIC SBC Intel® Core™2 Duo, Core™ Duo/ Core Solo FSB 667MHz with VGA/LVDS/HDTV-out, Dual PCIe GbE ,SATAII and Audio

32000-044300-RS: USB Cable

19800-000110-RS: RS-232/422/485 Cable

AC-KIT08R-R10: 5.1 Channel Audio Kit with Realtek ALC655

AC-KIT-888HD-R10: 7.1 Channel HD Audio Kit with Realtek ALC888

Support Dual Audio Streams

CF-479B-RS: CPU cooler

32200-015100-RS: LPT Cable

32100-043403-RS: ATX function cable

32000-083701-RS: HDTV Cable

Jumpers setting and Connectors

J_CMOS1 : Clear CMOS Setup	
J_CMOS1	DESCRIPTION
1-2 (default)*	Keep CMOS Setup (Normal Operation)
Short 2-3	Clear CMOS Setup

JCF1 : configure CF Card type	
JCF1	DESCRIPTION
OFF (default)	Slave
Short 1-2	Master

JP1 : configure COM2 Mode	
JP1	DESCRIPTION
Short 1-2 (default)	RS - 232
Short 3-4	RS - 422
Short 5-6	RS - 485

J_VLVDS1 : Set The Panel Voltage	
J_VLVDS1	DESCRIPTION
1-2 (default)*	Set The Voltage Level Of Panel To VCC3(+3.3V)
Short 2-3	Set The Voltage Level Of Panel To VCC(5V)

JP2 : VIO Voltage select	
JP2	DESCRIPTION
Short 1-2	VCC(5V)
Short 2-3	VCC3(+3.3V)

INVERTER1: Panel Power Supply	
PIN	DESCRIPTION
1	BRIGHTNESS
2	GND
3	12V
4	GND
5	BL_EN

CPU_FAN1 : CPU Fan Connector	
PIN	DESCRIPTION
1	Rotation Signal
2	+12V
3	Ground

COM2 : Internal Serial Port Connector			
PIN	DESCRIPTION	PIN	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	N/C
11	TXD485+	12	TXD485#
13	RXD485+	14	RXD485#

LPT1 : Parallel Port Connector			
PIN	DESCRIPTION	PIN	DESCRIPTION
1	STROBE#	14	AUTO FORM FEED #
2	DATA0	15	ERROR#
3	DATA1	16	INITIALIZE#
4	DATA2	17	PRINTER SELECT LN#
5	DATA3	18	GND
6	DATA4	19	GND
7	DATA5	20	GND
8	DATA6	21	GND
9	DATA7	22	GND
10	ACKNOWLEDGE#	23	GND
11	BUSY	24	GND
12	PAPER EMPTY	25	GND
13	PRINTER SELECT	26	N/C

ATXCTL1 : ATX Connector	
PIN	DESCRIPTION
1	GND
2	PS_ON#
3	5VSB

IR1: IrDA connector	
PIN	DESCRIPTION
1	VCC
2	NC
3	IR-RX
4	GND
5	IR-TX

LVDS1: LVDS Connector	
PIN	DESCRIPTION
1	GND
2	GND
3	LVDS_DAP0
4	LVDS_DAN0
5	LVDS_DAP1
6	LVDS_DAN1
7	LVDS_DAP2
8	LVDS_DAN2
9	LVDS_CLKA
10	LVDS_CLKA#
11	LVDS_DAP3
12	LVDS_DAN3
13	GND
14	GND
15	LVDS_DBP0
16	LVDS_DBN0
17	LVDS_DBP1
18	LVDS_DBN1
19	LVDS_DBP2
20	LVDS_DBN2
21	LVDS_CLKB
22	LVDS_CLKB#
23	LVDS_DBP3
24	LVDS_DBN3
25	GND
26	GND
27	VCC_LCD
28	VCC_LCD
29	VCC_LCD
30	VCC_LCD

COM3 & COM4 : Internal Serial Port Connectors					
PIN	DESCRIPTION		PIN	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	N/C	

TV1: Video output for television	
S-Video Connector	
PIN	DESCRIPTION
1	GND
2	AGREEN_Y
3	GND
4	ARED_C
5	GND
6	ABLUE_CVBS

KB1: 6-pin Mini-DIN Keyboard/Mouse Connector	
PIN	DESCRIPTION
1	VCC
2	Mouse Data
3	Mouse Clock
4	Keyboard Data
5	Keyboard Clock
6	GND

USB01, USB23: Internal USB Connector			
USB01, USB23			
PIN	DESCRIPTION	PIN	DESCRIPTION
1	VCC	2	GND
3	DATA-	4	DATA+
5	DATA+	6	DATA-
7	GND	8	VCC

CN1 & CN2 : +12V MAIN POWER Connector			
PIN	DESCRIPTION	PIN	DESCRIPTION
1	GND	2	GND
3	+12V	4	+12V

CN3 : +5V Power Connector			
PIN	DESCRIPTION	PIN	DESCRIPTION
1	VCC	2	GND

J_AUDIO1 : Audio Source Connector			
PIN	DESCRIPTION	PIN	DESCRIPTION
1	AC97_SYNC	2	AC97_BITCLK
3	AC97_SDOUT	4	AC97_PCBEAP
5	AC97_SDIN	6	AC97_RST#
7	AC97_VCC	8	AC97_GND
9	AC97_12V	10	AC97_GND

DIO1 : Digital Input / Output Connector			
PIN	DESCRIPTION	PIN	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

F_PANEL1 : PWR & RST Buttons and Indicators panel					
	PIN	DESCRIPTION	PIN	DESCRIPTION	
PWRBTN	1	PWRBTBW-	2	VCC	Power LED
	3	GROUND	4	GROUND	
HDD LED	5	VCC	6	SYSRST-	RESET
	7	-HDLED	8	Ground	

JSPI : Program SPI connector			
PIN	DESCRIPTION	PIN	DESCRIPTION
1	SPI_VCC	2	GND
3	SPI_CS	4	SPI_CLK
5	SPI_SO	6	SPI_SI
7	NC	8	NC

Board Layout: Jumper and Connector Locations

