

COM Express Rev 2.0 Basic/Compact Type II Module, Intel® Atom™ D2550/N2600 Processor, VGA/LVDS, PCI, GbE, SATA 3Gb/s, USB and Audio, RoHS

ICE-CV- D25502

ICE-CV- N26002

Quick Installation Guide

Version 1.02

Dec. 28, 2012

Package Contents

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

- 1 x ICE-CV-D25502/N26002 single board computer
- 1 x Heat Spreader
- 1 x Heatsink
- 1 x Utility CD
- 1 x One Key Recovery CD
- 1 x QIG (Quick Installation Guide)



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Specifications

- Form Factor
PICMG COM Express R2.0 Type II for Compact size
95 mm x 95 mm
10-layers
- CPU
Intel® Atom™ N2600 dual-core processor 1.6GHz/512 x 2 L2 cache
Intel® Atom™ D2550 dual-core processor 1.86GHz/512 x 2 L2 cache
- PCH
Intel® NM10
- Memory
Intel® Atom™ N2600 dual-core processor 1.6GHz/512 x 2 L2 cache (system max. 2GB)
Intel® Atom™ D2550 dual-core processor 1.86GHz/512 x 2 L2 cache (system max. 4GB)
Supports 1.35V DDR3L
- BIOS
UEFI BIOS
- Graphic Engine
Intel® GMA 3650 Graphic core 640MHz for D2550
Intel® GMA 3600 Graphic core 400MHz for N2600
Support for DX9, Blu Ray 2.0
MPEG2, h.264, VC-1, 1080p decode

- Display Output
VGA Integrated in the Intel® N2600/D2550 signal to base board
1 x CRT
1 x single Channel LVDS 18/24 bit (N2600: 18bit ; D2550: 24 bit)
- Ethernet
RTL RTL8111E-VL-CG Gbe Ethernet
Co- lay RTL8111E-VB-GR
- Embedded Controller
iWDD (ITE)
- USB
8 x USB 2.0 signal to base board
- SATA
2 x SATA 3GB/s signal to base board
- Audio
High definition audio interface to base board
- GPIO
YES, to base board
- SMBus
YES, to base board
- I2C
YES, to base board
- LPC
YES, to base board
- SPI
YES, to base board
- Serial port
2 serial ports to base board
- Expansion
3 x PCIe x1 signal to base board
- PCI
YES, to base board
- Watchdog Timer
Software programmable support 1~255 sec. system reset (By EC)

- Power Consumption
+12V@0.45A, Vcore _12V@1.0A
- Operating Temperature
-10°C ~ 60°C
- Operating Humidity
5% ~95%, non-condensing
- Diemension
95 mm x 95 mm
- Weight GW: 600g/NW: 200g

Ordering Information

ICE-CV-D25501-R10: COM Express Rev 2.0 Basic/Compact Type II Module, Intel® Atom™ D2550 Processor, VGA/LVDS, PCI, GbE, SATAII, USB and Audio, RoHS

ICE-CV-N26002-R10: COM Express Rev 2.0 Basic/Compact Type II Module Intel® Atom™ N2600 Processor, VGA/LVDS, PCI, GbE, SATAII, USB and Audio, RoHS

ICE-DB-9S-R10: Baseboard for COM Express Type 2 modules

Table of Connectors

LABEL	FUNCTION
J1 J2	COM Express connector AB & CD

J2 : COM Express Connector CD

Pin No.	DESCRIPTION	Pin No.	DESCRIPTION
C1	GND0	D1	GND15
C2	RSVD	D2	RSVD
C3	RSVD	D3	RSVD
C4	RSVD	D4	RSVD
C5	RSVD	D5	RSVD
C6	RSVD	D6	RSVD
C7	RSVD	D7	RSVD
C8	RSVD	D8	RSVD
C9	RSVD	D9	RSVD
C10	RSVD	D10	RSVD
C11	GND1	D11	GND16
C12	RSVD	D12	RSVD
C13	RSVD	D13	RSVD
C14	RSVD	D14	RSVD
C15	PCI_PME#	D15	RSVD
C16	PCI_GNT2#	D16	RSVD
C17	PCI_REQ2#	D17	RSVD
C18	PCI_GNT1#	D18	RSVD
C19	PCI_REQ1#	D19	PCI_GNT3#
C20	PCI_GNT0#	D20	PCI_REQ3#
C21	GND2	D21	GND17
C22	PCI_REQ0#	D22	PCI_AD1
C23	PCI_RESET#	D23	PCI_AD3
C24	PCI_AD0	D24	PCI_AD5
C25	PCI_AD2	D25	PCI_AD7
C26	PCI_AD4	D26	PCI_CBE0#
C27	PCI_AD6	D27	PCI_AD9
C28	PCI_AD8	D28	PCI_AD11
C29	PCI_AD10	D29	PCI_AD13
C30	PCI_AD12	D30	PCI_AD15
C31	GND3	D31	GND18
C32	PCI_AD14	D32	PCI_PAR
C33	PCI_CBE1#	D33	PCI_SERR#
C34	PCI_PERR#	D34	PCI_STOP#
C35	PCI_LOCK#	D35	PCI_TRDY#
C36	PCI_DEVSEL#	D36	PCI_FRAME#
C37	PCI_IRDY#	D37	PCI_AD16

Pin	DESCRIPTION	Pin	DESCRIPTION
C38	PCI_CBE2#	D38	PCI_AD18
C39	PCI_AD17	D39	PCI_AD20
C40	PCI_AD19	D40	PCI_AD22
C41	GND4	D41	GND19
C42	PCI_AD21	D42	PCI_AD24
C43	PCI_AD23	D43	PCI_AD26
C44	PCI_CBE3#	D44	PCI_AD28
C45	PCI_AD25	D45	PCI_AD30
C46	PCI_AD27	D46	PCI_IRQC#
C47	PCI_AD29	D47	PCI_IRQD#
C48	PCI_AD31	D48	PCI_CLKRUN#
C49	PCI_IRQA#	D49	PCI_M66EN
C50	PCI_IRQB#	D50	GND20
C51	GND5	D51	PCI_CLK
C52	PEG_RX0+	D52	PEG_TX0+
C53	PEG_RX0-	D53	PEG_TX0-
C54	TYPE0#	D54	PEG_LANE_RV#
C55	PEG_RX1+	D55	PEG_TX1+
C56	PEG_RX1-	D56	PEG-TX1-
C57	TYPE1#	D57	TYPE2#
C58	PEG_RX2+	D58	PEG_TX2+
C59	PEG_RX2-	D59	PEG_TX2-
C60	GND7	D60	GND21
C61	PEG_RX3+	D61	PEG_TX3+
C62	PEG_RX3-	D62	PEG_TX3-
C63	RSVD1	D63	RSVD10
C64	RSVD2	D64	RSVD9
C65	PEG_RX4+	D65	PEG_TX4+
C66	PEG_RX4-	D66	PEG_TX4-
C67	RSVD3	D67	GND28
C68	PEG_RX5+	D68	PEG_TX5+
C69	PEG_RX5-	D69	PEG_TX5-
C70	GND9	D70	GND22
C71	PEG_RX6+	D71	PEG_TX6+
C72	PEG_RX6-	D72	PEG_TX6-
C73	SDVO_DATA	D73	SDVO_CLK
C74	PEG_RX7+	D74	PEG_TX7+
C75	PEG_RX7-	D75	PEG_TX7-
C76	GND8	D76	GND29
C77	RSVD4	D77	IDE_CBLID#
C78	PEG_RX8+	D78	PEG_TX8+

Pin	DESCRIPTION	Pin	DESCRIPTION
C79	PEG_RX8-	D79	PEG_TX8-
C80	GND10	D80	GND23
C81	PEG_RX9+	D81	PEG_TX9+
C82	PEG_RX9-	D82	PEG_TX9-
C83	RSVD5	D83	RSVD8
C84	GND6	D84	GND30
C85	PEG_RX10+	D85	PEG_TX10+
C86	PEG_RX10-	D86	PEG_TX10-
C87	GND35	D87	GND31
C88	PEG_RX11+	D88	PEG_TX11+
C89	PEG_RX11-	D89	PEG_TX11-
C90	GND27	D90	GND24
C91	PEG_RX12+	D91	PEG_TX12+
C92	PEG_RX12-	D92	PEG_TX12-
C93	GND11	D93	GND32
C94	PEG_RX13+	D94	PEG_TX13+
C95	PEG_RX13-	D95	PEG_TX13-
C96	GND12	D96	GND33
C97	RSVD6	D97	PEG_ENABLE#
C98	PEG_RX14+	D98	PEG_TX14+
C99	PEG_RX14-	D99	PEG_TX14-
C100	GND13	D100	GND25
C101	PEG_RX15+	D101	PEG_TX15+
C102	PEG_RX15-	D102	PEG_TX15-
C103	GND	D103	GND34
C104	VCC_12V1	D104	VCC_12V7
C105	VCC_12V2	D105	VCC_12V8
C106	VCC_12V3	D106	VCC_12V9
C107	VCC_12V4	D107	VCC_12V10
C108	VCC_12V5	D108	VCC_12V11
C109	VCC_12V6	D109	VCC_12V12
C110	GND14	D110	GND26

J1 : COM Express Connector AB			
Pin No.	DESCRIPTION	Pin No.	DESCRIPTION
A1	GND0	B1	GND15
A2	GBE0_MDI3-	B2	GBE0_ACT#
A3	GBE0_MDI3+	B3	LPC_FRAME#
A4	GBE0_LINK100#	B4	LPC_AD0
A5	GBE0_LINK1000#	B5	LPC_AD1
A6	GBE0_MDI2-	B6	LPC_AD2
A7	GBE0_MDI2+	B7	LPC_AD3
A8	GBE0_LINK#	B8	LPC_DRQ0#
A9	GBE0_MDI1-	B9	LPC_DRQ1#
A10	GBE0_MDI1+	B10	LPC_CLK
A11	GND1	B11	GND16
A12	GBE0_MDI0-	B12	PWRBRN#
A13	GBE0_MDI0+	B13	SMB_CK
A14	GBE0_CTREF	B14	SMB_DAT
A15	SUS_S3#	B15	SMB_ALERT#
A16	SATA0_TX+	B16	SATA1_TX+
A17	SATA0_TX-	B17	SATA1_TX-
A18	SUS_S4#	B18	SUS_STAT#
A19	SATA0_RX+	B19	SATA1_RX+
A20	SATA0_RX-	B20	SATA1_RX-
A21	GND2	B21	GND17
A22	SATA2_TX+	B22	SATA3_TX+
A23	SATA2_TX-	B23	SATA3_TX-
A24	SUS_S5#	B24	PWR_OK
A25	SATA2_RX+	B25	SATA3_RX+
A26	STAT2_RX-	B26	SATA3-RX-
A27	BATLOW#	B27	WDT
A28	ATA_ACT#	B28	AC/HD_SDIN2
A29	AC/HD_SYNC	B29	AC/HD_SDIN1
A30	AC/HD_RST#	B30	AC/HD_SDIN0
A31	GND3	B31	GND18
A32	AC/HD_BITCLK	B32	SPKR
A33	AC/HD_SDOUT	B33	I2C_CK
A34	BIOS_DISABLE#	B34	I2C_DAT
A35	THRMTRIP#	B35	THRM#
A36	USB6-	B36	USB7-

Pin No.	DESCRIPTION	Pin No.	DESCRIPTION
A37	USB6+	B37	USB7+
A38	USB6_7_OC#	B38	USB4_5_OC#
A39	USB4-	B39	USB5-
A40	USB4+	B40	USB5+
A41	GND4	B41	GND19
A42	USB2-	B42	USB3-
A43	USB2+	B43	USB3+
A44	USB2_3_OC#	B44	USB0_1_OC#
A45	USB0-	B45	USB1-
A46	USB0+	B46	USB1+
A47	VCC_RTC	B47	EXCD1_PERST#
A48	EXCD0_PERST#	B48	EXCD1_CPPE#
A49	EXCD0_CPPE#	B49	SYS_RESET#
A50	LPC-SERIRQ	B50	GND20
A51	GND5	B51	CB_RESET#
A52	PCIE_TX5+	B52	PCIE_RX5+
A53	PCIE_TX5-	B53	PCIE_RX5-
A54	GPIO	B54	GPO1
A55	PCIE_TX4+	B55	PCIE_RX4+
A56	PCIE_TX4-	B56	PCIE_RX4-
A57	GND6	B57	GPO2
A58	PCIE_TX3+	B58	PCIE_RX3+
A59	PCIE_TX3-	B59	PCIE_RX3-
A60	GND7	B60	GND21
A61	PCIE_TX2+	B61	PCIE_RX2+
A62	PCIE_TX2-	B62	PCIE_RX2-
A63	GPI1	B63	GPO3
A64	PCIE_TX1+	B64	PCIE_RX1+
A65	PCIE_TX1-	B65	PCIE_RX1-
A66	GND8	B66	WAKE0#
A67	GPI2	B67	WAKE1#
A68	PCIE_TX0+	B68	PCIE_RX0+
A69	PCIE_TX0-	B69	PCIE_RX0-
A70	GND9	B70	GND22
A71	LVDS_A0+	B71	LVDS_B0+
A72	LVDS_A0-	B72	LVDS_B0-
A73	LVDS_A1+	B73	LVDS_B1+

Pin No.	DESCRIPTION	Pin No.	DESCRIPTION
A74	LVDS_A1-	B74	LVDS_B1-
A75	LVDS_A2+	B75	LVDS_B2+
A76	LVDS_A2-	B76	LVDS_B2-
A77	LVDS_VDD_EN	B77	LVDS_B3+
A78	LVDS_A3+	B78	LVDS_B3-
A79	LVDS_A3-	B79	LVDS_BKLT_EN
A80	GND10	B80	GND23
A81	LVDS_A_CLK+	B81	LVDS_B_CLK+
A82	LVDS_A_CLK-	B82	LVDS_B_CLK-
A83	LVDS_I2C_CK	B83	LVDS_BKLT_CTRL
A84	LVDS_I2C_DAT	B84	VCC5SBY1
A85	GPI3	B85	VCC5SBY2
A86	RSVD	B86	VCC5SBY3
A87	RSVD	B87	VCC5SBY4
A88	PCIE0_CK_REF+	B88	BIOS_DIS1#
A89	PCIE0_CK_REF-	B89	VGA_RED
A90	GND11	B90	GND24
A91	SPI_VCC	B91	VGA_GRN
A92	SPI_MISO	B92	VGA_BLU
A93	GPO0	B93	VGA_HSYNC
A94	SPI_CLK	B94	VGA_VSYNC
A95	SPI_MOSI	B95	VGA_I2C_CK
A96	PP_TPM	B96	VGA_I2C_DAT
A97	TYPE10#	B97	SPI_CS#
A98	RS1_TX	B98	RSVD
A99	RS1_RX	B99	RSVD
A100	GND13	B100	GND25
A101	RS2_TX	B101	FAN_PWMOUT
A102	RS2_RX	B102	FAN_TACHIN
A103	LID#	B103	SLEEP#
A104	VCC_12V7	B104	VCC_12V16
A105	VCC_12V8	B105	VCC_12V17
A106	VCC_12V9	B106	VCC_12V18
A107	VCC_12V10	B107	VCC_12V19
A108	VCC_12V11	B108	VCC_12V20
A109	VCC_12V12	B109	VCC_12V21
A110	GND14	B110	GND26

Board Layout: Jumper and Connector Locations

