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Mini-ITX SBC with Intel® Atom™ D425/D525, DDR3,VGA/
18+48-bit LVDS, dual GbE, audio, USB2.0 and SATA 3Gb/s

KINO-PV- D4252/D5252

Quick Installation Guide
Version 1.1

Nov. 06, 2015

Package Contents

KINO-PV- D4252/D5252 package includes the following items:

- 1 x KINO-PV- D4252/D5252 Single Board Computer
- 1 x RS-232 cable with bracket
- 1 x SATA with 5V/ 12Voutput cable Kit
- 1 x I/O shielding
- 1 x Mini Jumper Pack
- 1 x Utility CD
- 1 x One key recovery CD
- 1 x QIG (Quick Installation Guide)

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Specifications

- CPU:

  D425: Intel® Atom™ 45nm 1.8GHz single core processor with 512KB L2 Cache

  D525: Intel® Atom™ 45nm 1.8GHz dual core processor with 1MB L2 Cache
- System Chipset: Intel® ICH8M
- BIOS: UEFI BIOS
- System Memory: 2 x 204-pin DDR3 800MHz SO-DIMMs SDRAM slot up to 4GB
- Ethernet: LAN: Dual PCIe GbE by Realtek RT8111E, LAN1 supports ASF2.0
- I/O Interface:

  5 x RS-232

  1 x RS-232/422/485 with Auto Flow control

  1 x LPT

  1 x 6-pin header for KB/MS

  8 x USB2.0

  2 x SATA 3Gb/s with 5V/12V DC power connector

  1 x CF Type II socket
- Super I/O: Fintek F81865

  Digital I/O: 8-bit Digital I/O (4-bit input / 4-bit output)
- Display:

  Graphic engine by Intel GMA3150

  Analog CRT supports resolution up to 2048x1536
  18-bit single-channel LVDS, resolution support up to WXGA 1366x768 or XGA 1024x768
  24-bit dual-channel LVDS by Novatek NT68660BUFG, resolution support up to 1920x1080
- Audio:

  Realtek ALC662-GR HD audio codec
- SMBus:

  1 x 4-pin wafer connector
- TPM (Optional)

  On board Infineon SLB9635TT1.2

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- Watchdog timer: Software programmable 1-255 sec. by Super I/O: Fintek F81865
- Expansions:

  1 x PCI slot

  1 x PCIe x1 slot

  1 x PCIe Mini card slot (PCIe + USB + SATA signal) support IEI mini DOM
- Power supply: Single voltage 12V DC input

  1 x external DIN 4-pin DC jack
  1 x internal 2 x 2-pin power connector
- Power Consumption:

  12V@1.95A (Intel® Atom™ D525 1.8GHz with DDR3 1GB*2 DIMM)
- Operation Temperature:

  -20℃ ~ 60℃ with free air, -20℃ ~ 70℃ with force air for D525 processor
  -20℃ ~ 65℃ with free air, -20℃ ~ 70℃ with force air for D425 processor
- Operation Humidity: 5% ~ 95%, non-condensing
- FAN:

  1 x 4-pin CPU fan connector
  1 x 3-pin System fan connector
- Dimensions: 170mm X 170mm
- Weight GW/NW: 900g / 450g

Ordering Information

- **KINO-PV-D5252-L2-R11**：

  Mini ITX SBC with Intel Atom D525 1.8GHz,DDR3,VGA/18+48-bit LVDS,Dual GbE,Audio,USB 2.0 and SATA II,RoHS
- **KINO-PV-D4252-R11**：

  Mini ITX SBC with Intel Atom D425 1.8GHz,DDR3,VGA/18 LVDS,Dual GbE,Audio,USB 2.0 and SATA II,RoHS
- **32000-023800-RS:** KB/MS Y cable
- **32200-015100-RS:** LPT cable

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- **19800-000110-RS:** RS-232/422/485 cable with bracket
- **CB-USB02-RS:** Dual ports USB cable with bracket
- **32100-192900-RS**: One 4-pin (2x2) to one 4-pin (1x4) DC power cable with terminal block
- **PCIER-K101L-R10:** PCIex1 riser card
- **19FTS00032100-000001-RS:** Optional CPU fan

Jumpers setting and connectors

LABEL	FUNCTION
J_CMOS1	CMOS state setting
JCF1	CF Card setting
ATXCTL1	Power Mode Setting
J_VLVDS1	LVDS1 Voltage Selection (Only for D525 sku)
J_VLVDS2	LVDS2 Voltage Selection
JP4	LVDS1 Panel Resolution Selection (Only for D525 sku)
J_LCD_TYPE1	LVDS2 Panel Resolution Selection
JP3	COM2 Port Mode setting
VGACOM1	15-pin Female Connector
USBLAN1 USBLAN2	External USB +LAN Connector
KB_MS1	Keyboard & Mouse Connector
COM1 COM3 COM4	External Serial Port Connectors
USB1.USB2	Internal USB Connectors
SATA1.SATA2	Serial ATA Connectors
SATA_PWR1 SATA_PWR2	Serial ATA Power Connectors
BAT1	Battery Connector
CN4	SMBus Connector
COM2	Internal Serial Port 14-Pin Connector
COM5.COM6	Internal Serial Port Connector
CPU_FAN1	CPU Fan Connector
J4	Fan Connector
DIO1	Digital I/O connector
CN2	PCIe Mini card slot
LVDS2	LVDS2 Connector

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INV2	LVDS2 Panel Backlight Power Source connector
LVDS1	LVDS1 Connector (Only for D525 sku)
INV1	LVDS1 Panel Backlight Power Source connector (Only for D525 sku)
KEY1	Key Pad Connector (Only for D525 sku)
F_PANEL1	PWR & RST Buttons and Indicators
PWR1	ADAPTER DC12V POWER IN
PWR2	Power Supply DC12V Power IN
CF1	Compact Flash Slot
SPI1	Flash SPI ROM
LPT1	Parallel Port Connector

J_CMOS1: Clear CMOS Setup	
PIN NO.	**DESCRIPTION**
1-2 (default)*	**Keep CMOS Setup(Normal Operation)**
Short 2-3	**Clear CMOS Setup**

JCF1: CF Card Setting	
JCF1	**DESCRIPTION**
Open (Default)	Slave
Short 1-2	Master

ATXCTL1: AT/ATX Power Mode Setting	
PIN NO.	**DESCRIPTION**
1-2	ATX mode
Short 2-3 (default)*	AT mode

J_VLVDS1: LVDS1 Voltage Selection	
PIN NO.	**DESCRIPTION**
1-2	12V
3-4 (default)	5V
5-6	3.3V

J_VLVDS2: LVDS Voltage Selection	
PIN NO.	**DESCRIPTION**
1-2(default)*	3.3V
Short 2-3	5V

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JP4: LVDS1 Panel Resolution type selection		
PIN NO.	**DESCRIPTION**	
OFF	1024 x 768	24bit
1-2	800 x 600	18bit
3-4	1024 x 768	18bit
1-2 & 3-4	1280 x 1024 (Default)	24bit
5-6	1366 x 768	24bit
1-2 & 5-6	1920 x 1080	24bit
7-8	brightness inverse	

J_LCD_TYPE1: LVDS2 Panel Resolution type selection	
PIN NO.	**DESCRIPTION**
OFF	640 X 480 (18bit)
1-2	800 X 480 (18bit)
3-4 (Default)	800 X 600 (18bit)
1-2 & 3-4	1024 X 768 (18bit)
5-6	1280 X 1024 (18bit)
1-2 & 5-6	1366 X 768 (18bit)
3-4 & 5-6	1280 X 800 (18bit)
1-2 & 3-4& 5-6	1280 X 600 (18bit)

JP3:COM2 RS232 or RS-422 or RS-485 type selection	
PIN NO.	**DESCRIPTION**
Short 1-2 (default)	**RS - 232**
Short 3-4	**RS - 422**
Short 5-6	**RS - 485**
Short 7-8	**RS-485 with RTS control**

VGACOM1 : 15-pin Female Connector			
PIN	**DESCRIPTION**	**PIN**	**DESCRIPTION**
1	RED	2	GREEN
3	BLUE	4	NC
5	GND	6	GND
7	GND	8	GND
9	VCC / NC	10	GND
11	NC	12	DDC DAT
13	HSYNC	14	VSYNC
15	DDCCLK		

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USBLAN1,USBLAN2: USB Connector			
PIN	**DESCRIPTION**	**PIN**	**DESCRIPTION**
1	VCC	5	VCC
2	DATA-	6	DATA-
3	DATA+	7	DATA+
4	GROUND	8	GROUND

USBLAN1,USBLAN2: RJ45 LAN Connector			
PIN	**DESCRIPTION**	**PIN**	**DESCRIPTION**
1	MDIA3-	5	MDIA1+
2	MDIA3+	6	MDIA2+-
3	MDIA2-	7	MDIA0-
4	MDIA1-	8	MDIA0+

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

COM1,COM3,COM4: External Serial Port Connector			
PIN	**DESCRIPTION**	**PIN**	**DESCRIPTION**
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI		

USB1,USB2: Internal USB Connector			
PIN	**DESCRIPTION**	**PIN**	**DESCRIPTION**
1	VCC	2	GND
3	DATA-	4	DATA+
5	DATA+	6	DATA-
7	GND	8	VCC

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SATA1,SATA2 : Serial ATA Connector			
PIN	**DESCRIPTION**	**PIN**	**DESCRIPTION**
1	GND	5	RX-
2	TX+	6	RX+
3	TX-	7	GND
4	GND		

SATA_PWR1: 5V SATA power	
PIN NO.	**DESCRIPTION**
1	5V
2	GND

SATA_PWR2: 5V/12V SATA power	
PIN NO.	**DESCRIPTION**
1	12V
2	GND
3	GND
4	5V

BAT1: +3V Battery Connector	
PIN NO.	**DESCRIPTION**
1	VCC_BAT
2	GND

CN4: SMBus Connector	
PIN NO.	**DESCRIPTION**
1	Ground
2	SMB_DATA
3	SMB_CLK
4	+5V

COM2 : Internal Serial Port 14-Pin Connector			
PIN	**DESCRIPTION**	**PIN**	**DESCRIPTION**
1	DCD	2	DSR
3	RXD	4	RTS
5	TXD	6	CTS
7	DTR	8	RI
9	GND	10	NC
11	TXD485+	12	TXD485#

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13	RXD485+	14	RXD485#

COM5,COM6: Internal Serial Port Connector

PIN	DESCRIPTION	PIN	DESCRIPTION
1	DCD	2	DSR
3	RXD	4	RTS
5	TXD	6	CTS
7	DTR	8	RI
9	GND	10	GND

CPU_FAN1 : CPU Fan Connector

PIN NO.	DESCRIPTION
1	GND
2	VCC12
3	FANIN1
4	FANOUT1

J4 : Fan Connector

PIN NO.	DESCRIPTION
1	FANIO1
2	+12V (PWM)
3	GND

DIO1 : Digital Input / Output Connector

PIN	DESCRIPTION	PIN	DESCRIPTION
1	Ground	2	VCC5
3	Output 3	4	Output 2
5	Output 1	6	Output 0
7	Input 3	8	Input 2
9	Input 1	10	Input 0

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CN2: PCI-E Mini Card Connector			
PIN	**DESCRIPTION**	**PIN**	**DESCRIPTION**
1	PCIE_WAKE#	2	VCC3
3	N/C	4	GND
5	N/C	6	1.5V
7	CLKREQ#	8	LFRAME#
9	GND	10	LAD3
11	CLK-	12	LAD2
13	CLK+	14	LAD1
15	GND	16	LAD0
17	PCIRST#	18	GND
19	LPC	20	VCC3
21	GND	22	PCIRST#
23	PERN2	24	3VDual
25	PERP2	26	GND
27	GND	28	1.5V
29	GND	30	SMBCLK
31	PETN2	32	SMBDATA
33	PETP2	34	GND
35	GND	36	USBD-
37	GND	38	USBD+
39	SATARXP	40	GND
41	SATARXN	42	N/C
43	N/C	44	RF_LINK#
45	SATATXN	46	BLUELED#
47	SATATXP	48	1.5V
49	GND	50	GND
51	N/C	52	VCC3

LVDS2: LVDS Connector			
PIN	**DESCRIPTION**	**PIN**	**DESCRIPTION**
1	GND1	2	GND2
3	A_Y0	4	A_Y0#
5	A_Y1	6	A_Y1#
7	A_Y2	8	A_Y2#
9	A_CK	10	A_CK#
11	NC	12	NC
13	GND3	14	GND4
15	NC	16	NC
17	VCC_LCD	18	VCC_LCD
19	VCC_LCD	10	VCC_LCD

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INV2: LVDS2 Panel Backlight Power Source connector	
PIN NO.	**DESCRIPTION**
1	LCD_BKLTCTL
2	GROUND
3	+12V
4	GROUND
5	BACKLIGHT ENABLE

LVDS1: 48bit dual channel LVDS1 Connector			
PIN	**DESCRIPTION**	**PIN**	**DESCRIPTION**
1	GND1	2	GND2
3	A_Y0	4	A_Y0#
5	A_Y1	6	A_Y1#
7	A_Y2	8	A_Y2#
9	A_CK	10	A_CK#
11	A_Y3	12	A_Y3#
13	GND3	14	GND4
15	B_Y0	16	B_Y0#
17	B_Y1	18	B_Y1#
19	B_Y2	20	B_Y2#
21	B_CK	22	B_CK#
23	B_Y3	24	B_Y3#
25	GND5	26	GND6
27	VCC_LCD	28	VCC_LCD
29	VCC_LCD	30	VCC_LCD

INV1 : LVDS1 Panel Backlight Power Source connector	
PIN NO.	**DESCRIPTION**
1	LCD_BKLTCTL
2	GROUND
3	+12V
4	GROUND
5	BACKLIGHT ENABLE

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KEY1 :9-pin Header Key Pad Connector	
PIN NO.	**DESCRIPTION**
1	Red LED
2	NC
3	Green LED
4	Menu/Enter
5	Down
6	Up
7	Auto/Exit
8	Power
9	Ground

F_PANEL1:
Power button, Rest button, HDD & Power LED Indicators Connector

	PIN	DESCRIPTION	PIN	DESCRIPTION	
PWR_BTN	1	PWRBTSW-	2	PWR_LED+	PWRLED
	3	GND	4	GND	
HDD_LED	5	VCC	6	PM_RESET	RESET
	7	-HDLED	8	GND	

PWR1: ADAPTER DC12V POWER IN	
PIN NO.	**DESCRIPTION**
1	12V
2	GND
3	12V
4	GND
5	GND

PWR2: Power Supply DC12V Power IN			
PIN	**DESCRIPTION**	**PIN**	**DESCRIPTION**
1	GND	2	GND
3	+12V	4	+12V

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CF1 : CF Card Interface Slot			
PIN	**DESCRIPTION**	**PIN NO.**	**DESCRIPTION**
1	GND	26	CD1#
2	D3	27	D11
3	D4	28	D12
4	D5	29	D13
5	D6	30	D14
6	D7	31	D15
7	CE#	32	CE2#
8	A10	33	VS1#
9	OE#	34	IOR#
10	A9	35	IOW#
11	A8	36	WE#
12	A7	37	IRQ
13	VCC	38	VCC
14	A6	39	CSEL#
15	A5	40	VS2#
16	A4	41	RESET#
17	A3	42	WAIT#
18	A2	43	INPACK#
19	A1	44	REG#
20	A0	45	BVD2
21	D0	46	BVD1
22	D1	47	D8
23	D2	48	D9
24	IOCS16#	49	D10
25	CD2#	50	GND2

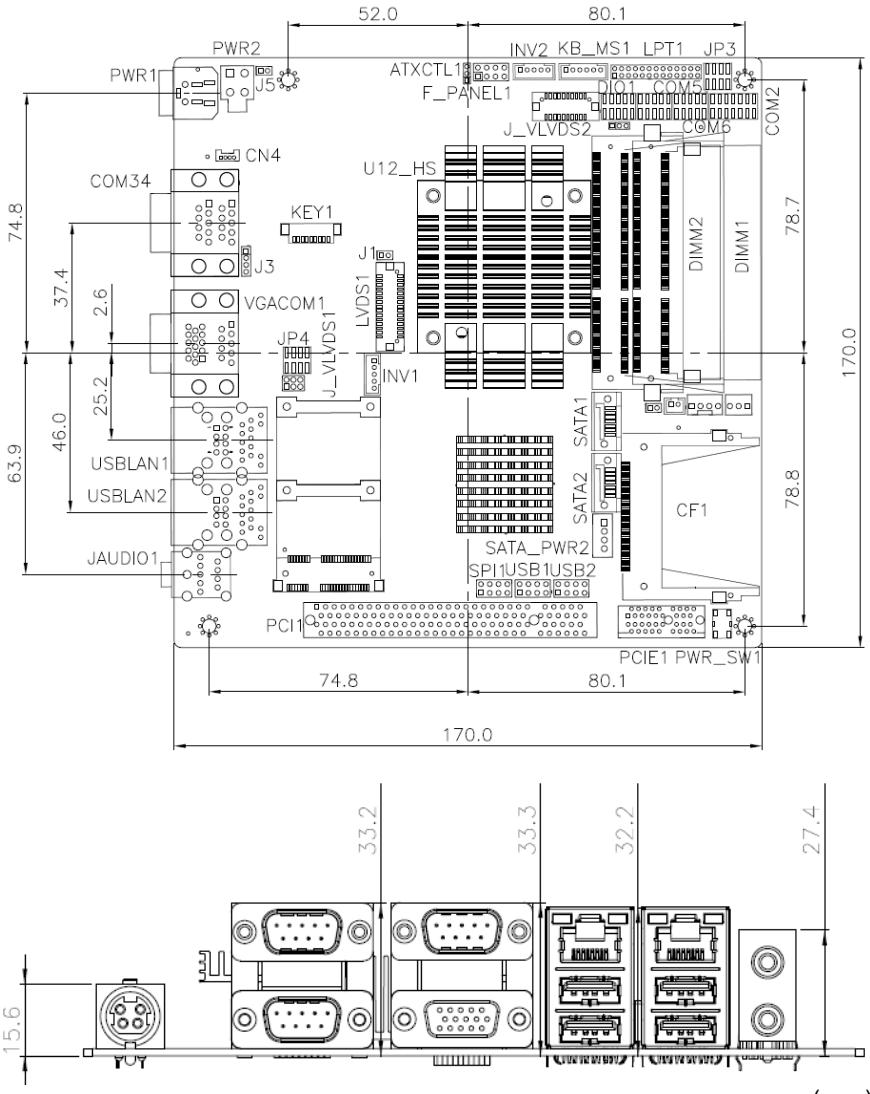
SPI1: Program SPI connector			
PIN	**DESCRIPTION**	**PIN**	**DESCRIPTION**
1	SPI_VCC	2	GND
3	SPI_CS	4	SPI_CLK
5	SPI_SO	6	SPI_SI
7	NC	8	NC

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LPT1 : Parallel Port Connector			
PIN NO.	**DESCRIPTION**	**PIN NO.**	**DESCRIPTION**
1	STROBE#	2	AUTO FORM FEED #
3	DATA0	4	ERROR#
5	DATA1	6	INITIALIZE#
7	DATA2	8	PRINTER SELECT LN#
9	DATA3	10	GND
11	DATA4	12	GND
13	DATA5	14	GND
15	DATA6	16	GND
17	DATA7	18	GND
19	ACKNOWLEDGE#	20	GND
21	BUSY	22	GND
23	PAPER EMPTY	24	GND
25	PRINTER SELECT	26	NC

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Board Layout: Jumper and Connector Locations



(mm)

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