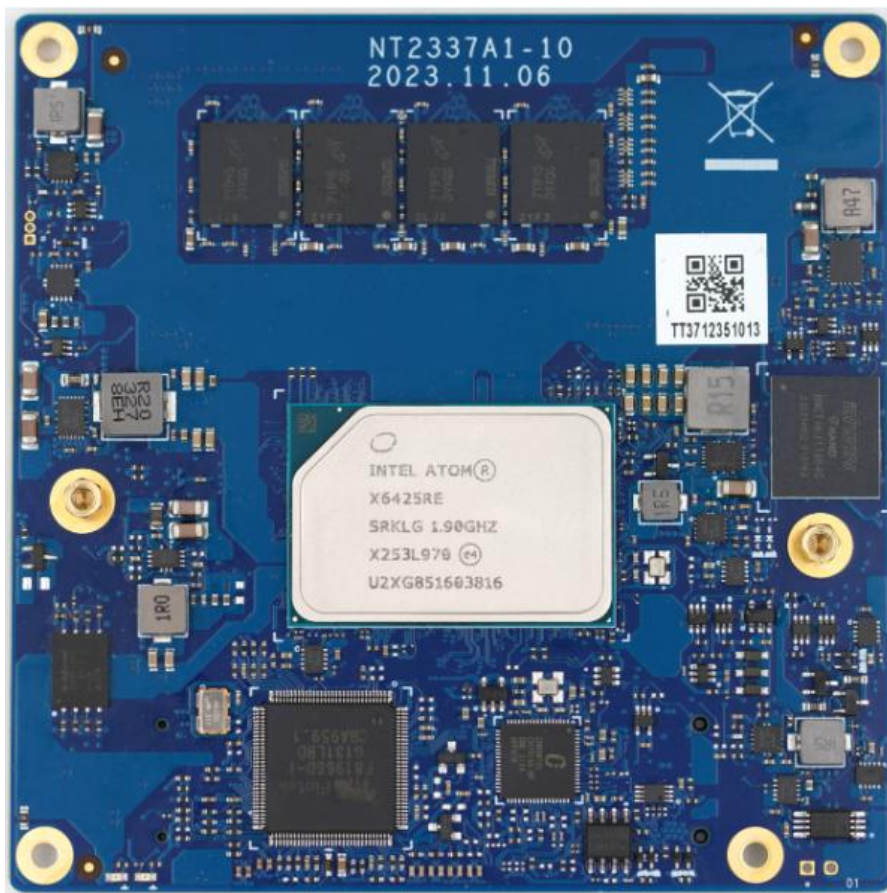


Shanghai Novotech Ariaboard intel x6425RE Core-board

Elkhart Lake Series

NT2337



Introduction

Ariaboard Intel x6425RE is SOM with low power Intel Industrial Extended Temp Atom processor. It provides working temperature guarantee of -40c ~ 85c, allowing your products to run freely outdoor with harsh temperature requirements. Suitable for high performance gateways, NAS, HMI.

Features

- l COM Express® R3.0 Compact Module Type 6 Pinout
- l Intel® Pentium®/Celeron® and Atom® x6000 Series (Elkhart Lake) Processors
- l Dual Channel up to 16GB DDR4-3200
- l Supports up to 3 simultaneous display: LVDS、eDP、HDMI
- l Supports onboard eMMC Storage (Optional)

Specifications

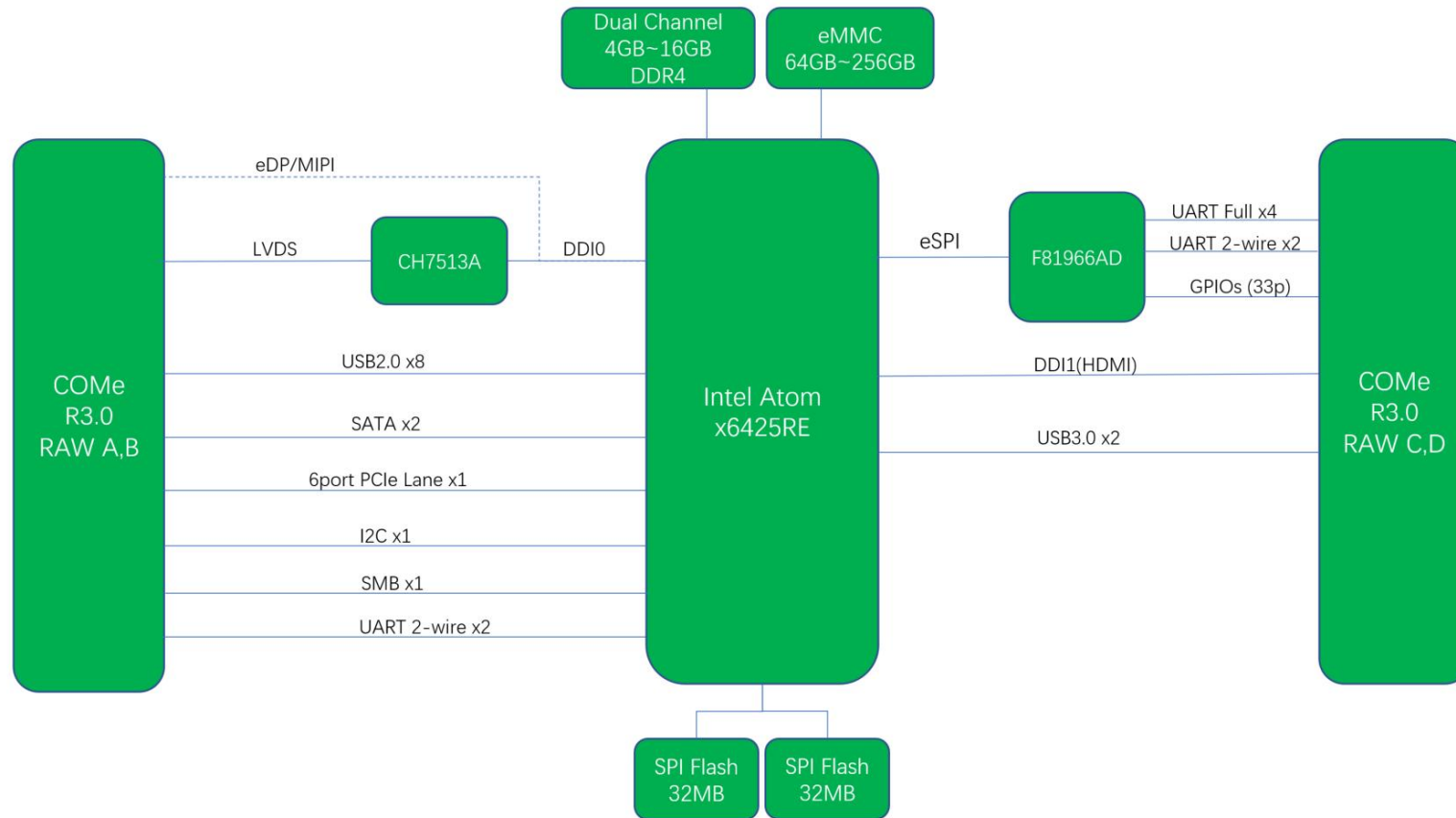
Specs	Value
CPU	
CPU Name	Intel x6425RE
CPU Family	Intel Elkhart Lake x86 64bit™
CPU Cores	Quad Core
CPU Clock	1.9GHz
Lithography	10 nm
Memory	
RAM	4GB~16GB DDR4 3200MHz
eMMC	64GB~256GB (Optional)
Flash	Dual 32MB BIOS
Multimedia	
Video Encode / Decode	4K60 H.265 Decode, 1080p30 H.265 Encode
Audio/Display	
HDMI	2.0
eDP	4K
LVDS	2 channel
Connectivity	

Specs	Value
USB Host / Device	USB 3.0 : 2x Host, USB 2.0: 6x Host
GPIO	x28
UART	x6, up to 3.6 Mbps
I2C	x1
SATA	x2
PCI-Express	6x Gen3.0 x1
Power Input	
DC12V	
Power Consumption	
5~12W	
Operation Temperature Range	
-40c to 85c	
Dimensions	
95 mm x 95 mm	

ON Board CONN

I Foxconn QT012206-1031-2H

Block Diagram



PIN Definition

COMe R3.0 RAW A,B				COMe R3.0 RAW C,D			
A1	GND	B1	GND	C1	GND	D1	GND
A2	NC	B2	NC	C2	GND	D2	GND
A3	NC	B3	NC	C3	USB_SSRX0-	D3	USB_SSTX0-
A4	NC	B4	NC	C4	USB_SSRX0+	D4	USB_SSTX0+
A5	NC	B5	NC	C5	GND	D5	GND
A6	NC	B6	NC	C6	USB_SSRX1-	D6	USB_SSTX1-
A7	NC	B7	NC	C7	USB_SSRX1+	D7	USB_SSTX1+
A8	NC	B8	NC	C8	GND	D8	GND
A9	NC	B9	NC	C9	NC	D9	NC
A10	NC	B10	NC	C10	NC	D10	NC
A11	GND	B11	GND	C11	GND	D11	GND
A12	NC	B12	FP_P SIN#	C12	NC	D12	NC
A13	NC	B13	SMB_CLK_3.3	C13	NC	D13	NC
A14	NC	B14	SMB_DAT_3.3	C14	GND	D14	GND
A15	PM_SLP_S3#_3.3	B15	SMB_ALERT#_3.3	C15	NC	D15	DDI1_DDC_SCL_3.3
A16	SATA0_TX+	B16	SATA1_TX+	C16	NC	D16	DDI1_DDC_SDA_3.3
A17	SATA0_TX-	B17	SATA1_TX-	C17	GPIO07	D17	GPIO61
A18	PM_SLP_S4#_3.3	B18	NC	C18	SIN5	D18	GPIO62
A19	SATA0_RX+	B19	SATA1_RX+	C19	SOUT5	D19	GPIO63
A20	SATA0_RX-	B20	SATA1_RX-	C20	GPIO60	D20	GPIO64
A21	GND	B21	GND	C21	GND	D21	GND
A22	NC	B22	NC	C22	NC	D22	GPIO54
A23	NC	B23	NC	C23	NC	D23	GPIO55
A24	PM_SLP_S5#_3.3	B24	PWR_OK	C24	DDI1_HPD	D24	GPIO56
A25	NC	B25	NC	C25	GPIO12	D25	GPIO57
A26	NC	B26	NC	C26	GPIO13	D26	DDI1_TX0+
A27	NC	B27	WDTO#	C27	GPIO97	D27	DDI1_TX0-
A28	SATA_LED#_3.3	B28	NC	C28	GPIO70	D28	NC
A29	NC	B29	NC	C29	GPIO71	D29	DDI1_TX1+
A30	NC	B30	NC	C30	GPIO72	D30	DDI1_TX1-
A31	GND	B31	GND	C31	GND	D31	GND
A32	NC	B32	SPKR_3.3	C32	GPIO73	D32	DDI1_TX2+
A33	NC	B33	I2C_SCL	C33	GPIO74	D33	DDI1_TX2-
A34	NC	B34	I2C_SDA	C34	GPIO75	D34	NC
A35	THERMTRIP#	B35	NC	C35	GPIO76	D35	GPIO53
A36	USB6_DM	B36	USB7_DM	C36	GPIO77	D36	DDI1_TX3+
A37	USB6_DP	B37	USB7_DP	C37	GPIO80	D37	DDI1_TX3-
A38	USB67_EN_OC#_3.3	B38	USB45_EN_OC#_3.3	C38	GPIO81	D38	SOUT6
A39	USB4_DM	B39	USB5_DM	C39	GPIO82	D39	SIN6
A40	USB4_DP	B40	USB5_DP	C40	GPIO83	D40	GPIO50

COMe R3.0 RAW A,B				COMe R3.0 RAW C,D			
A41	GND	B41	GND	C41	GND	D41	GND
A42	USB2_DM	B42	USB3_DM	C42	SIN2	D42	DCD1#
A43	USB2_DP	B43	USB3_DP	C43	SOUT2	D43	RI1#
A44	USB23_EN_OC#_3.3	B44	USB01_EN_OC#_3.3	C44	DSR2#	D44	CTS1#
A45	USB0_DM	B45	USB1_DM	C45	RTS2#	D45	DTR1#
A46	USB0_DP	B46	USB1_DP	C46	DTR2#	D46	RTS1#
A47	VBAT_CMOS 3V	B47	NC	C47	CTS2#	D47	DSR1#
A48	NC	B48	NC	C48	RI2#	D48	SOUT1
A49	NC	B49	PM_EXTRST#	C49	DCD2#	D49	SIN1
A50	NC	B50	PLTRST#_3.3	C50	NC	D50	DCD3#
A51	GND	B51	GND	C51	GND	D51	GND
A52	PCIE_TX5+	B52	PCIE_RX5+	C52	DCD4#	D52	RI3#
A53	PCIE_TX5-	B53	PCIE_RX5-	C53	RI4#	D53	CTS3#
A54	ALS_INT#	B54	NC	C54	CTS4#	D54	DTR3#
A55	PCIE_TX4+	B55	PCIE_RX4+	C55	DTR4#	D55	RTS3#
A56	PCIE_TX4-	B56	PCIE_RX4-	C56	RTS4#	D56	DSR3#
A57	GND	B57	NC	C57	DSR4#	D57	GND
A58	PCIE_TX3+	B58	PCIE_RX3+	C58	SOUT4	D58	SOUT3
A59	PCIE_TX3-	B59	PCIE_RX3-	C59	SIN4	D59	SIN3
A60	GND	B60	GND	C60	GND	D60	GND
A61	PCIE_TX2+	B61	PCIE_RX2+	C61	GPIO84	D61	NC
A62	PCIE_TX2-	B62	PCIE_RX2-	C62	GPIO85	D62	NC
A63	PG_+V3.3A	B63	NC	C63	GPIO86	D63	NC
A64	PCIE_TX1+	B64	PCIE_RX1+	C64	GPIO87	D64	NC
A65	PCIE_TX1-	B65	PCIE_RX1-	C65	GPIO00	D65	NC
A66	GND	B66	PCIE_WAKE#_3.3	C66	GPIO01	D66	NC
A67	NC	B67	NC	C67	RAPID_SHUTDOWN	D67	GND
A68	PCIE_TX0+	B68	PCIE_RX0+	C68	NC	D68	NC
A69	PCIE_TX0-	B69	PCIE_RX0-	C69	NC	D69	NC
A70	GND	B70	GND	C70	GND	D70	GND
A71	LVDS0_D0+	B71	LVDS1_D0+	C71	NC	D71	NC
A72	LVDS0_D0-	B72	LVDS1_D0-	C72	NC	D72	NC
A73	LVDS0_D1+	B73	LVDS1_D1+	C73	GND	D73	GND
A74	LVDS0_D1-	B74	LVDS1_D1-	C74	NC	D74	NC
A75	LVDS0_D2+	B75	LVDS1_D2+	C75	NC	D75	NC
A76	LVDS0_D2-	B76	LVDS1_D2-	C76	GND	D76	GND
A77	DDIO_VDD_EN	B77	LVDS1_D3+	C77	NC	D77	NC
A78	LVDS0_D3+	B78	LVDS1_D3-	C78	NC	D78	NC
A79	LVDS0_D3-	B79	LCD_BKL_EN	C79	NC	D79	NC

COMe R3.0 RAW A,B				COMe R3.0 RAW C,D			
A80	GND	B80	GND	C80	GND	D80	GND
A81	LVDS0_CLK+	B81	LVDS0_CLK+	C81	NC	D81	NC
A82	LVDS0_CLK-	B82	LVDS0_CLK-	C82	NC	D82	NC
A83	LVDS0_DDCCLK_AUX+	B83	LCD_BKLT_CTL_3.3	C83	NC	D83	NC
A84	LVDS0_DDCCLK_AUX-	B84	V5_SB	C84	GND	D84	GND
A85	PM_RSMRST#	B85	V5_SB	C85	NC	D85	NC
A86	NC	B86	V5_SB	C86	NC	D86	NC
A87	CH7513_eDP_HDP	B87	V5_SB	C87	GND	D87	GND
A88	CLK_PCIE_REF+	B88	NC	C88	NC	D88	NC
A89	CLK_PCIE_REF-	B89	NC	C89	NC	D89	NC
A90	GND	B90	GND	C90	GND	D90	GND
A91	NC	B91	NC	C91	NC	D91	NC
A92	BIOS_SEL#0	B92	NC	C92	NC	D92	NC
A93	DISPLAY_MODE	B93	NC	C93	GND	D93	GND
A94	BIOS_SEL#1	B94	NC	C94	NC	D94	NC
A95	NC	B95	NC	C95	NC	D95	NC
A96	TPM_PP_3.3	B96	NC	C96	GND	D96	GND
A97	NC	B97	NC	C97	NC	D97	NC
A98	EC_RS1_TX_D	B98	NC	C98	NC	D98	NC
A99	EC_RS1_RX_D	B99	NC	C99	NC	D99	NC
A100	GND	B100	GND	C100	GND	D100	GND
A101	EC_RS2_TX_D	B101	EC_FAN_PWM	C101	NC	D101	NC
A102	EC_RS2_RX_D	B102	EC_FAN_TACH	C102	NC	D102	NC
A103	NC	B103	NC	C103	GND	D103	GND
A104	DC12V INPUT	B104	DC12V INPUT	C104	DC12V INPUT	D104	DC12V INPUT
A105	DC12V INPUT	B105	DC12V INPUT	C105	DC12V INPUT	D105	DC12V INPUT
A106	DC12V INPUT	B106	DC12V INPUT	C106	DC12V INPUT	D106	DC12V INPUT
A107	DC12V INPUT	B107	DC12V INPUT	C107	DC12V INPUT	D107	DC12V INPUT
A108	DC12V INPUT	B108	DC12V INPUT	C108	DC12V INPUT	D108	DC12V INPUT
A109	DC12V INPUT	B109	DC12V INPUT	C109	DC12V INPUT	D109	DC12V INPUT
A110	GND	B110	GND	C110	GND	D110	GND