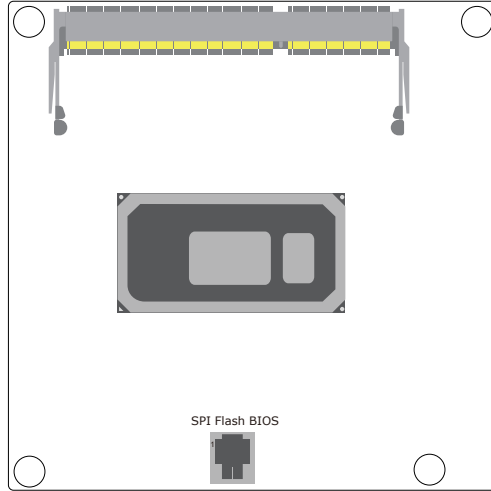
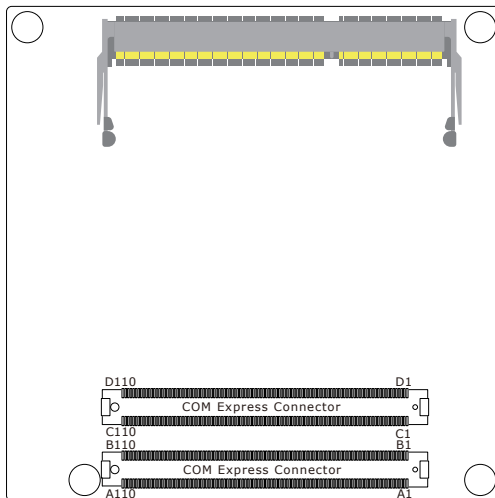


Board Layout and COM Express Pin Assignments

TOP



BOTTOM



► COM Express Connector

Row A		Row B	
A1	GND (FIXED)	B1	GND (FIXED)
A2	GBE0_MDI3-	B2	GBE0_ACT#
A3	GBE0_MDI3+	B3	LPC_FRAME#/ESPI_CS0#(NA)
A4	GBE0_LINK100#	B4	LPC_AD0/ESPI_IO_0(NA)
A5	GBE0_LINK1000#	B5	LPC_AD1/ESPI_IO_1(NA)
A6	GBE0_MDI2-	B6	LPC_AD2/ESPI_IO_2(NA)
A7	GBE0_MDI2+	B7	LPC_AD3/ESPI_IO_3(NA)
A8	GBE0_LINK#	B8	LPC_DRQ0#(NA)/ ESPI_ALERT0#(NA)
A9	GBE0_MDI1-	B9	LPC_DRQ1# (NA)/ ESPI_ALERT0#(NA)
A10	GBE0_MDI1+	B10	LPC_CLK/ESPI_CLK
A11	GND (FIXED)	B11	GND (FIXED)
A12	GBE0_MDI0-	B12	PWRBTN#
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#(NA)/ ESPI_RESET#(NA)
A19	SATA0_RX+	B19	SATA1_RX+
A20	SATA0_RX-	B20	SATA1_RX-
A21	GND (FIXED)	B21	GND (FIXED)
A22	SATA2_TX+ (NA)	B22	SATA3_TX+ (NA)
A23	SATA2_TX- (NA)	B23	SATA3_TX- (NA)
A24	SUS_S5#	B24	PWR_OK
A25	SATA2_RX+ (NA)	B25	SATA3_RX+ (NA)
A26	SATA2_RX- (NA)	B26	SATA3_RX- (NA)
A27	BATLOW#	B27	WDT

Row A		Row B	
A28	(S)ATA_ACT#	B28	PCIE_CLK_REQ_BT B
A29	HDA_SYNC	B29	HDA_SDIN1/ SNDW0_CLK(NA)
A30	HDA_RST#	B30	HDA_SDIN0/ SNDW1_CLK(NA)
A31	GND (FIXED)	B31	GND (FIXED)
A32	HDA_BITCLK	B32	SPKR
A33	HDA_SDOOUT	B33	I2C_CK
A34	BIOS_DIS0#/ESPI_ SAFS(NA)	B34	I2C_DAT
A35	THRMTRIP#	B35	THRM#
A36	USB6-	B36	USB7-
A37	USB6+	B37	USB7+
A38	USB_6_7_OC#	B38	USB_4_5_OC#
A39	USB4-	B39	USB5-
A40	USB4+	B40	USB5+
A41	GND (FIXED)	B41	GND (FIXED)
A42	USB2-	B42	USB3-
A43	USB2+	B43	USB3+
A44	USB_2_3_OC#	B44	USB_0_1_OC#
A45	USB0-	B45	USB1-
A46	USB0+	B46	USB1+
A47	VCC_RTC	B47	ESPI_EN#(NA)
A48	RSMRST_OUT#	B48	USB0_HOST_ PRSNT(NA)
A49	GBE0_SDP	B49	SYS_RESET#
A50	LPC_SERIRQ/ ESPI_CS1#(NA)	B50	CB_RESET#
A51	GND (FIXED)	B51	GND (FIXED)
A52	PCIE_TX5+ (Optional)	B52	PCIE_RX5+
A53	PCIE_TX5- (Optional)	B53	PCIE_TX5-
A54	GPIO	B54	GPO1
A55	PCIE_TX4+	B55	PCIE_RX4+

	Row A		Row B
A56	PCIE_TX4-	B56	PCIE_RX4-
A57	GND	B57	GPO2
A58	PCIE_TX3+	B58	PCIE_RX3+
A59	PCIE_TX3-	B59	PCIE_RX3-
A60	GND (FIXED)	B60	GND (FIXED)
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	GND	B66	WAKE0#
A67	GPI2	B67	WAKE1#
A68	PCIE_TX0+	B68	PCIE_RX0+
A69	PCIE_TX0-	B69	PCIE_RX0-
A70	GND(FIXED)	B70	GND (FIXED)
A71	LVDS_A0+/ eDP_TX2+	B71	LVDS_B0+
A72	LVDS_A0-/ eDP_TX2-	B72	LVDS_B0-
A73	LVDS_A1+/ eDP_TX1+	B73	LVDS_B1+
A74	LVDS_A1-/ eDP_TX1-	B74	LVDS_B1-
A75	LVDS_A2+/ eDP_TX0+	B75	LVDS_B2+
A76	LVDS_A2-/ eDP_TX0-	B76	LVDS_B2-
A77	LVDS_VDD_EN /eDP_VDD_EN	B77	LVDS_B3+
A78	LVDS_A3+	B78	LVDS_B3-
A79	LVDS_A3-	B79	LVDS_BKLT_EN /eDP_BKLT_EN
A80	GND (FIXED)	B80	GND (FIXED)
A81	LVDS_A_CK+/eDP_TX3+	B81	LVDS_B_CK+
A82	LVDS_A_CK-/eDP_TX3-	B82	LVDS_B_CK-

Row A		Row B	
A83	LVDS_I2C_CK/eDP_AUX+	B83	LVDS_BKLT_CTRL/eDP_BLK_T_CTRL
A84	LVDS_I2C_DAT /eDP_AUX-	B84	VCC_5V_SBY
A85	GPI3	B85	VCC_5V_SBY
A86	GP_SPI_MOSI(NA)	B86	VCC_5V_SBY
A87	RSVD/ePD_HPD	B87	VCC_5V_SBY
A88	PCIE0_CK_REF+	B88	BIOS_DIS1#
A89	PCIE0_CK_REF-	B89	VGA_RED
A90	GND (FIXED)	B90	GND (FIXED)
A91	SPI_POWER	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	TPM_PP	B96	VGA_I2C_DAT
A97	Type10# (NC)	B97	SPI_CS#
A98	SER0_TX	B98	GP_SPI_MISO(NA)
A99	SER0_RX	B99	GP_SPI_CK
A100	GND (FIXED)	B100	GND (FIXED)
A101	SER1_TX	B101	FAN_PWMOUT
A102	SER1_RX	B102	FAN_TACHIN
A103	LID#	B103	SLEEP#
A104	VCC_8.5V~ 20V	B104	VCC_8.5V~ 20V
A105	VCC_8.5V~ 20V	B105	VCC_8.5V~ 20V
A106	VCC_8.5V~ 20V	B106	VCC_8.5V~ 20V
A107	VCC_8.5V~ 20V	B107	VCC_8.5V~ 20V
A108	VCC_8.5V~ 20V	B108	VCC_8.5V~ 20V
A109	VCC_8.5V~ 20V	B109	VCC_8.5V~ 20V
A110	GND (FIXED)	B110	GND (FIXED)

Row C		Row D	
C1	GND (FIXED)	D1	GND (FIXED)
C2	GND	D2	GND
C3	USB_SSRX0-	D3	USB_SSTX0-
C4	USB_SSRX0+	D4	USB_SSTX0+
C5	GND	D5	GND
C6	USB_SSRX1-	D6	USB_SSTX1-
C7	USB_SSRX1+	D7	USB_SSTX1+
C8	GND	D8	GND
C9	USB_SSRX2-	D9	USB_SSTX2-
C10	USB_SSRX2+	D10	USB_SSTX2+
C11	GND (FIXED)	D11	GND (FIXED)
C12	USB_SSRX3-	D12	USB_SSTX3-
C13	USB_SSRX3+	D13	USB_SSTX3+
C14	GND	D14	GND
C15	USB4_1_LSTX (Optional)	D15	DDI1_CTRLCLK_AUX+/ USB4_1_AUX+ (Optional)
C16	USB4_1_LSRX (Optional)	D16	DDI1_CTRLDATA_AUX-/ USB4_1_AUX- (Optional)
C17	USB4_RT_ENA (Optional)	D17	USB4_PD_I2C_ALERT# (Optional)
C18	GND_C18	D18	PMCALERT# (Optional)
C19	PCIE_RX6+ (Optional)	D19	PCIE_TX6+ (Optional)
C20	PCIE_RX6- (Optional)	D20	PCIE_TX6- (Optional)
C21	GND (FIXED)	D21	GND (FIXED)
C22	PCIE_RX7+ (Optional)	D22	PCIE_TX7+ (Optional)
C23	PCIE_RX7- (Optional)	D23	PCIE_TX7- (Optional)
C24	DDI1_HPD	D24	GND_D24
C25	SML0_CLK (Optional)	D25	GND_D25
C26	SML0_DAT (Optional)	D26	DDI1_PAIR0+/ USB4_1_SSTX0+ (Optional)
C27	SML1_CLK (Optional)	D27	DDI1_PAIR0-/ USB4_1_SSTX0- (Optional)

Row C		Row D	
C28	SML1_DAT (Optional)	D28	GND_D28
C29	USB4_PD_I2C_CLK (Optional)	D29	DDI1_PAIR1+/ USB4_1_SSRX0+(Optional)
C30	USB4_PD_I2C_DAT (Optional)	D30	DDI1_PAIR1-/ USB4_1_SSRX0-(Optional)
C31	GND (FIXED)	D31	GND (FIXED)
C32	DDI2_CTRLCLK_AUX+ / USB4_2_AUX+ (Optional)	D32	DDI1_PAIR2+/ USB4_1_SSTX1+ (Optional)
C33	DDI2_CTRLDATA_AUX-/ USB4_2_AUX- (Optional)	D33	DDI1_PAIR2-/ USB4_1_SSTX1- (Optional)
C34	DDI2_DDC_AUX_SEL	D34	DDI1_DDC_AUX_SEL
C35	USB4_2_LSTX (Optional)	D35	USB4_2_LSRX (Optional)
C36	DDI3_CTRLCLK_AUX+	D36	DDI1_PAIR3+/ USB4_1_SSRX1+ (Optional)
C37	DDI3_CTRLDATA_AUX-	D37	DDI1_PAIR3-/ USB4_1_SSRX1- (Optional)
C38	DDI2_DDC_AUX_SEL	D38	GND_D38
C39	DDI3_PAIR0+	D39	DDI2_PAIR0+/ USB4_2_SSTX0+ (Optional)
C40	DDI3_PAIR0-	D40	DDI2_PAIR0-/ USB4_2_SSTX0- (Optional)
C41	GND (FIXED)	D41	GND (FIXED)
C42	DDI3_PAIR1+	D42	DDI2_PAIR1+/ USB4_2_SSRX0+ (Optional)
C43	DDI3_PAIR1-	D43	DDI2_PAIR1-/ USB4_2_SSRX0- (Optional)
C44	DDI3_HPD	D44	DDI2_HPD
C45	GP_SPI_CS#(NA)	D45	GND_D45
C46	DDI3_PAIR2+	D46	DDI2_PAIR2+/ USB4_2_SSTX1+ (Optional)
C47	DDI3_PAIR2-	D47	DDI2_PAIR2-/ USB4_2_SSTX1- (Optional)
C48	RSVD	D48	GND_D48
C49	DDI3_PAIR3+	D49	DDI2_PAIR3+/ USB4_2_SSRX1+ (Optional)
C50	DDI3_PAIR3-	D50	DDI2_PAIR3-/ USB4_2_SSRX1- (Optional)
C51	GND (FIXED)	D51	GND (FIXED)
C52	PEG_RX0+	D52	PEG_TX0+
C53	PEG_RX0-	D53	PEG_TX0-
C54	TYPE0# (NC)	D54	PEG_LANE_RV#
C55	PEG_RX1+	D55	PEG_TX1+

Row C		Row D	
C56	PEG_RX1-	D56	PEG_TX1-
C57	TYPE1# (NC)	D57	TYPE2# (GND)
C58	PEG_RX2+	D58	PEG_TX2+
C59	PEG_RX2-	D59	PEG_TX2-
C60	GND (FIXED)	D60	GND (FIXED)
C61	PEG_RX3+	D61	PEG_TX3+
C62	PEG_RX3-	D62	PEG_TX3-
C63	GND_C63	D63	GND_D63
C64	GND_C64	D64	GND_D64
C65	PEG_RX4+	D65	PEG_TX4+
C66	PEG_RX4-	D66	PEG_TX4-
C67	RAPID_SHUTDOWN	D67	GND
C68	PEG_RX5+	D68	PEG_TX5+
C69	PEG_RX5-	D69	PEG_TX5-
C70	GND (FIXED)	D70	GND (FIXED)
C71	PEG_RX6+	D71	PEG_TX6+
C72	PEG_RX6-	D72	PEG_TX6-
C73	GND	D73	GND
C74	PEG_RX7+	D74	PEG_TX7+
C75	PEG_RX7-	D75	PEG_TX7-
C76	GND	D76	GND
C77	GND_C77	D77	GND_D77
C78	PEG_RX8+ (Optional)	D78	PEG_TX8+ (Optional)
C79	PEG_RX8- (Optional)	D79	PEG_TX8- (Optional)
C80	GND (FIXED)	D80	GND (FIXED)
C81	PEG_RX9+ (Optional)	D81	PEG_TX9+ (Optional)
C82	PEG_RX9- (Optional)	D82	PEG_TX9- (Optional)

Row C		Row D	
C83	GND_C83	D83	GND_D83
C84	GND	D84	GND
C85	PEG_RX10+ (Optional)	D85	PEG_TX10+ (Optional)
C86	PEG_RX10- (Optional)	D86	PEG_TX10- (Optional)
C87	GND	D87	GND
C88	PEG_RX11+ (Optional)	D88	PEG_TX11+ (Optional)
C89	PEG_RX11- (Optional)	D89	PEG_TX11- (Optional)
C90	GND (FIXED)	D90	GND (FIXED)
C91	PEG_RX12+ (Optional)	D91	PEG_TX12+ (Optional)
C92	PEG_RX12- (Optional)	D92	PEG_TX12- (Optional)
C93	GND	D93	GND
C94	PEG_RX13+ (Optional)	D94	PEG_TX13+ (Optional)
C95	PEG_RX13- (Optional)	D95	PEG_TX13- (Optional)
C96	GND	D96	GND
C97	GND_C97	D97	GND_D97
C98	PEG_RX14+ (Optional)	D98	PEG_TX14+ (Optional)
C99	PEG_RX14- (Optional)	D99	PEG_TX14- (Optional)
C100	GND (FIXED)	D100	GND (FIXED)
C101	PEG_RX15+ (Optional)	D101	PEG_TX15+ (Optional)
C102	PEG_RX15- (Optional)	D102	PEG_TX15- (Optional)
C103	GND	D103	GND
C104	VCC_8.5V~ 20V	D104	VCC_8.5V~ 20V
C105	VCC_8.5V~ 20V	D105	VCC_8.5V~ 20V
C106	VCC_8.5V~ 20V	D106	VCC_8.5V~ 20V
C107	VCC_8.5V~ 20V	D107	VCC_8.5V~ 20V
C108	VCC_8.5V~ 20V	D108	VCC_8.5V~ 20V
C109	VCC_8.5V~ 20V	D109	VCC_8.5V~ 20V
C110	GND (FIXED)	D110	GND (FIXED)



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