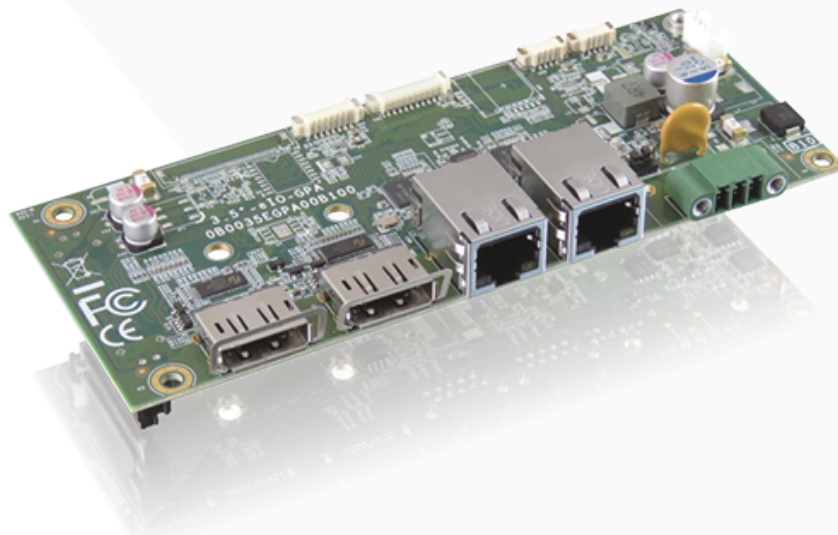


3.5"-eIO-GPA



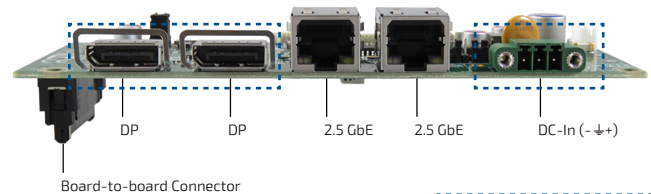
3.5" Extended I/O Board For General Purpose Applications

- Electronically & mechanically compatible with Kontron 3.5"-SBC Series products
- Additional rear I/O connectors stacked onto 3.5"-SBC Series products
- Additional internal connections & expansion slots stacked onto 3.5"-SBC Series products
- Industrial-grade operating temperature range support
- Extended voltage input range support

3.5" Extended I/O Board for General Purpose Applications

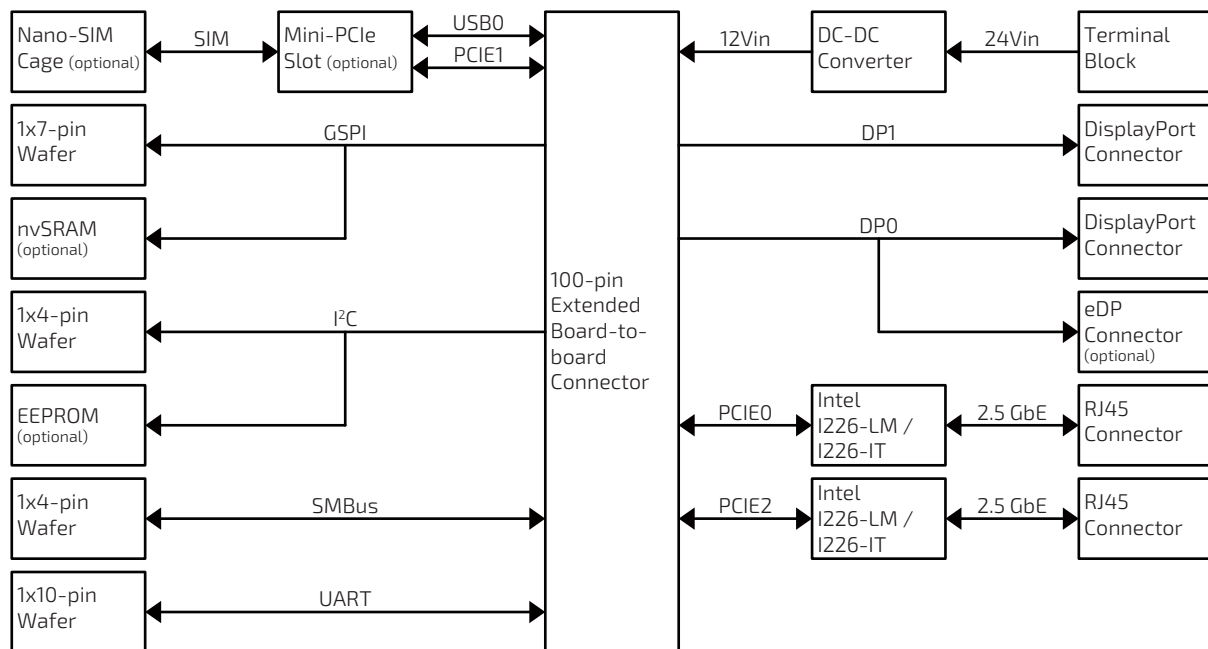
3.5"-eIO-GPA is an extended I/O board designed for Kontron 3.5"-SBC Series products for general purpose applications to facilitate system integration with less efforts and investment in I/O extension.

- Up to 2x DP for video output
- 2x 2.5 GbE LAN for Ethernet
- Up to 1x UART, up to 1x I²C, up to 1x SMBus, up to 1x GSPI
- DC 11 V ~ 32 V voltage input support
- Applicable to Kontron 3.5"-SBC Series products

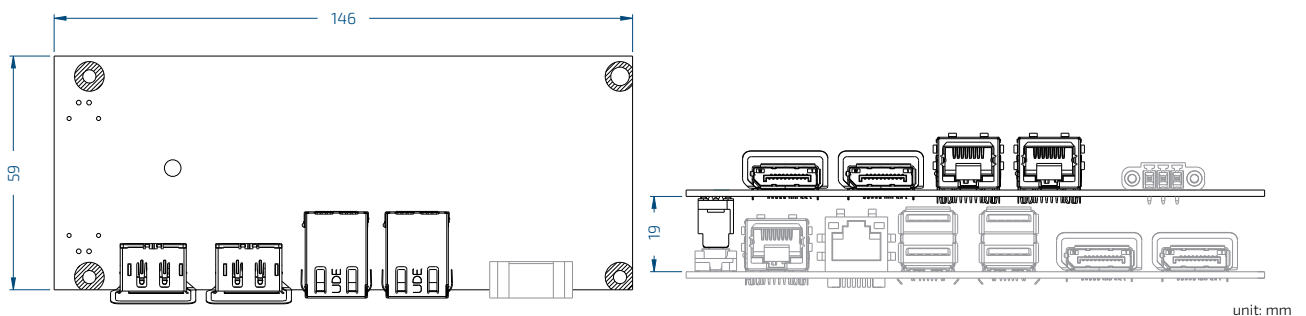


available depending on model

Block Diagram



Mechanical Dimensions



unit: mm

VIDEO	DISPLAY INTERFACE	2x DP (on rear, available depending on model) 1x eDP (optional, trade off with 1x DP)
NETWORK CONNECTION	ETHERNET	2x 2.5 GbE LAN (RJ45 on rear, Intel® I226-LM / I226-IT)
PERIPHERAL CONNECTION	SERIAL PORT OTHER I/Os	1x UART (by header, available depending on model) 1x I ² C (by header, available depending on model) 1x SMBus (by header, available depending on model) 1x GSPI (by header, available depending on model)
STORAGE & EXPANSION	MEMORY PCI EXPRESS SIM CARD HOLDER	1 MByte nvSRAM (optional, trade off with GSPI) 32 KByte EEPROM (optional, trade off with I ² C) 1x mPCIe (optional, Full Size, w/ PCIe x1 & USB 2.0, trade off with 2nd 2.5 GbE) 1x SIM Card Holder (optional, Nano size, Push-Push type, connected to PCIe)
POWER	INPUT VOLTAGE CONNECTOR	DC 11 V ~ 32 V (w/ reserve polarity protection, DC input from terminal block) DC 12 V / 5 VSB / 3.3 VSB (DC input from B2B connector) 1x3-pin 3.5 mm pitch terminal block (w/ reverse polarity protection, by model) B2B Connector
MECHANICAL	DIMENSION (L x W) CONNECTOR	146 mm x 59 mm / 5.75" x 2.32" 100-pin extended B2B connector
ENVIRONMENTAL	OPERATING TEMPERATURE STORAGE TEMPERATURE HUMIDITY	0 °C ~ 60 °C / 32 °F ~ 140 °F (Standard) -40 °C ~ 85 °C / -40 °F ~ 185 °F (Extreme) -20 °C ~ 80 °C / -4 °F ~ 176 °F (Standard) -55 °C ~ 85 °C / -67 °F ~ 185 °F (Extreme) 0 % ~ 95 %
APPLICATION	SUPPORTED BASEBOARD	Kontron 3.5"-SBC

Supportability

3.5"-eIO-GPA SIGNAL	2x DP	2x 2.5 GbE LAN	1x UART	1x I ² C	1x SMBus	1x GSPI
SUPPORT BY 3.5"-SBC-TGL	2x	2x	1x	1x	1x	1x
SUPPORT BY 3.5"-SBC-EKL	0x / 1x (optL.)	2x	1x	1x	1x	1x
SUPPORT BY 3.5"-SBC-AML/ADN	1x	2x	1x	1x	1x	1x
SUPPORT BY 3.5"-SBC-RPL	2x	2x	1x	1x	1x	1x

Mating Connector Information

ARTICLE	VENDOR	MODEL NO.
BOARD-TO-BOARD CONNECTOR	HIROSE ELECTRONIC	3.5"-SBC side: FX23L-100S-0.5SV 3.5"-eIO-GPA side: FX23-100P-0.5SV20

Ordering Information

ARTICLE	ORDERING CODE		REAR I/O			ONBOARD I/O				ETH. CTRL.	OP. TEMP. (°C)
	EMEA / AMER	APAC	2.5 GbE	DP	DC IN	UART	I ² C	SMBus	GSPI		
3.5"-eIO-GPA-0	1069-6159	B35EGPA0-001001T	2	2	1	1	1	1	1	I226-LM	0 ~ 60
3.5"-eIO-GPA-1	1069-6922	B35EGPA0-011001T	2	2	-	1	1	1	1	I226-LM	0 ~ 60
3.5"-eIO-GPA-2-XT	1073-9682	B35EGPAI-021000T	2	-	1	1	1	1	1	I226-IT	-40 ~ 85
3.5"-eIO-GPA-3 *	1073-6700	B35EGPA0-031002T	2	-	-	-	-	-	-	I226-LM	0 ~ 60
3.5"-eIO-GPA-4-XT *	1073-8651	B35EGPAI-041002T	2	-	-	-	-	-	-	I226-IT	-40 ~ 85

(* project based)

Board-to-board Connector Pin Assignment

PIN NUMBER	SIGNAL	PIN NUMBER	SIGNAL
P3	+12V_IN / +12V_OUT	P1	+5VSB_OUT
51	GSPI_CLK	1	+3.3VSB_OUT
52	GSPI_MOSI	2	+3.3VSB_OUT
53	GSPI_MISO	3	+3.3VSB_OUT
54	GSPI_CS0#	4	+3.3VSB_OUT
55	GSPI_CS1#	5	+3.3VSB_OUT
56	GND	6	GND
57	DP1_TX0+ / HDMI1_TX2+	7	eDP_DP0_TX0+ / HDMI0_TX2+
58	DP1_TX0- / HDMI1_TX2-	8	eDP_DP0_TX0- / HDMI0_TX2-
59	GND	9	GND
60	DP1_TX1+ / HDMI1_TX1+	10	eDP_DP0_TX1+ / HDMI0_TX1+
61	DP1_TX1- / HDMI1_TX1-	11	eDP_DP0_TX1- / HDMI0_TX1-
62	GND	12	GND
63	DP1_TX2+ / HDMI1_TX0+	13	eDP_DP0_TX2+ / HDMI0_TX0+
64	DP1_TX2- / HDMI1_TX0-	14	eDP_DP0_TX2- / HDMI0_TX0-
65	GND	15	GND
66	DP1_TX3+ / HDMI1_CLK+	16	eDP_DP0_TX3+ / HDMI0_CLK+
67	DP1_TX3- / HDMI1_CLK-	17	eDP_DP0_TX3- / HDMI0_CLK-
68	GND	18	GND
69	DP1_AUX+ / HDMI1_DDC_CLK	19	eDP_DP0_AUX+ / HDMI0_DDC_CLK
70	DP1_AUX- / HDMI1_DDC_DATA	20	eDP_DP0_AUX- / HDMI0_DDC_DATA
71	GND	21	GND
72	PCIE1_CLK_REF+	22	PCIE0_CLK_REF+
73	PCIE1_CLK_REF-	23	PCIE0_CLK_REF-
74	GND	24	GND
75	PCIE1_TX+ / SATA1_TX+	25	PCIE0_TX+ / SATA0_TX+
76	PCIE1_TX- / SATA1_TX-	26	PCIE0_TX- / SATA0_TX-
77	GND	27	GND
78	PCIE1_RX+ / SATA1_RX-	28	PCIE0_RX+ / SATA0_RX-
79	PCIE1_RX- / SATA1_RX+	29	PCIE0_RX- / SATA0_RX+
80	GND	30	GND
81	PCIE3_TX+ / USB1_SSTX+	31	PCIE2_TX+ / USB0_SSTX+
82	PCIE3_TX- / USB1_SSTX-	32	PCIE2_TX- / USB0_SSTX-
83	GND	33	GND
84	PCIE3_RX+ / USB1_SSRX+	34	PCIE2_RX+ / USB0_SSRX+
85	PCIE3_RX- / USB1_SSRX-	35	PCIE2_RX- / USB0_SSRX-
86	GND	36	GND
87	USB1_D-	37	USB0_D-
88	USB1_D+	38	USB0_D+
89	GND	39	GND
90	I2C_CLK	40	UART_TXD
91	I2C_DATA	41	UART_RXD
92	SMB_CLK	42	UART_CTS#
93	SMB_DATA	43	UART_RTS#
94	GND	44	GND
95	SMB_ALERT#	45	eDP_PWM
96	PCIE_WAKE#	46	eDP_VDDEN
97	PCIE_PLTRST#	47	eDP_BKLTEN
98	DP1_HPD / HDMI1_HPD	48	eDP_DP0_HPD / HDMI0_HPD
99	DP1_EN# / HDMI1_EN	49	eDP_DP0_EN# / HDMI0_EN
100	PS_ON#	50	USB_OC#
P4	+12V_IN / +12V_OUT	P2	+12V_IN / +12V_OUT

Note: The supported functions depend on the 3.5"-SBC board.

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