

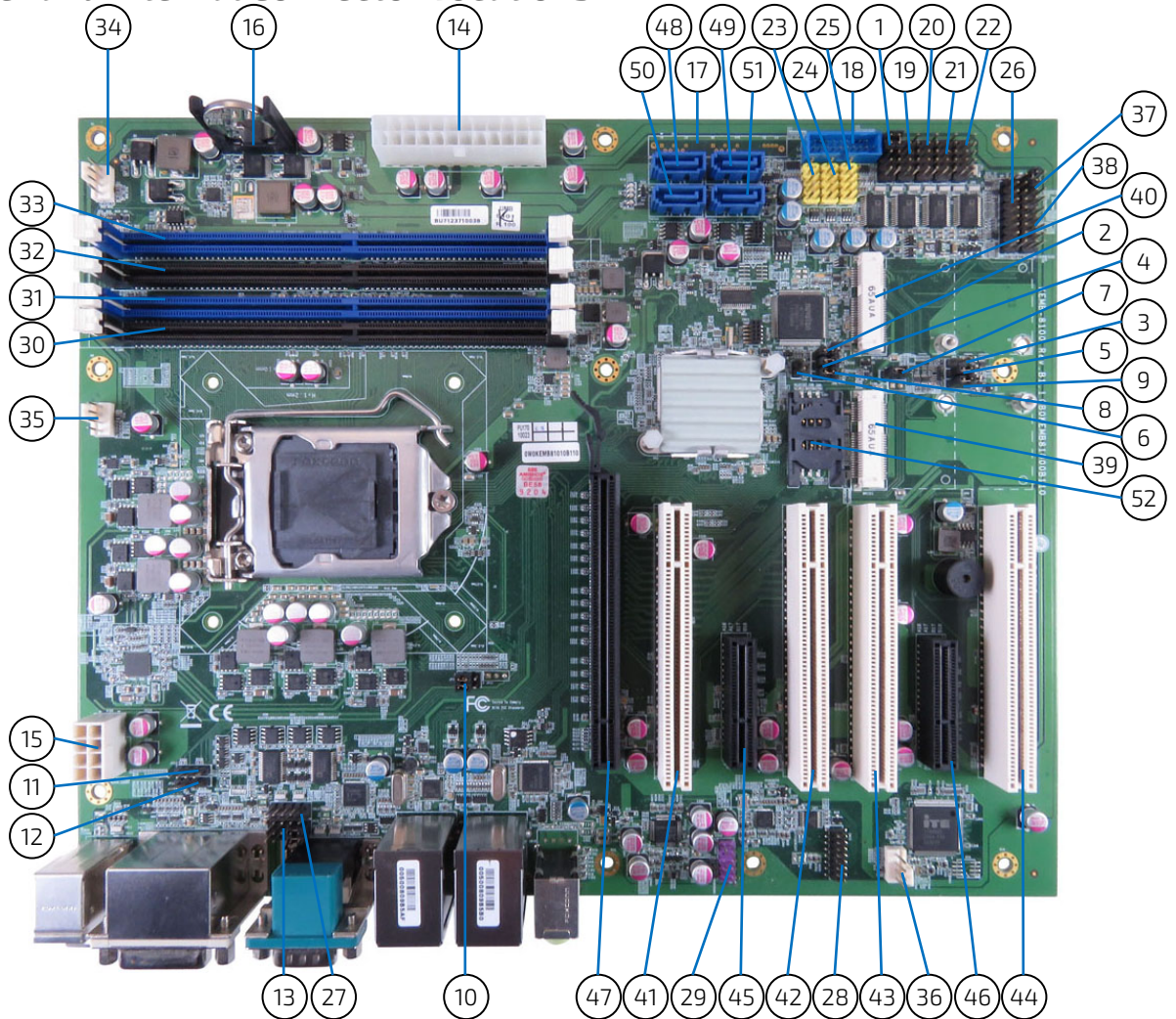
▶ ATX-KBL-S - QUICK INSTALLATION GUIDE

Thank you for purchasing the Kontron ATX-KBL-S embedded board. This document provides information to allow you to quickly install this product.

Packing Checklist

1. Take the ATX-KBL-S out of the packing box and check if the unit is properly secure in the plastic bag.
2. Check the contents of the carton box: (*: optional)
 - ▶ ATX-KBL-S main board
 - ▶ Rear I/O Shield
 - ▶ COM Port Cable*
 - ▶ USB 3.0 Cable*
 - ▶ 2-Port USB 2.0 Cable*
 - ▶ SATA Cable*
 - ▶ VGA Cable*

Jumper and Internal Connector Locations



► Jumper List

Item	Designation	Description
1	JP1	Pin-9 Selection for COM3 & COM4
2	JP2	Keyboard Lock Selection
3	JP3	mPCIE LED Indicator Pin Header
4	JP4	Protected RTC Selection
5	JP5	mPCIE / mSATA Selection for MPCIE2 (Q170 models only)
6	JP6	Flash Descriptor Security Override Selection
7	JP7	AT / ATX Power Mode Selection
8	JP8	ME F/W Selection
9	JP9	mPCIE / mSATA Selection for MPCIE1 (Q170 models only)
10	JP12	PCIE Configuration Setting for PEG1 (Q170 models only)
11	JP13	Terminator Selection for COM1

Item	Designation	Description
12	JP14	Terminator Selection for COM2
13	JP15	Pin-9 Selection for COM1 & COM2

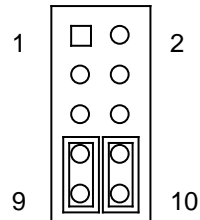
► Internal Connector List

Item	Designation	Description
14	ATX1	2x12-pin ATX Power Supply Wafer
15	ATX2	2x4-pin ATX Power Supply Wafer
16	BAT1	CR2032 Battery Holder
17	CN1	SATA Express Connector (Q170 models only)
18	CN2	USB3.0 Ports-5, 6 Box Header (Q170 models only)
19	CN3	RS-232 COM3 Pin Header
20	CN4	RS-232 COM4 Pin Header
21	CN5	RS-232 COM5 Pin Header
22	CN6	RS-232 COM6 Pin Header
23	CN7	USB2.0 Port-7, 8 Pin Header
24	CN8	USB2.0 Port-11, 12 Pin Header (Q170 models only)
25	CN9	USB2.0 Port-9, 10 Pin Header
26	CN10	16-bit Digital Input / Output Pin Header
27	CN12	RS-232/422/485 COM2 Pin Header
28	CN13	VGA Header
29	CN16	Front Panel Audio Pin Header
30	DIMM1	Channel-A, DIMM-0 DDR4 DIMM Slot
31	DIMM2	Channel-A, DIMM-1 DDR4 DIMM Slot (Q170 models only)
32	DIMM3	Channel-B, DIMM-0 DDR4 DIMM Slot
33	DIMM4	Channel-B, DIMM-1 DDR4 DIMM Slot (Q170 models only)
34	FAN1	System FAN Wafer
35	FAN2	CPU FAN Wafer
36	FAN3	AUX FAN Wafer
37	FP1	Front Panel Pin Header 1
38	FP2	Front Panel Pin Header 2
39	MPCIE1	Full Size mPCIE / mSATA Socket
40	MPCIE2	Half Size mPCIE / mSATA Socket (Q170 models only)
41	PCI1	32-bit, 33MHz PCI Slot 1
42	PCI2	32-bit, 33MHz PCI Slot 2
43	PCI3	32-bit, 33MHz PCI Slot 3
44	PCI4	32-bit, 33MHz PCI Slot 4
45	PCIE1	PCIEx4 Slot 1
46	PCIE2	PCIEx4 Slot 2
47	PEG1	PCIEx16 Slot

Item	Designation	Description
48	SATA1	Serial ATA Port-1 Connector (H110 models only)
49	SATA2	Serial ATA Port-2 Connector (H110 models only)
50	SATA3	Serial ATA Port-3 Connector
51	SATA4	Serial ATA Port-4 Connector
52	SIM1	SIM Card Holder for MPCIE1

Jumper Settings

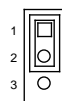
- ▶ Pin-9 Selection for COM3 & COM4 (JP1)



Jumper 1 Position				Description
Pin 1-3	Pin 3-5	Pin 5-7	Pin 7-9	
X	-	-	-	COM3, Pin 9 = +12V
-	X	-	-	COM3, Pin 9 = +5V
-	-	X	-	COM3, Pin 9 = +5V
-	-	-	X	COM3, Pin 9 = RI
Jumper 2 Position				Description
Pin 2-4	Pin 4-6	Pin 6-8	Pin 8-10	
X	-	-	-	COM4, Pin 9 = +12V
-	X	-	-	COM4, Pin 9 = +5V
-	-	X	-	COM4, Pin 9 = +5V
-	-	-	X	COM4, Pin 9 = RI

"X" = Jumper set (short) and "-" = jumper not set (open)

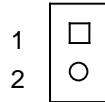
- ▶ Keyboard Lock Selection (JP2)



Jumper 1 Position		Description
Pin 1-2	Pin 2-3	
X	-	Normal
-	X	Keyboard Locked

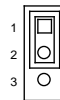
"X" = Jumper set (short) and "-" = jumper not set (open)

▶ mPCIE LED Indicator Jumper (JP3)



Pin	Signal	Note
1	LED+	
2	LED-	

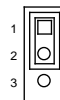
▶ Protected RTC Selection (JP4)



Jumper 1 Position		Description
Pin 1-2	Pin 2-3	
X	-	Normal (default position)
-	X	Clear RTC_RST Register (board does not boot with the jumper in this position)

"X" = Jumper set (short) and "-" = jumper not set (open)

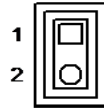
▶ mPCIE / mSATA Selection for MPCIE2 & MPCIE1 (JP5 & JP9) (only for models with Intel® Q170 Chipset)



Jumper 1 Position		Description
Pin 1-2	Pin 2-3	
X	-	mSATA
-	X	mPCIE

"X" = Jumper set (short) and "-" = jumper not set (open)

▶ ME F/W Selection (JP6)



Jumper Position		Description
Pin 1-2		
X		ME F/W Disabled
-		Normal Operation

"X" = Jumper set (short) and "-" = jumper not set (open)

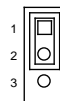
▶ AT / ATX Power Mode Selection (JP7)



Jumper 1 Position			Description
Pin 1-2	Pin 2-3		
X	-		ATX Mode
-	X		AT Mode

"X" = Jumper set (short) and "-" = jumper not set (open)

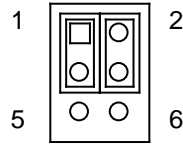
▶ Clear ME Register (JP8)



Jumper 1 Position			Description
Pin 1-2	Pin 2-3		
X	-		Normal
-	X		Clear ME Register

"X" = Jumper set (short) and "-" = jumper not set (open)

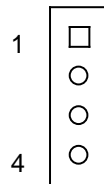
► PCIE Configuration Setting for PEG1 (JP12)



Jumper 1 Position		Jumper 2 Position		Description
Pin 1-3	Pin 3-5	Pin 2-4	Pin 4-6	
X	-	X	-	X16
X	-	-	X	X8 x8
-	X	X	-	X8 x4
-	X	-	X	X8 x4 x4

"X" = Jumper set (short) and "-" = jumper not set (open)

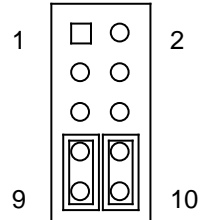
► Terminator Selection for COM1 & COM2 (JP13 & JP14)



Jumper 1 Position	Description
Pin 1-2	
X	Terminator is enabled between RX+ & RX-
-	Terminator is disabled
Jumper 2 Position	Description
Pin 3-4	
X	Terminator is enabled between TX+ & TX-
-	Terminator is disabled

"X" = Jumper set (short) and "-" = jumper not set (open)

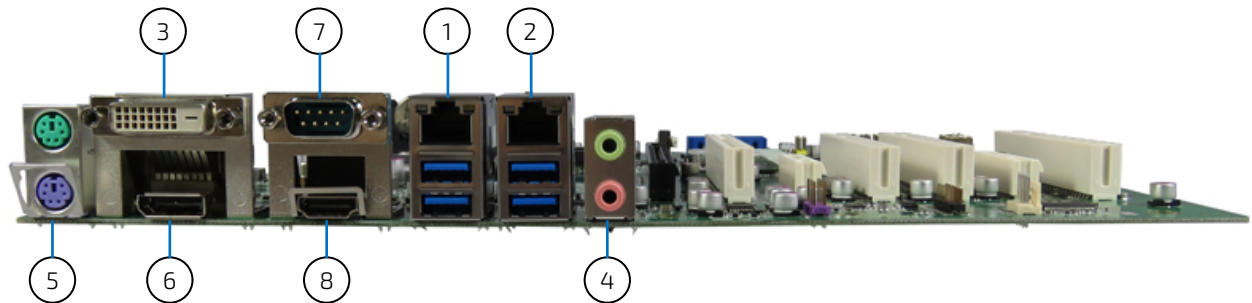
► Pin-9 Selection for COM1 & COM2 (JP15)



Jumper 1 Position				Description
Pin 1-3	Pin 3-5	Pin 5-7	Pin 7-9	
X	-	-	-	COM1, Pin 9 = +12V
-	X	-	-	COM1, Pin 9 = +5V
-	-	X	-	COM1, Pin 9 = +5V
-	-	-	X	COM1, Pin 9 = RI
Jumper 2 Position				Description
Pin 2-4	Pin 4-6	Pin 6-8	Pin 8-10	
X	-	-	-	COM2, Pin 9 = +12V
-	X	-	-	COM2, Pin 9 = +5V
-	-	X	-	COM2, Pin 9 = +5V
-	-	-	X	COM2, Pin 9 = RI

"X" = Jumper set (short) and "-" = jumper not set (open)

Real I/O Panel Connector Locations



Item	Designation	Description
1	CN14	GbE LAN1 & USB3.0 Port-3, 4
2	CN15	GbE LAN2 & USB3.0 Port-1, 2
3	CN17	DVI-D Connector
4	CN18	Line-Out & Mic-In Audio Jacks
5	CN19	PS/2 Keyboard & Mouse Mini-DIN Connector
6	CN20	DisplayPort Connector
7	CN21	RS-232/422/485 COM1 Connector
8	CN22	HDMI Connector