

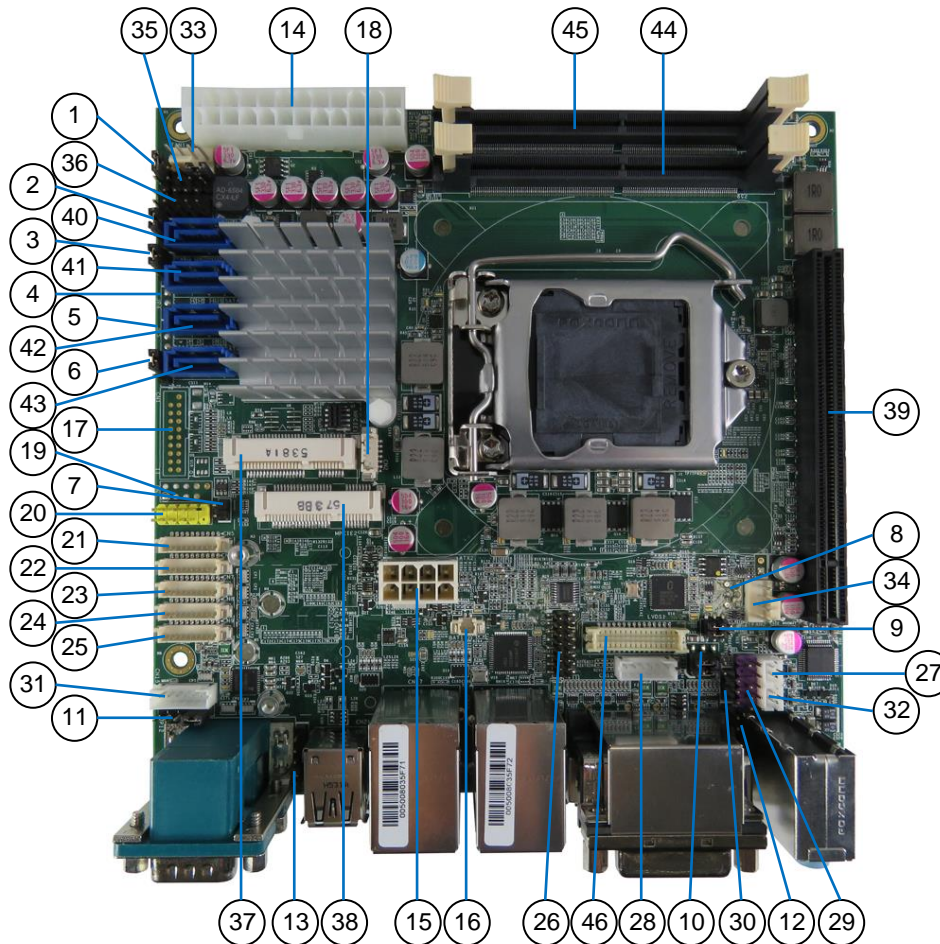
▶ mITX-SKL - QUICK INSTALLATION GUIDE

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

Packing Checklist

1. Take the mITX-SKL 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)
 - ▶ mITX-SKL main board
 - ▶ Rear I/O Shield
 - ▶ COM Port Cable*
 - ▶ DIO Cable*
 - ▶ USB 3.0 Cable*
 - ▶ 2-Port USB 2.0 Cable*
 - ▶ SATA Cable*
 - ▶ PS/2 Cable*
 - ▶ VGA Cable*
 - ▶ 3G Mini SIM Card Holder Kit*

Jumper and Internal Connector Locations



▶ Jumper List

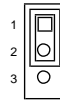
Item	Designation	Description
1	JP1	AT / ATX Power Mode Selection
2	JP2	Clear ME Register
3	JP3	RTC Reset Selection
4	JP4	mPCIE / mSATA Selection for MPCIE1 (models w/ Q170 only)
5	JP5	mPCIE / mSATA Selection for MPCIE2 (models w/ Q170 only)
6	JP6	Keyboard Lock Selection
7	JP7	mPCIE LED Indicator Pin Header
8	JP9	PCIE Configuration Setting for PEG1 (models w/ Q170 only)
9	JP10	Backlight Power Enable Selection for LVDS1
10	JP11	Panel & Backlight Power Selection for LVDS1
11	JP12	Pin-9 Selection for COM1
12	JP13	ME F/W Selection
13	JP14	Pin-9 Selection for COM2

► Internal Connector List

Item	Designation	Description
14	ATX1	2x12-pin ATX Power Supply Wafer
15	ATX2	2x2-pin ATX Power Supply Wafer
16	BAT1	CR2032 Battery Power Input Wafer
17	CN1	USB3.0 Port-5, 6 Box Header (models w/ Q170 only)
18	CN2	SIM Interface Wafer for MPCIE2
19	CN3	USB2.0 Port 11, 12 Pin Header (models w/ Q170 only)
20	CN4	USB2.0 Port 7, 8 Pin Header
21	CN5	8-bit Digital Input / Output Pin Header
22	CN6	RS-232 / 422 / 485 Port 3 Wafer
23	CN7	RS-232 Port 4 Wafer
24	CN8	RS-232 Port 5 Wafer
25	CN9	RS-232 Port 6 Wafer
26	CN10	VGA Header
27	CN11	Left Channel 3W Audio AMP Output Wafer
28	CN12	Backlight Power Output Wafer for LVDS1
29	CN13	Front Panel Audio Pin Header
30	CN14	SPDIF-Out Pin Header
31	CN15	PS/2 Keyboard & Mouse Mini-DIN Connector
32	CN16	Right Channel 3W Audio AMP Output Wafer
33	FAN1	CPU FAN Wafer
34	FAN2	System FAN Wafer
35	FP1	Front Panel Pin Header 1
36	FP2	Front Panel Pin Header 2
37	MPCIE1	Half Size mPCIE / mSATA Socket
38	MPCIE2	Full Size mPCIE / mSATA Socket
39	PEG1	PCIEx16 Slot
40	SATA1	Serial ATA Port-0 Connector
41	SATA2	Serial ATA Port-1 Connector
42	SATA3	Serial ATA Port-2 Connector
43	SATA4	Serial ATA Port-3 Connector
44	DIMM1	DDR4 Memory SO-DIMM Socket
45	DIMM2	DDR4 Memory SO-DIMM Socket
46	LVDS1	Primary 24-bit, 2-channel LVDS Panel Connector

Jumper Settings

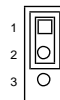
▶ AT / ATX Power Mode Selection (JP1)



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)

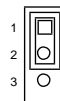
▶ Clear ME Register (JP2)



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)

▶ RTC Reset Selection (JP3)



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

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

► mPCIE / mSATA Selection for MPCIE2 (JP4) (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)

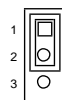
► mPCIE / mSATA Selection for MPCIE1 (JP5) (only for models with Intel® Q170 Chipset)



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

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

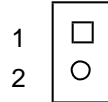
► Keyboard Lock Selection (JP6)



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

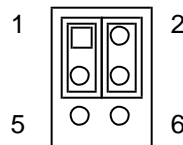
“X” = Jumper set (short) and “-” = jumper not set (open)

▶ MPCIE LED Indication Pin Header (JP7)



Pin	Signal	Note
1	LED+	
2	LED-	

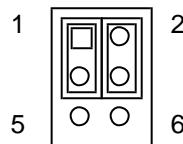
▶ Panel & Backlight Power Selection for PEG1 (JP9) (only for models with Intel® Q170 Chipset)



Jumper Position				Description
Pin 1-3	Pin 3-5	Pin 2-4	Pin 4-6	
X	-	X	-	x16
-	X	X	-	x8 x8

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

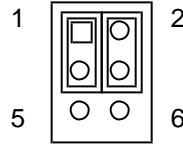
▶ Backlight Power Enable Selection for LVDS1 (JP10)



Jumper 1 Position		Description
Pin 1-3	Pin 3-5	
X	-	Backlight Enable Voltage = +3.3V
-	X	Backlight Enable Voltage = +5V
Jumper 2 Position		Description
Pin 2-4	Pin 4-6	
X	-	Active High
-	X	Active Low

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

▶ Panel & Backlight Power Selection for LVDS1 (JP11)



Jumper 1 Position		Description
Pin 1-3	Pin 3-5	
X	-	Backlight Power = +12V
-	X	Backlight Power = +5V
Jumper 2 Position		Description
Pin 2-4	Pin 4-6	
X	-	Panel Power = +3.3V
-	X	Panel Power = +5V

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

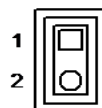
▶ Pin-9 Selection for COM1 (JP12)



Jumper Position				Description
Pin 1-2	Pin 2-3	Pin 3-4	Pin 4-5	
X	-	-	-	COM1, Pin-9 = +12V
-	X	-	-	COM1, Pin-9 = +5V
-	-	X	-	COM1, Pin-9 = +5V
-	-	-	X	COM1, Pin-9 = RI

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

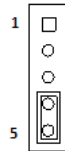
▶ ME FW Selection (JP13)



Jumper Position	Description
Pin 1-2	
X	Security Measures Defined by BIOS are Over-written
-	Security Measures Defined are Set

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

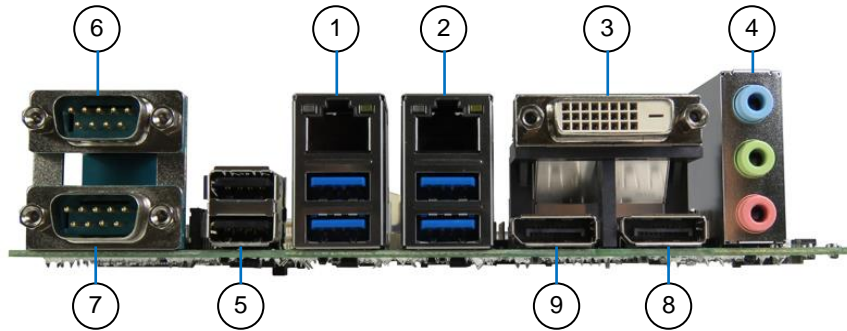
▶ Pin-9 Selection for COM2 (JP14)



Jumper Position				Description
Pin 1-2	Pin 2-3	Pin 3-4	Pin 4-5	
X	-	-	-	COM1, Pin-9 = +12V
-	X	-	-	COM1, Pin-9 = +5V
-	-	X	-	COM1, Pin-9 = +5V
-	-	-	X	COM1, Pin-9 = RI

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

Real I/O Panel Connector Locations



Item	Designation	Description
1	CN17	GbE LAN1 & USB3.0 Port-1, 2 Connector
2	CN18	GbE LAN2 & USB3.0 Port-3, 4 Connector
3	CN19	DVI-D Connector
4	CN20	Line-In, Line-Out & Mic-In Audio Jacks
5	CN21	USB2.0 Port-9, 10
6	CN22TOP	RS-232 / 422 / 485 COM2 Connector
7	CN22BOT	RS-232 / 422 / 485 COM1 Connector
8	CN23	Display Port B Connector
9	CN24	Display Port A Connector