conga-QKIT/x86

Starter Kit for Qseven x86 Modules

Quick Start Guide

Revision 1.3

1 General Information

To reduce the risk of personal injury, electric shock or equipment damage, users must observe the following instructions before connecting and operating the congatec Qseven Starter Kit (conga-QKIT/x86).

1.1 Safety Instructions

- To prevent overheating:
  - Use recommended cooling solution to ensure optimal heat dissipation
  - Do not exceed the stipulated operating temperature range
  - Make sure the product is provided with sufficient ventilation.
  - Do not place the product on a heat sensitive surface
- Moisture or liquids that penetrates the starter kit can cause electric shocks or short circuit:
  - Operate the product indoors.
  - Do not use the product in a wet or damp environment.
  - Never let liquids get inside the product.
- Operate the product only from an electrical outlet with the correct power source as indicated on the power supply.

1.2 Handling and Maintenance

- The conga-QKIT/x86 contains sensitive components and should only be opened by qualified technical personnel.
  - Do not open or handle the product except at an electrostatic-free workstation
  - Do not ship or store the product near strong electrostatic, electromagnetic, magnetic, or radioactive fields unless the device is contained within its original manufacturer's packaging.
- Unplug the product before dusting or cleaning.
  - Use a damp cloth to clean the product.
  - Do not use liquid/aerosol cleaners or magnetic/static cleaning devices.
- Ensure all boards are aligned correctly during attachment to prevent the connector pins from bending.
- Dispose of used batteries according to the local environmental regulations.

2 Introduction

This guide briefly describes the conga-QKIT/x86 and how to install, configure and operate it.

2.1 Product Overview

The conga-QKIT/x86 provides manufacturers and enthusiasts the ability to quickly evaluate Qseven modules. The starter kit contains amongst other components, the conga-QEVAL/2.0 evaluation carrier board.

The conga-QEVAL/2.0 evaluation carrier board provides all the interfaces necessary for designing a Qseven application. Its DIP switches and jumpers are configured by default for x86 modules (standard operation).

Note

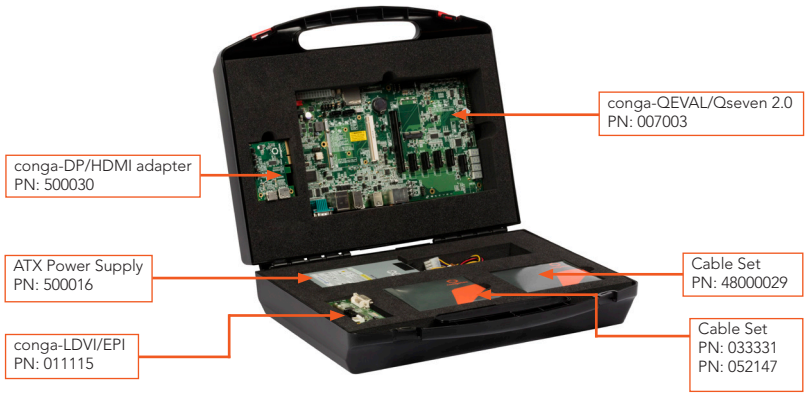
1. *The conga-QKIT/x86 is for evaluation or development purposes only and is provided "as is".*
2. *The conga-QKIT/x86 supports various congatec Qseven modules. You can find the user's guide for the modules at www.congatec.com/products/qseven.html*

2.2 Default Settings

DIP Switch	Switch 1	Switch 2	Switch 3	Switch 4
SW1	ON	ON	ON	ON
SW2	ON	ON	OFF	ON
SW3	ON	ON	ON	ON
SW4	ON	ON	ON	ON
SW9	OFF	OFF	OFF	OFF
M13	OFF	OFF		

Jumper	Default	Jumper	Default	Jumper	Default
X9	2-3	X33	1-2	X48	1-2
X17	1-2	X37	1-2	X49	1-2
X22	1-2	X43	1-2	X50	1-2
X28	1-2	X44	1-2	X51	1-2
X29	1-2	X46	1-2	X52	1-2
X32	1-2	X47	2-3		

2.3 What is in the Package?



The conga-QKIT/x86 (PN:077455) package includes the following items:

PN. No	Name	Description	Qty
007003	conga-QEVAL/Qseven 2.0	Evaluation board for Qseven modules (rev. B.4)	1
011115	conga-LDVI/EPI	LVDS to DVI converter board with EEPROM	1
033331	cab-LVDV-DAT-34-15	34-pin, 1 mm pitch, 15 cm ribbon cable for LVDS data	1
052147	cab-LVDV-PWR-10-15	10-pin, 15 cm, RM 1,27 mm ribbon cable for LVDS power (conga-LVDI/EPI)	1
48000029	SATA III Cable	Standard SATA-cable, 30 cm, straight-straight	2
10000471	ATX Power Supply	FSP180W, max 180 W (150 x 81.5 x 40.5 mm)	1
500030	conga-DP/HDMI Adapter	4k adapter for HDMI	1
71500020	Generic Cable Box	100 x 120 x 40 mm box for cables	2
85500008	conga-Qkit/x86 QSG	Quick Start Guide	1

Note

1. *The number of USB ports the kit supports depends on the USB configuration of the module. See the User's Guide of the conga-QEVAL/Qseven 2.0 and the respective module for supported USB configurations.*

2. *The LVDI adapter supports resolutions up to 1280 x 1024 @ 1 x 24 bit*

3 Hardware

3.1 Setup

1. Attach the congatec Qseven/x86 module to connector CN1 on the carrier board.

2. Install the appropriate cooling solution for the Qseven module.

3. Attach display monitor:
   - for HDMI display output, attach the conga-DP/HDMI adapter to connector X15 on the carrier board.
   - for DVI display output, attach the conga-LDVI/EPI data cable to connector X41 and the power cable to connector X42, on the carrier board.

4. Attach other necessary peripherals.

5. Attach ATX power supply to connector X26 or 12 V power supply to connectors M8 and M9, on the carrier board.

6. Press the power button to turn on the system.