XA-SK-GPIO Slice Card Hardware Guide

XMOS®

Table of Contents

1 Slice Card Overview

1.1 Pack Contents

▶ One XA-SK-GPIO Slice Card

1.2 GPIO Access Features

▶ A variety of XMOS ports of 1 bit, 4 bit and 8bit type are exposed for access via 0.1" headers.

▶ Access to 4 LEDs via a 4 bit port

▶ Two push buttons are connected via a 4-bit port

▶ A small prototyping area is provided

1.3 RS232 UART

▶ A pair of 1 bit ports (1 each for RX and TX) are used with an RS232 transceiver and DB9 connector to provide a standard UART terminal running up to 115.2 KBaud which can be connected to any PC COM port or Serial-to-USB adapter.

1.4 4 Channel ADC With xternal Temperature Sensor

▶ An ADC with a standard 2-wire interface is provided, with an external linearised thermistor connected to the first ADC channel. The remaining 3 ADC channels are exposed on testpoints.

2 XA-SK-GPIO Functional Pins

This table shows the port mapping for each of the Slice Card Signal IO, and the Slicekit Slot connector pin it is located on.

Function	STAR	TRIANGLE	SQUARE	CIRCLE	PIN	Description
GPIO_0	NC	1A	NC	1A	B2	1 Bit port free for GPIO
GPIO_1	NC	1D	NC	1D	B4	1 Bit port free for GPIO
GPIO_2	NC	1E	NC	1E	A3	1 Bit port free for GPIO
GPIO_3	NC	1H	NC	1H	A4	1 Bit port free for GPIO
UART_TX	1C	1K	1C	1K	B10	RS232 TX
UART_RX	1G	1I	1G	1I	B15	RS232 RX
I2C_SCL	1F	1L	1F	1L	A15	I2C Clock for ADC
I2C_SDA	1B	1J	1B	1J	A8	I2C Data for ADC
GPO_0/LED_0	4A0	4E0	4A0	4E0	B6	GP output, connected to l
GPO_1/LED_1	4A1	4E1	4A1	4E1	B7	GP output, connected to l
GPO_6/LED_2	4A2	4E2	4A2	4E2	A6	GP output, connected to l
GPO_7/LED_3	4A3	4E3	4A3	4E3	A7	GP output, connected to l
GPO_2	4B0	4F0	4B0	4F0	B9	GP output
GPO_3	4B1	4F1	4B1	4F1	B11	GP output
GPO_4	4B2	4F2	4B2	4F2	A9	GP output
GPO_5	4B3	4F3	4B3	4F3	A11	GP output
BUTTON_A	4C0	8D0	4C0	8D0	B12	Input from Button A
BUTTON_B	4C1	8D1	4C1	8D1	B13	Input from Button B
GPI_0	4D0	1O	4D0	1O	B17	GP Input
GPI_1	4D1	1P	4D0	1P	B18	GP Input
GPI_2	4D2	8D4	4D0	NC	A18	GP Input
GPI_3	4D3	8D5	4D0	NC	A17	GP Input
GPI_4	4C2	8D6	4C2	NC	A12	GP Input
GPI_5	4C3	8D7	4C3	NC	A13	GP Input

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