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MAX32625NEXPAQ Development Board

General Description

The MAX32625NEXPAQ is a rapid development platform designed to accelerate the implementation of nexpaq modules with the MAX32625 ARM® Cortex®-M4F microcontroller. It contains all the elements needed to interface to the nexpaq system and provides easy access to the main peripherals inside the microcontroller. This provides an expandable platform for quick proof-of-concepts and early software development to enhance time to market.

The nexpaq platform provides the simplest way to interface hardware to a phone. It utilizes web standards to enable a rich user experience that is fundamentally cross platform.

Ordering Information appears at end of data sheet.

ARM is a registered trademark and registered service mark and Cortex and mbed are registered trademarks of ARM Limited.

1-Wire is a registered trademark of Maxim Integrated Products, Inc.

Features

- MAX32625 Microcontroller
 - ARM Cortex-M4F
 - 512KB Flash, 160KB SRAM
 - FS-USB, UART, SPI, I2C, 1-Wire®
- nexpaq Compatible
 - nexpaq Module Form Factor
 - nexpaq Interface Connector
- Expansion Connections
 - Power: GND, 3.3V, 5V, Battery
 - Serial I/O: I2C, SPI, UART, 1-Wire
 - Analog Inputs
 - PWM Outputs
 - RGB Indicator LED
 - mbed® HDK DAPLink Connector
 - Drag-and-Drop Programming
 - CMSIS-DAP Debugger
 - Virtual UART Console

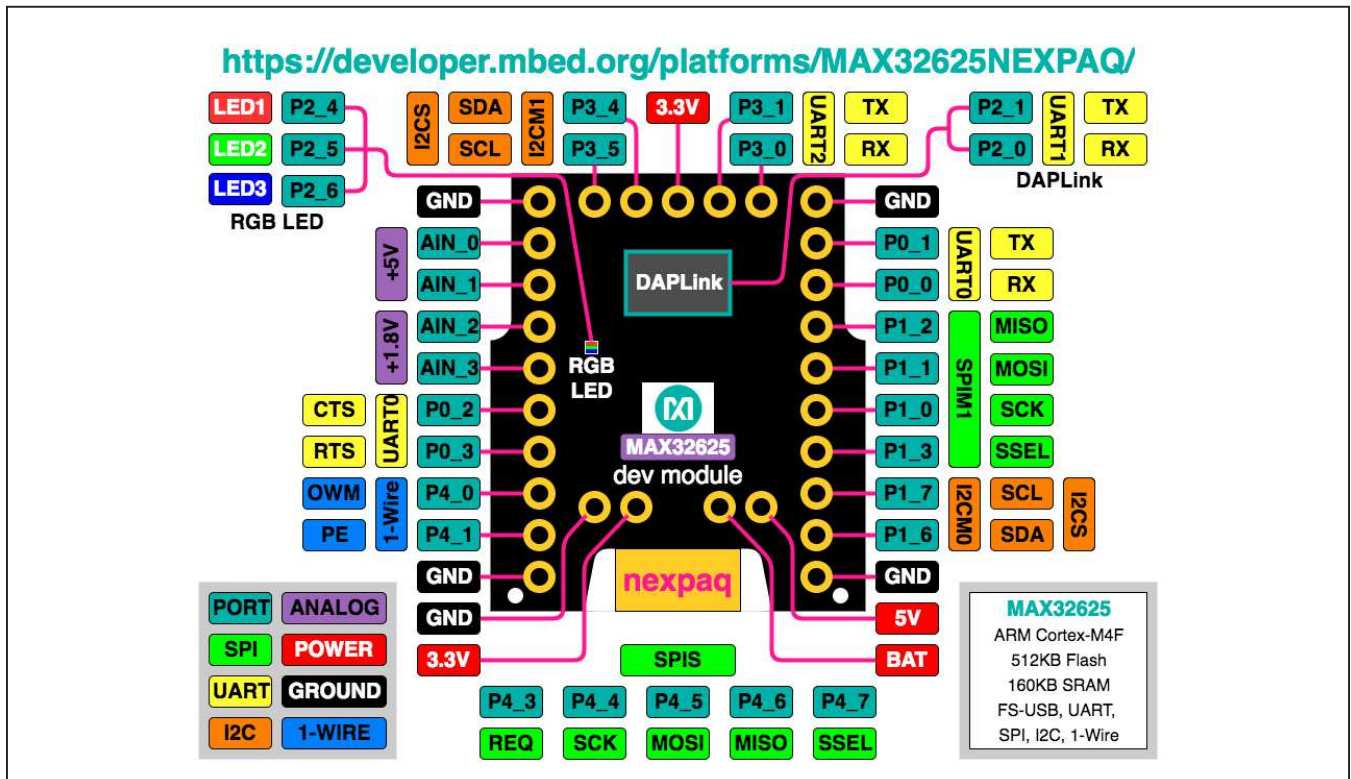


Figure 1. MAX32625NEXPAQ Pin Diagram

MAX32625NEXPAQ Development Board

Overview

The MAX32625NEXPAQ as part of the nexpaq developers kit takes phone customization to a whole new level. This is the easiest way to add new features to your phone. This cost-effective, easy-to-use developers kit finally provides the tools needed to enable developers around the world.

The nexpaq technology provides a gateway between the phone and external modules that allows developers to create custom interfaces on their phone for just about any peripheral they can imagine. The use of web standards on the phone and the mbed tools for the embedded code

make this a truly cross platform development environment, where all you need is a web browser and a text editor to get started.

The MAX32625NEXPAQ nexpaq Development Module provides the core circuits and libraries needed to link to the nexpaq gateway, as well as development features for debugging and connecting to external devices.

Getting Started

Go to <https://developer.mbed.org/platforms/MAX32625NEXPAQ/> to get started with this exciting new platform.

nexpaq Card Edge Connector

Table 1. nexpaq Card Edge Connector Pinout

PORT	TOP	BOTTOM	PORT
USB D+	1	14	GND
USB D-	2	13	+3.3V
N.C.	3	12	CS
N.C.	4	11	SCK
N.C.	5	10	SIMO
N.C.	6	9	SOMI
BAT	7	8	+5V

Left Side Header

Table 2. MAX32625NEXPAQ Left-Side Header Pinout

PORT	DESCRIPTION
GND	Ground
AIN_0	ADC input 0
AIN_1	ADC input 1
AIN_2	ADC input 2
AIN_3	ADC input 3
P0_2	GPIO/UART0 CTS
P0_3	GPIO/UART0 RTS
P4_0	GPIO/1-Wire Master
P4_1	GPIO/1-Wire Pullup Enable
GND	Ground

Right-Side Header

Table 3. MAX32625NEXPAQ Right-Side Header Pinout

PORT	DESCRIPTION
GND	Ground
P0_1	GPIO/UART0 TX
P0_0	GPIO/UART0 RX
P1_2	GPIO/SPIM1 MISO
P1_1	GPIO/SPIM1 MOSI
P1_0	GPIO/SPIM1 SCK
P1_3	GPIO/SPIM1 SSEL
P1_7	GPIO/I2CM0 SCL
P1_6	GPIO/I2CM0 SDA
GND	Ground

Top Header

Table 4. MAX32625NEXPAQ Top Header Pinout

PORT	DESCRIPTION
P3_5	GPIO/I2CM1 SCL
P3_4	GPIO/I2CM1 SDA
+3.3V	+3.3V Power
P3_1	GPIO/UART2 Tx
P3_0	GPIO/UART2 Rx

MAX32625NEXPAQ Development Board

Bottom Header

Table 5. MAX32625NEXPAQ Bottom Header Pinout

PORT	DESCRIPTION
GND	Ground
+3.3V	+3.3V Power
BAT	Battery Voltage
+5V	+5V Power

Ordering Information

PART	TYPE
MAX32625NEXPAQ#	Development Board

#Denotes RoHS compliant.

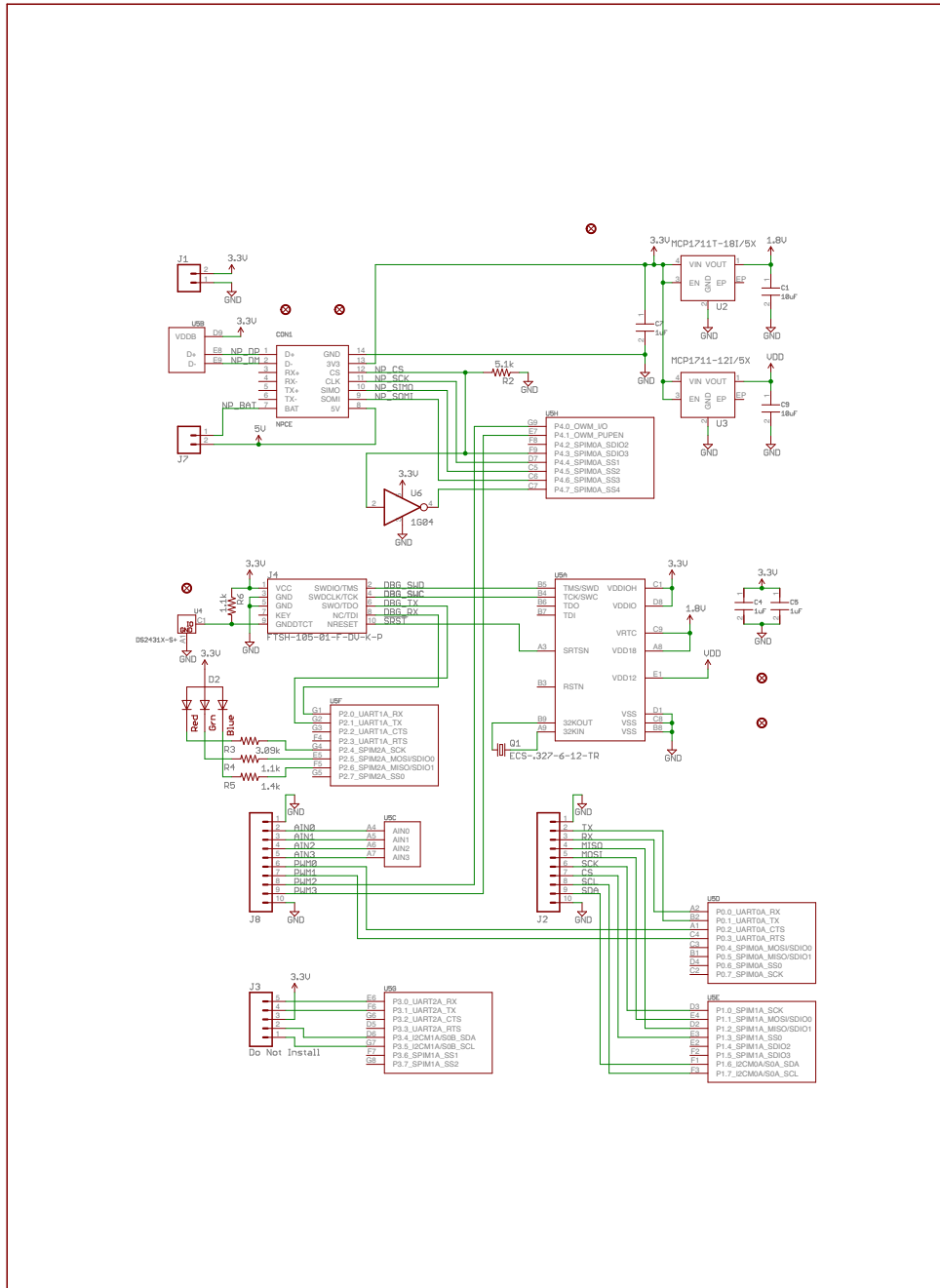
MAX32625NEXPAQ Development Board Bill of Materials

PART	QTY	DESCRIPTION
J1, J7	2	Pin header, 1x2, 0.1in
J2, J8	2	Pin header, 1x10, 0.1in
U5	1	Microcontroller, MAX32625
R4, R6	2	Resistor, SMT, 1.1kΩ, 0402
R5	1	Resistor, SMT, 1.4kΩ, 0402
C4, C5, C7	3	Capacitor, SMT, 1μF, 0402
C1, C9	2	Capacitor, SMT, 10μF, 0402
R3	1	Resistor, SMT, 3.09kΩ, 0402
R2	1	Resistor, SMT, 5.1kΩ, 0402

PART	QTY	DESCRIPTION
U4	1	IC, EEPROM, 1Kb, DS2431
Q1	1	Crystal, tuning fork, 32.768kHz
J4	1	Header, 2x5, 0.05in, FTSH-105-01-F-DV-K-P
U6	1	Inverter, single gate, 74AUP1G04 IC
U3	1	IC, voltage regulator, 1.2V, MCP1711-12I/5X
U2	1	IC, voltage regulator, 1.8V, MCP1711T-18I/5X
D2	1	LED, triple, RGB, RGBLED_SML-LX0404

MAX32625NEXPAQ Development Board

MAX32625NEXPAQ Development Board Schematic



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MAX32625NEXPAQ

Development Board

Revision History

REVISION NUMBER	REVISION DATE	DESCRIPTION	PAGES CHANGED
0	11/16	Initial release	—

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