Features:

- KL25Z128VLK4-Cortex-M0+ MCU with:
  - 128kB flash, 16kB SRAM
  - Up to 48MHz operation
  - USB full-speed controller
- OpenSDA-sophisticated USB debug interface
- Tri-color LED
- Capacitive touch “slider”
- Freescale MMA8451Q accelerometer
- Flexible power supply options
  - Power from either on-board USB connector
  - Coin cell battery holder (optional population option)
  - 5V to 9V_{\text{Vin}} from optional IO header
  - 5V provided to optional IO header
  - 3.3V to or from optional IO header
- Reset button
- Expansion IO form factor accepts peripherals designed for Arduino™-compatible hardware

Kit Contents:

<table>
<thead>
<tr>
<th>Description</th>
<th>Qty</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samtec Socket, 2.54mm, 1 × 6 Pos</td>
<td>1</td>
<td>SSW-106-01-T-S</td>
</tr>
<tr>
<td>Samtec Socket, 2.54mm, 1 × 8 Pos</td>
<td>2</td>
<td>SSW-108-01-T-S</td>
</tr>
<tr>
<td>Samtec Socket, 2.54mm, 1 × 10 Pos</td>
<td>1</td>
<td>SSW-110-01-T-S</td>
</tr>
<tr>
<td>Samtec Header, 2.54mm, THT VERT, 2 Pos</td>
<td>3</td>
<td>TSW-102-07-T-S</td>
</tr>
<tr>
<td>Multicom Mini USB cable</td>
<td>1</td>
<td>SPC20060</td>
</tr>
<tr>
<td>Freescale Freedom Platform</td>
<td>1</td>
<td>FRDM-KL25Z</td>
</tr>
</tbody>
</table>

Specifications:

- Silicon Manufacturer: Freescale
- Core Architecture: ARM
- Core Sub-Architecture: Cortex - M0+
- Silicon Core Number: MKL2
- Silicon Family Name: Kinetis - KL2

Description:

The Freescale Freedom development platform is a low-cost evaluation and development platform featuring Freescale's newest ARM® Cortex™-M0+ based Kinetis KL25Z MCUs.

Ordering Information

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eval Basic Kit, Kinetis KL25Z Freescale Freedom Platform</td>
<td>FRDMKL25Z BASIC BUNDLE</td>
</tr>
</tbody>
</table>

www.element14.com
www.farnell.com
www.newark.com
Eval Basic Kit
Kinetis KL25Z Freedom Platform

FRDM-KL25Z Single Row/Arduino Header Layout

NOTE: Mount headers to outside row of holes

KL25Z Signals
Arduino™ R3 Signals

SDA_PTD5 – 2
P3V3 – 4
RESET – 6
P3V3 – 8
P5V_USB – 10
GND – 12
GND – 14
P5.0_VIN – 16
A0
A1_PTB1 – 4
A2_PTB2 – 6
A3_PTB3 – 8
A4_PTC2 – 10
A5_PTC1 – 12

I2C_SCL
I2C_SDA
AREF
GND
D13
D12
D11
D10
D9
D8
D7
D6
D5
D4
D3
D2
D1
D0

20 – PTE0
16 – PTE1
16 – VREF
14 – GND
12 – PT0
10 – PT0
8 – PT0
6 – PT0
4 – PT0
2 – PT0
12 – PTA13
10 – PTA5
8 – PTA12
6 – PTA10
4 – PTA2
2 – PTA1

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Attaching Single Row Headers to the Freedom Platform

This special bundle includes headers that can be soldered to the board to give you access to additional Arduino™-compatible hardware – commonly referred to as “Shields”.

To attach the single row headers to the Freedom Platform, please reference the "FRDM-KL25Z Single Row/Arduino Header Layout" diagram. Attaching these headers to the outside row of I/O holes on the board give you access to the unlimited potential of access to peripherals designed for Arduino™-compatible hardware. Using optional dual row headers are also acceptable, but are not needed to use Arduino™-compatible hardware/ shields.

<table>
<thead>
<tr>
<th>Header</th>
<th>Positions on Board</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAMTEC SSW-106-01-T-S</td>
<td>J10</td>
</tr>
<tr>
<td>SAMTEC SSW-108-01-T-S</td>
<td>J1, J9</td>
</tr>
<tr>
<td>SAMTEC SSW-110-01-T-S</td>
<td>J2</td>
</tr>
<tr>
<td>SAMTEC TSW-102-07-T-S</td>
<td>J3, J4, J11 *</td>
</tr>
</tbody>
</table>

* Three of these headers have been included for additional/ advanced features that are available on positions J3, J4, and J11 and are not necessary for use with Arduino™-compatible hardware/ shields. Details of their functionality can be found in the Freedom Platform documentation.

Note:

Also available the supplemental bundle - Newark order code 54W6564

The Freescale Freedom development platform is form-factor compatible with popular third-party hardware designed to work with Arduino™ and Arduino-compatible boards, providing engineers the “freedom” to connect to a broader range of expansion boards.

Also available is a case for the Freedom Platform - Newark order code 55W6264