Features

- STM32 microcontrollers in 32-pin packages
- Three LEDs:
  - USB communication (LD1), power LED (LD2), user LED (LD3)
- Reset push-button
- Board expansion connectors
  - Arduino™ Nano
- Flexible power-supply options: ST-LINK USB VBUS or external sources
- On-board ST-LINK/V2-1 debugger/programmer with USB re-enumeration capability: mass storage, virtual COM port, debug port
- Support of a wide choice of Integrated Development Environments (IDEs) including IAR™, Keil®, GCC-based IDEs, ARM® mbed
- ARM® mbed Enabled™ (see http://mbed.org)

Description

The STM32 Nucleo-32 board provides an affordable and flexible way for users to try out new concepts and build prototypes with the STM32 microcontroller, choosing from various combinations of performance, power consumption and features. The Arduino™ Nano connectivity makes it easy to expand the functionality of the STM32 Nucleo open development platform with a choice of specialized shields. The STM32 Nucleo-32 board does not require any separate probe as it integrates the ST-LINK/V2-1 debugger/programmer and it comes with the STM32 comprehensive software HAL library, together with various packaged software examples, as well as direct access to the ARM® mbed Enabled™ on-line resources.

Table 1. Device summary

<table>
<thead>
<tr>
<th>Reference</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUCLEO-XXXXXX</td>
<td>NUCLEO-F031K8, NUCLEO-F042K8, NUCLEO-F303K8, NUCLEO-L011K4, NUCLEO-L031K6, NUCLEO-L432KC.</td>
</tr>
</tbody>
</table>
System requirements

- Windows® OS (XP, 7, 8 and 10), Linux® 64-bit or macOS™
- USB Type-A to Micro-B cable

Development toolchains

- Keil® MDK-ARM\(^{(a)}\)
- IAR™ EWARM\(^{(a)}\)
- GCC-based IDEs including free SW4STM32 from AC6
- ARM® mbed Enabled™ online

Ordering information

*Table 2* lists the order codes and the respective targeted STM32.

<table>
<thead>
<tr>
<th>Order code</th>
<th>Targeted STM32</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUCLEO-F031K6</td>
<td>STM32F031K6T6</td>
</tr>
<tr>
<td>NUCLEO-F042K6</td>
<td>STM32F042K6T6</td>
</tr>
<tr>
<td>NUCLEO-F303K8</td>
<td>STM32F303K8T6</td>
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<td>NUCLEO-L011K4</td>
<td>STM32L011K4T6</td>
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<td>NUCLEO-L031K6</td>
<td>STM32L031K6T6</td>
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<tr>
<td>NUCLEO-L432KC</td>
<td>STM32L432KCU6</td>
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</tbody>
</table>

The meaning of NUCLEO-TXXKY codification is as follows:
- TXXX describes the STM32 product line (T for F or L)
- K describes the pin count (K for 32 pins)
- Y describes the memory size (4 for 16 Kbytes, 6 for 32 Kbytes, 8 for 64 Kbytes, C for 256 Kbytes)

The order code is printed on a sticker, placed at the top or bottom side of the board.

\(^{(a)}\) On Windows® only.
## Revision history

Table 3. Document revision history

<table>
<thead>
<tr>
<th>Date</th>
<th>Revision</th>
<th>Changes</th>
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</thead>
<tbody>
<tr>
<td>08-Sep-2015</td>
<td>1</td>
<td>Initial release.</td>
</tr>
<tr>
<td>15-Jan-2016</td>
<td>2</td>
<td>Updated Table 1: Device summary and Table 2: Ordering information.</td>
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<td>09-Jun-2016</td>
<td>3</td>
<td>Updated Section : Description and Section : System requirements to add NUCLEO-L432KC.</td>
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<tr>
<td>07-Jul-2017</td>
<td>4</td>
<td>Updated Features.</td>
</tr>
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