Features

- STM32 microcontroller in LQFP144 package
- SMPS: significantly reduces power consumption in Run mode, by generating Vcore logic supply from an external DC/DC converter. This function is only available on ‘-P’ suffixed boards
- 3 user LEDs
- 2 push-buttons: USER and RESET
- LSE crystal:
  - 32.768 kHz crystal oscillator
- 2 types of extension resources:
  - ST Zio connector including: support for Arduino™ Uno V3 connectivity (A0 to A5, D0 to D15) and additional signals exposing a wide range of peripherals
  - ST morpho extension pin header footprints for full access to all STM32 I/Os
- USB OTG or full-speed device with Micro-AB connector
- 4 source options for power supply:
  - E5V from ST morpho connectors
  - ST-LINK/V2-1 USB connector
  - USB charger
  - V_IN (7 - 12 V) from ST Zio connector
- On-board ST-LINK/V2-1 debugger/programmer with SWD connector:
  - ST-LINK/V2-1 standalone kit capability
  - USB re-enumeration capability: virtual COM port, mass storage, debug port
- Comprehensive free software HAL and LL libraries including a variety of software examples
- Support of a wide choice of Integrated Development Environments (IDEs) including IAR™, Keil®, GCC-based IDEs

Description

The STM32 Nucleo-144 boards (NUCLEO-L496ZG and NUCLEO-L496ZG-P) provide an affordable and flexible way for users to try out new concepts and build prototypes using the various combinations of performance, power consumption and features provided by the STM32 microcontroller.

The ST Zio connector, which extends the Arduino™ Uno V3 connectivity, and the ST morpho headers provide an easy means of expanding the functionality of the Nucleo open development platform with a wide choice of specialized shields. The STM32 Nucleo-144 board does not require any separate probe as it integrates the ST-LINK/V2-1 debugger/programmer. The STM32 Nucleo-144 board comes with the STM32 comprehensive software HAL and LL libraries, and various packaged software examples.
System requirements

- Windows® OS (XP, 7, 8 and 10), Linux® 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

Ordering information

To order the Nucleo-144 board corresponding to the targeted STM32, use the order code given below in Table 1.

<table>
<thead>
<tr>
<th>Order code</th>
<th>Target STM32</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUCLEO-L496ZG</td>
<td>STM32L496ZGT6</td>
</tr>
<tr>
<td>NUCLEO-L496ZG-P</td>
<td>STM32L496ZGT6P</td>
</tr>
</tbody>
</table>

The meaning of the codification is explained in Table 2.

<table>
<thead>
<tr>
<th>NUCLEO-L496ZG/NUCLEO-L496ZG-P</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM32L496</td>
<td>STM32 product line</td>
</tr>
<tr>
<td>Z = 144 pins</td>
<td>STM32 package pin count</td>
</tr>
<tr>
<td>G = 1 Mbyte</td>
<td>STM32 Flash memory size</td>
</tr>
<tr>
<td>P = SMPS</td>
<td>MCU has SMPS function</td>
</tr>
</tbody>
</table>

This order code is mentioned on a sticker placed on the top side of the board.

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

**Table 3. Document revision history**

<table>
<thead>
<tr>
<th>Date</th>
<th>Revision</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-Feb-2017</td>
<td>1</td>
<td>Initial version.</td>
</tr>
</tbody>
</table>
| 16-Mar-2017| 2        | Document now scopes NUCLEO-L496ZG and NUCLEO-L496ZG-P products. Updated:  
- cover page features (to cover LL APIs)  
- cover page description  
- *Table 1: Ordering information*  
- *Table 2: Codification explanation.* |
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