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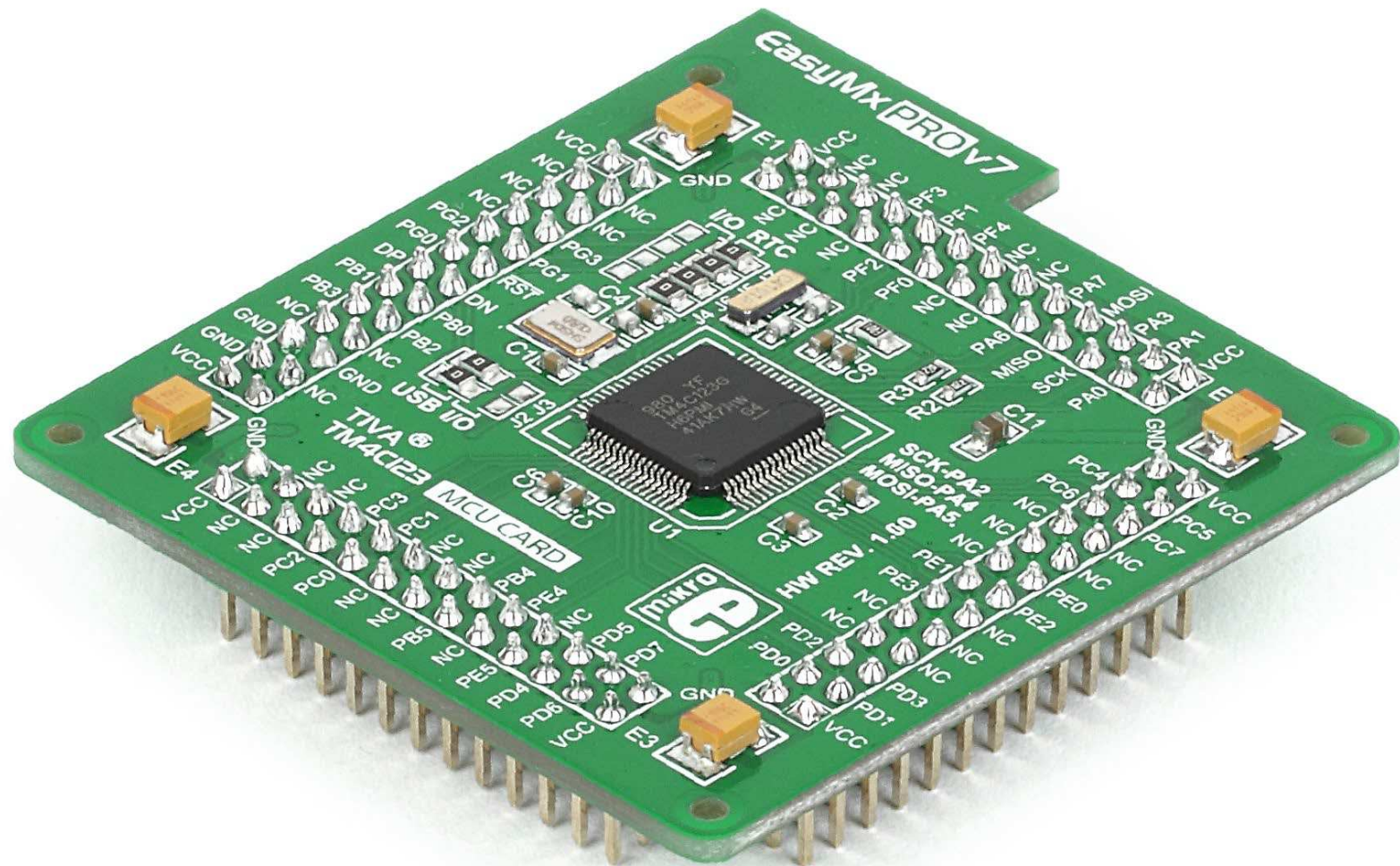
Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

Standard 64-pin MCU card
with TM4C123GH6PM

EasyMx PRO v7

Card information

The **MCU card** is shown on **Figure 1**. It contains the **TM4C123GH6PM** microcontroller which is loaded with on-chip modules and is a great choice for both beginners and professionals. After testing and building the final program, this card can also be taken out of the board socket and used in your final device.
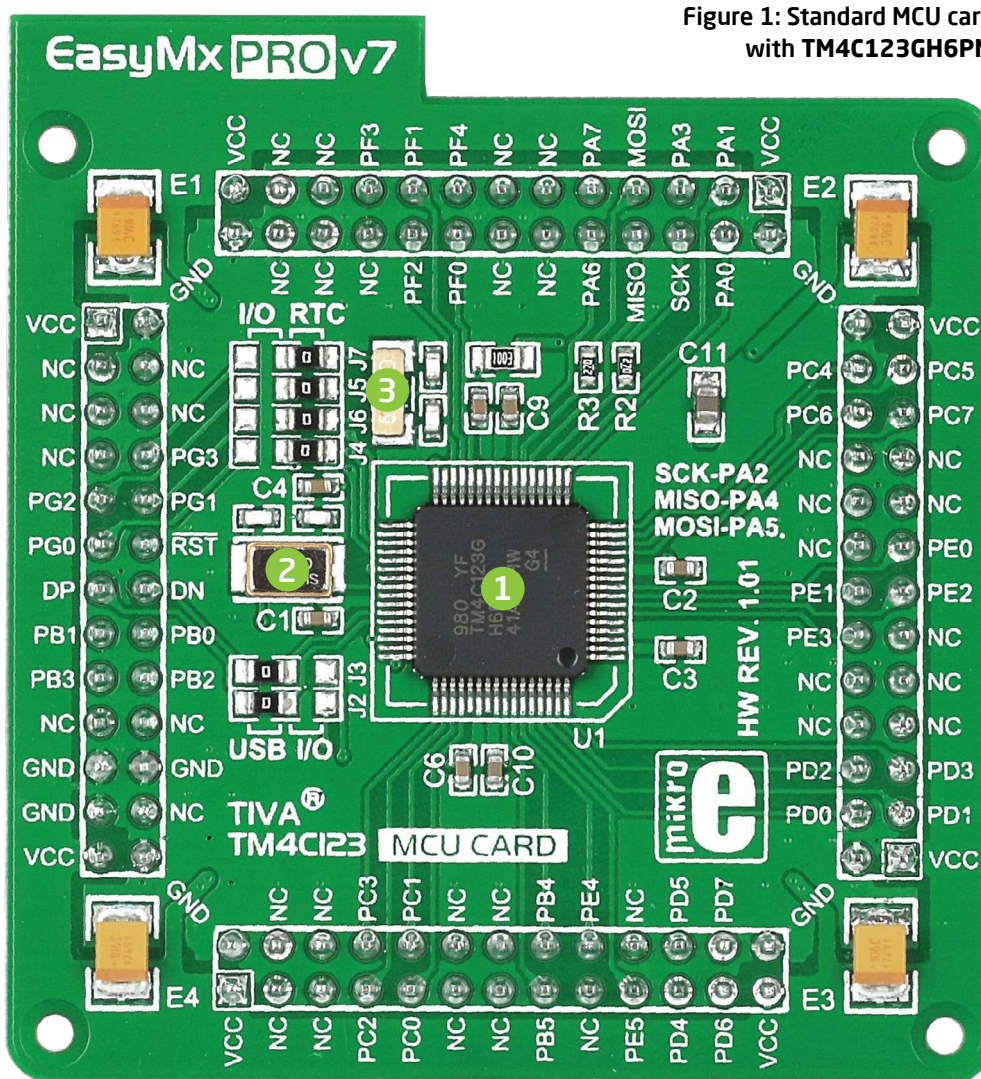

Figure 1: Standard MCU card with **TM4C123GH6PM**

① **TM4C123GH6PM** belongs to the ARM® Cortex™-M4 family. It operates at **80MHz**, has **256 KB** of Flash memory, **32 KB** of single-cycle System SRAM, **USB 2.0** (OTG, Host, Device), Up to 43 General purpose **I/O pins**, 6x32-bit **timers**, 2x12-bit **A/D** (12 channels), a 12-bit **D/A** , 8x**UARTs**, internal Real-time clock (**RTC**), 4x**I2C,** 4x**SPI** and 2x**CAN** controllers. It has Serial wire debug (SWD) and JTAG interfaces for programming and debugging.

② **8MHz crystal oscillator.** We carefully chose the most convenient crystal value that provides clock frequency which can be used directly, or with the PLL multipliers to create higher MCU clock value.

③ **32.768-kHz external crystal oscillator** which provides external clock for the internal hibernation module.
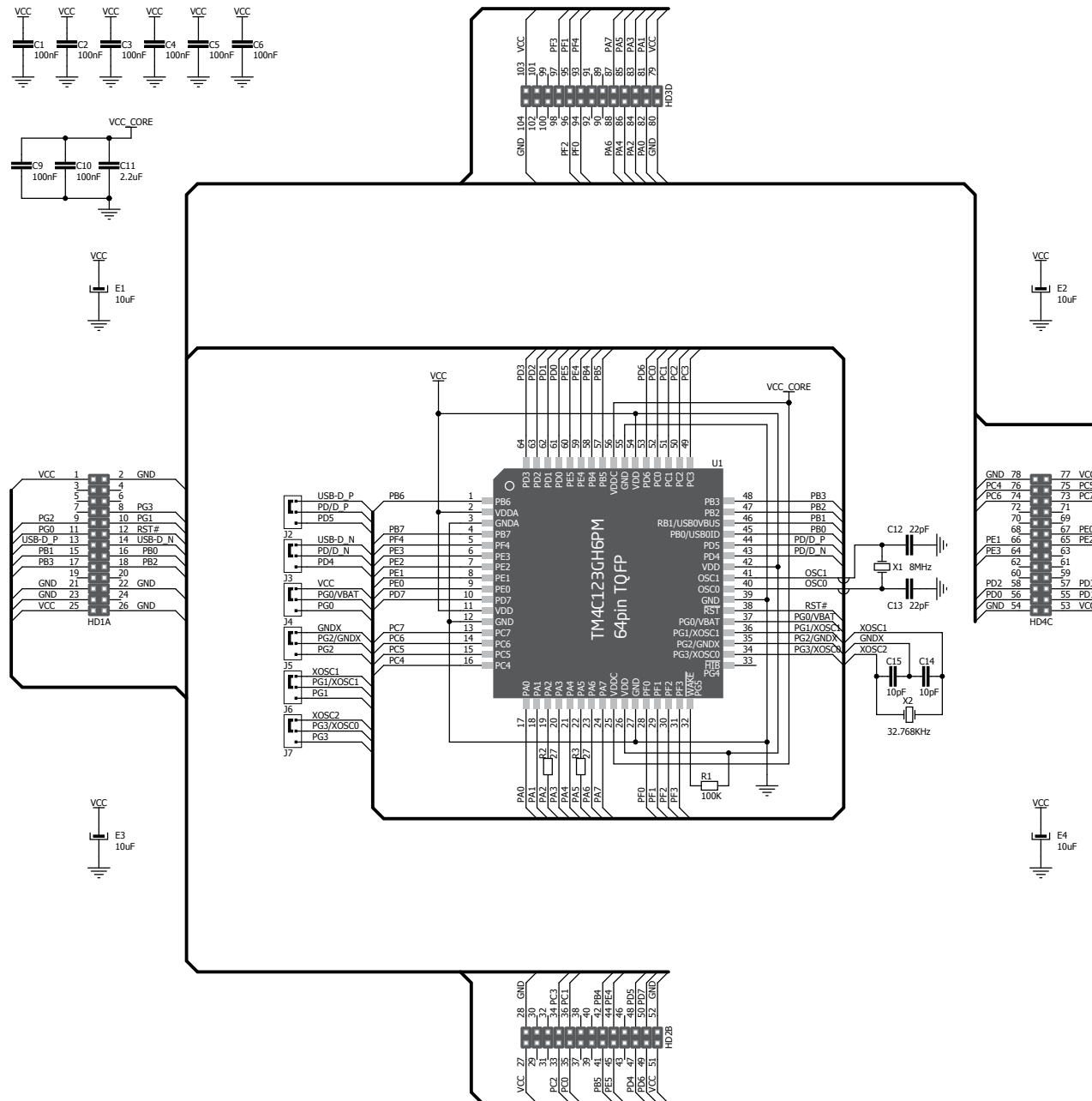
EasyMx **PRO**v7

Figure 2: MCU card schematics

VCC C1 100nF VCC C2 100nF VCC C3 100nF VCC C4 100nF VCC C5 100nF VCC C6 100nF

VCC_CORE
C9 100nF C10 100nF C11 2.2uF

VCC E1 10uF

VCC E2 10uF

VCC E3 10uF

VCC E4 10uF

U1
TM4C123GH6PM
64pin TQFP

X1 8MHz
C12 22pF
C13 22pF

OSC1
OSC0
RST#

X2 32.768KHz
C15 10pF C14 10pF
XOSC1
GNDX
XOSC2

R1 100K

R2 27 R3 27

HD3D
HD1A
HD2B
HD4C

J1 USB-D_P PD/D_P PD5
J2 USB-D_N PD/D_N PD4
J3 VCC PG0/VBAT PG0
J4 GNDX PG2/GNDX PG2
J5 XOSC1 PG1/XOSC1 PG1
J6 XOSC2 PG3/XOSC0 PG3
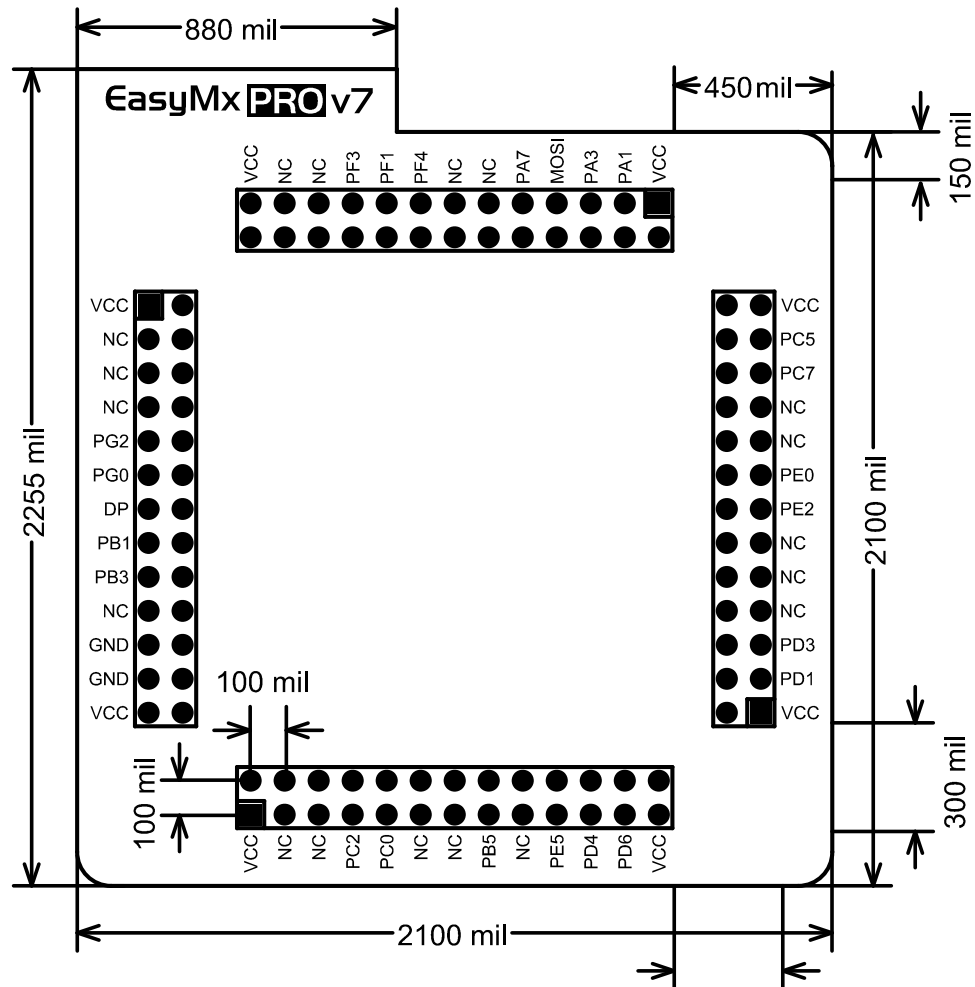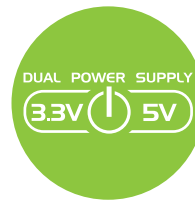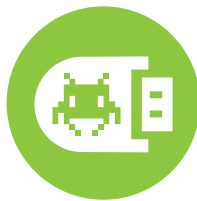J7

EasyMx PRO v7

Card dimensions

Figure 3: MCU card dimensions. Values are in mils.

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information, please place your ticket at www.mikroe.com/support
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