**Part Number:** DM240016**-** PIC24FJ256GA7 Curiosity Development Board

Overview:

The PIC24FJ256GA7 Curiosity Development Board is a cost-effective, fully integrated 16-bit development platform targeted at first-time users, makers, and those seeking a feature-rich rapid prototyping board. Designed from the ground-up to take full advantage of Microchip's MPLAB® X IDE and MPLAB Xpress Cloud-based IDE, the board includes an integrated programmer/debugger and requires no additional hardware, making it a perfect starting point to explore the latest low-cost and eXtreme Low Power (XLP) 16-bit PIC24FJ256GA705 family of Microcontrollers.

The PIC24FJ256GA7 Curiosity Board enables easy and faster adoption of low-cost XLP 16-bit PIC24FJ256GA705 family of microcontrollers. PIC24FJ256GA705 microcontroller featuring up to 256KB of ECC flash and 16KB of RAM, is ideally suited for low power general purpose applications. The layout and external connections of PIC24FJ256GA7 Curiosity board offer unparalleled access to the Core Independent Peripherals (CIPs) such as CLC, MCCP and DMA. These CIPs enable the user to integrate various system functions onto a single MCU, simplifying the design and keeping system power consumption and BOM cost low.

PIC24FJ256GA7 Curiosity Development Board
(Part # DM240016)
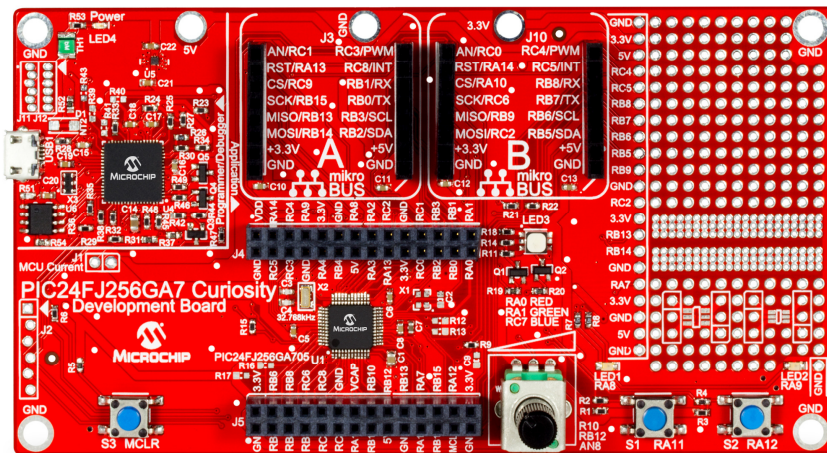
Crafted for Cloud-Based Development
The PIC24FJ256GA7 Curiosity Development Board offers seamless integration with the Microchip software tool chain, including the MPLAB Xpress Cloud-based IDE, XC16 compiler and MPLAB Code Configurator for easy set-up and prototyping.

Internet of Things (IoT) Ready
Have an IoT design in mind? The PIC24FJ256GA7 Curiosity Board can help turn your IoT design idea into reality. The board can enable applications with low power, low pin count and small footprint requirements as in IoT sensor nodes. Out of the box, the board offers several options for user interface—including switches, RGB LED, User LEDs and analog potentiometer. In addition, wireless connectivity can easily be added using 2 mikroBUS™ interfaces and wireless connectivity click boards™. A full complement of accessory boards is available via the MikroElectronika mikroBUS™ interfaces.

Features:

Features low cost PIC24FJ256GA705 eXtreme low power (XLP) microcontroller

• eXtreme Low Power with Low Voltage Retention Sleep current down to 190nA @ 25C for longer battery life

• Integrated programmer/debugger with USB interface
• Analog potentiometer, multiple user LEDs, RGB LED and switches
• Full compatibility with MPLAB Xpress, MPLAB X IDE, XC16 compiler and MPLAB Code Configurator
• Functionality expansion support with dual mikroBUS™ interfaces for click boards™
• Female headers to access microcontroller I/O pins
• Small prototyping area for the user to add additional components

Package Contents:

PIC24FJ256GA7 Curiosity Development Board

Accessories Support:

TMIK024 - ADC Click by MikroElektronika
ADC Click is an add-on board in the mikroBUS™ form factor. It includes a 12-bit Analog-to-Digital Converter (ADC) MCP3204 device that features 50k samples/second, 4 input channels, and low-power consumption (500nA typical standby, 2µA max). In addition, this board uses the industry-standard SPI communication interface. It is small in size and features convenient screw terminals for easier connections. By default, the board is set to use 3.3V of power. However, to use it with 5V systems, just place the PWR SEL SMD jumper in the 5V position.

• Download ADC Click Board Demo Code

TMIK025-DIGI POT Click by MikroElektronika
DIGIPOT Click is an add-on board in the mikroBUS™ form factor. It features a single-channel, digital potentiometer device (MCP4161) with 8-bit resolution (256 wiper steps) and the industry-standard SPI serial interface. The resistance value of the digital potentiometer goes up to 10 kΩ. This board features outstanding AC/DC characteristics and low-power consumption. It can be used in audio equipment, servo-motor control, battery charging and control, LCD contrast control, programmable filters, and more.

• Download DIGI POT Click Board Demo Code
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TMIK026 - DAC Click by MikroElektronika
DAC Click is an add-on board in the mikroBUS™ form factor. It includes a 12-bit, Digital-to-Analog Converter device (MCP4921) that features an optional 2x buffered output and SPI interface. The board provides high accuracy and low-noise performance for industrial applications where calibration or compensation of signals such as temperature, pressure, and humidity are required. The board is set to use the 3.3V power supply by default. You may solder the PWR SEL SMD jumper to the 5V position for use with 5V systems.

• Download DAC Click Board Demo Code
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TMIK028 - GPS Click with Active GPS Antenna
GPS Click is an add-on board in the mikroBUS™ form factor. It's a compact solution for adding GPS functionality to your device. It features the LEA-6S, high-performance u-blox 6 positioning engine. The board can interface with a microcontroller via UART or I2C, or data can be acquired using the PC application via USB. The board features a connector that is compatible with active and passive antennas. It can operate on 3.3V of power only.

• Download GPS Click Board Demo Code
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TMIK029 - RELAY Click by MikroElektronika
RELAY Click is an add-on board in the mikroBUS™ form factor. The board features two G6D1AASI-5DC power relay modules, screw terminals for connecting external loads up to 5A, 250V AC/30V DC, and on-board transistors to drive the relays.