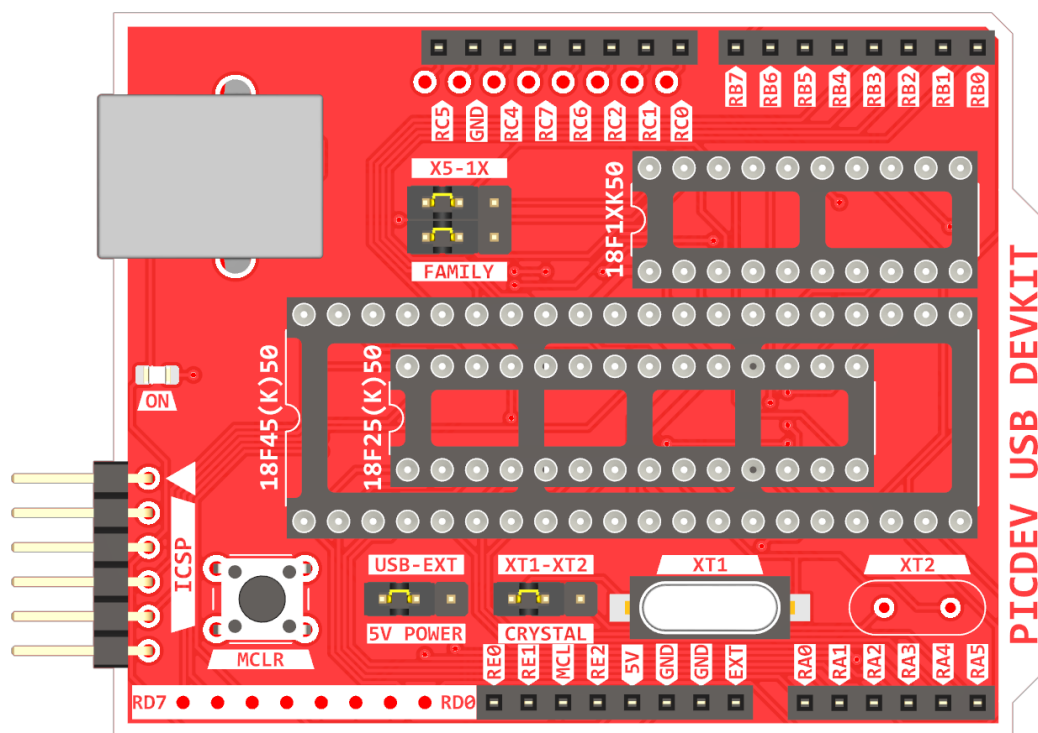# METE HOCA
PICDEV USB

ULTIMATE DEVKIT FOR USB SUPPORTED PIC

(Rev.1)

USER MANUAL

(Last update: 30 September 2023)

www.metehoca.com

METE HOCA

METE HOCA PRODUCTS | CHECK TINDIE STORE

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Essential components, sensors, external connections and more in one compact Arduino shield. Empower your creativity!

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Learn the basics of electronics and Arduino programming with ease with this simple but well-crafted Arduino Uno shield.

LogicShield | Logic Gate Education Arduino Shield | BUY NOW!
Mete Hoca LogicShield is a logic gate education shield for Arduino Uno. It emulates logic gates with a simple Arduino sketch.

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ISP and UPDI Arduino Uno Shield for Atmel's most popular AVR microcontrollers with 40 pin ZIF socket

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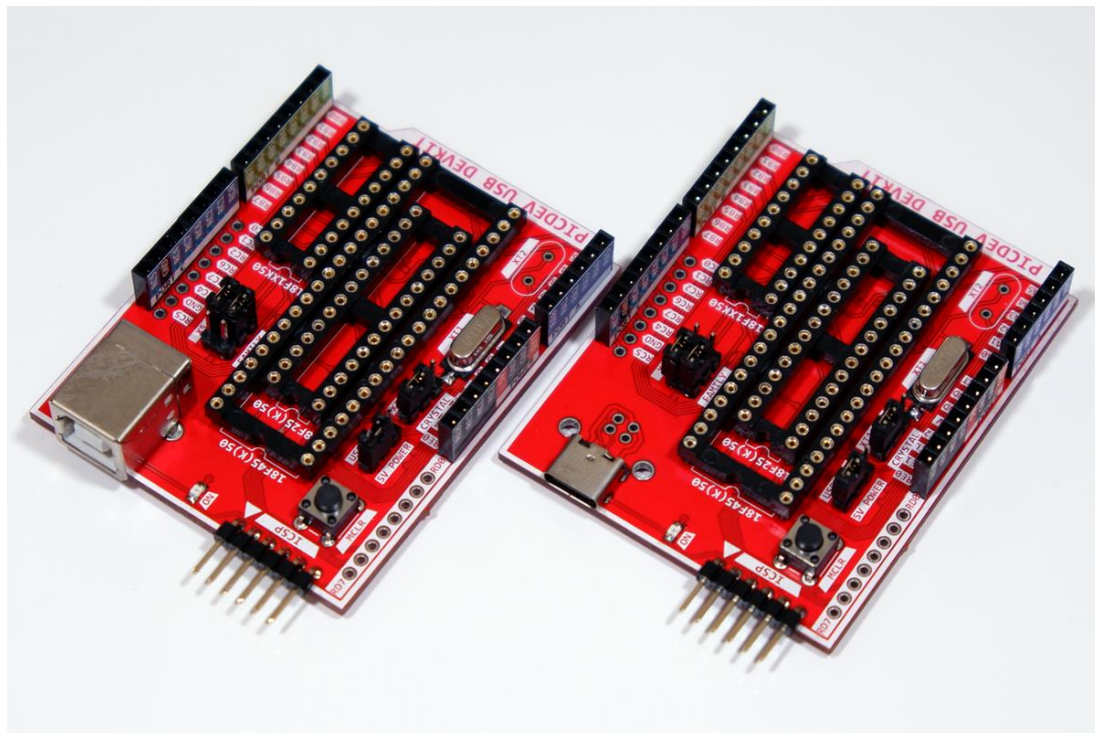September 2023, Mete K. Atay

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METE HOCA PICDEV USB | ULTIMATE DEVKIT FOR USB SUPPORTED PIC

Experiment USB PIC microcontrollers with PICDEV USB! Versatile, user-friendly, and Arduino form-factor.

Unlock the limitless potential of Microchip PIC microcontrollers with our state-of-the-art development board, the PICDEV USB. Designed for versatility and ease of use, this board is a game-changer for both beginners and seasoned developers. With support for various USB-compatible PIC18F series microcontrollers, an Arduino Uno form factor, and a plethora of features, PICDEV USB empowers you to bring your projects to life effortlessly.

Unleash the Power of PIC Microcontrollers

The heart of PICDEV USB lies in its compatibility with 20-pin, 28-pin, and 40-pin USB-supported PIC18F series microcontrollers. Whether you're experimenting with the PIC18F4550, PIC18F2550, PIC18F45K50, PIC18F25K50, PIC18F13K50, PIC18F14K50 or any other compatible model, this board has got you covered. Say goodbye to compatibility issues and hello to seamless development.

Arduino Uno Form Factor

PICDEV USB adopts the popular Arduino Uno form factor, making it the perfect companion for Arduino prototyping boards. The familiar layout allows you to integrate your PIC projects with ease, utilizing existing Arduino shields and accessories.

Complete Pin Access

Developers love having control over every pin, and we understand that. PICDEV USB provides header connectors for all microcontroller pins, ensuring that you have the flexibility to connect and test your projects with precision.

USER-FRIENDLY FEATURES

Reset (MCLR) Button: Resetting your microcontroller is a breeze with the onboard reset button, allowing for quick debugging and testing.

ON LED: A built-in LED indicator provides instant feedback, helping you monitor the status of your board and projects.

Crystal Oscillator Options: PICDEV USB includes an onboard 12 MHz crystal oscillator, but we've also added a footprint for you to solder your own crystal oscillator if needed. A jumper allows you to easily switch between these options, offering optimal flexibility.

Power Select Jumper: Choose between USB power or external 5V power with the power select jumper. It's your choice, ensuring compatibility with various setups.

USB Connector Options: Tailor the board to your needs with optional USB Type-C or classic USB Type-A connectors. Select the one that best suits your project's requirements.

TECHNICAL SPECIFICATIONS

Compatible Microcontrollers: 20-pin, 28-pin, and 40-pin USB-supported PIC18F series microcontrollers.
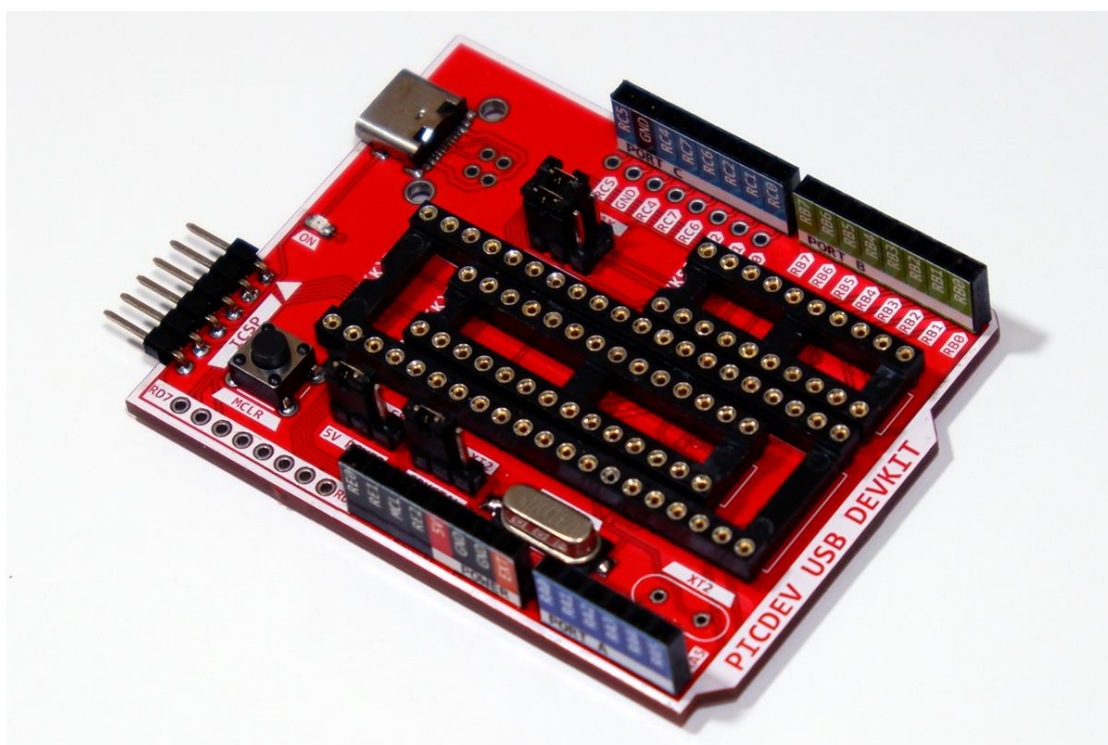
Form Factor: Arduino Uno

Pin Access: Header connectors for all microcontroller pins

Onboard Components: Reset (MCLR) button, ON LED, 12 MHz crystal oscillator, power select jumper

USB Connector Options: USB Type-A or USB Type-C (optional)

Additional Option: PIC18F2550 microcontroller available for purchase

WHY CHOOSE PICDEV USB?

Versatility: Supports a wide range of USB-compatible PIC18F series microcontrollers.

User-Friendly: Arduino Uno form factor and complete pin access make it easy for developers of all levels.

Customization: Choose your preferred USB connector type and add optional microcontrollers as needed.

Reliability: High-quality components ensure the board's durability and stability.

Flexibility: Power options, crystal oscillator choices, and extensive pin access cater to a variety of project needs.

GET STARTED WITH PICDEV USB

Whether you're a hobbyist, student, or professional, PICDEV USB is the ideal platform to turn your PIC microcontroller projects into reality. Its user-friendly design, extensive features, and compatibility with a range of microcontrollers set it apart from the rest.

Unlock the potential of your PIC projects with PICDEV USB. Order yours today and experience a seamless development journey like never before. Join the community of innovators who trust PICDEV USB for their microcontroller needs.

Don't miss out on this opportunity to elevate your projects to new heights. Make PICDEV USB your go-to development board and watch your ideas come to life.
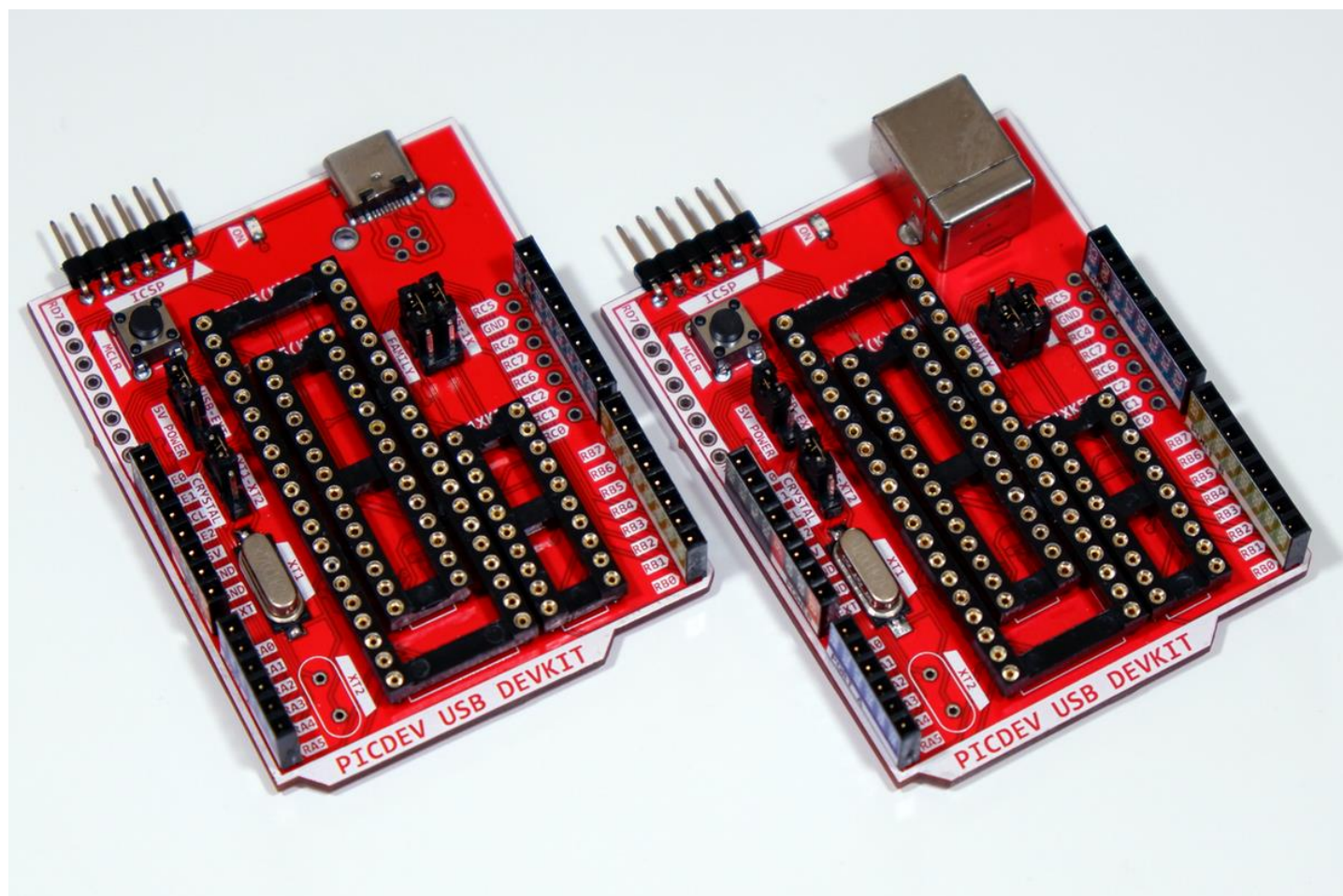
READ BEFORE USING: PICDEV USB INSTRUCTIONS

To ensure a safe and successful experience with your development board, please carefully read and follow the instructions below:

1. Microcontroller Placement:
   - Before connecting the microcontroller, make sure your board is powered off.
   - Align the microcontroller's pins with its socket.
   - Gently press the microcontroller onto the socket, ensuring a secure connection.
   - Double-check the alignment to avoid bending any pins.
2. Environmental Precautions:
   - Keep the shield away from liquids, including water, beverages, or any other moisture source.
   - Do not operate the board in humid or wet environments to prevent damage.
   - Store the board in a dry and clean place when not in use.
   - Avoid exposure to extreme temperatures or direct sunlight.
3. Handling and Transport:
   - Always handle the board with care and avoid excessive force or pressure.
   - Do not drop or strike the board, as it may result in damage to the components.
   - When transporting the board, use an anti-static bag or container to prevent electrostatic discharge (ESD).
   - Avoid storing or placing the board on metal surfaces or objects to prevent short circuits.
4. Additional Safety Measures:
   - Do not attempt to modify or tamper with the board's internal components.
   - Unplug the board from the power source when not in use or during maintenance.
5. Board Maintenance:
   - Periodically check the board for any loose connections, damaged pins, or signs of wear.
   - Clean the board using a soft, dry cloth. Do not use water or any cleaning agents.
   - If you need to clean the board's pins, use a small brush or compressed air to remove dust or debris gently.

By following these instructions, you will maximize the lifespan of your PICDEV USB and ensure safe and reliable operation. Remember, if you have any questions or concerns, refer to the user manual or contact me for assistance.
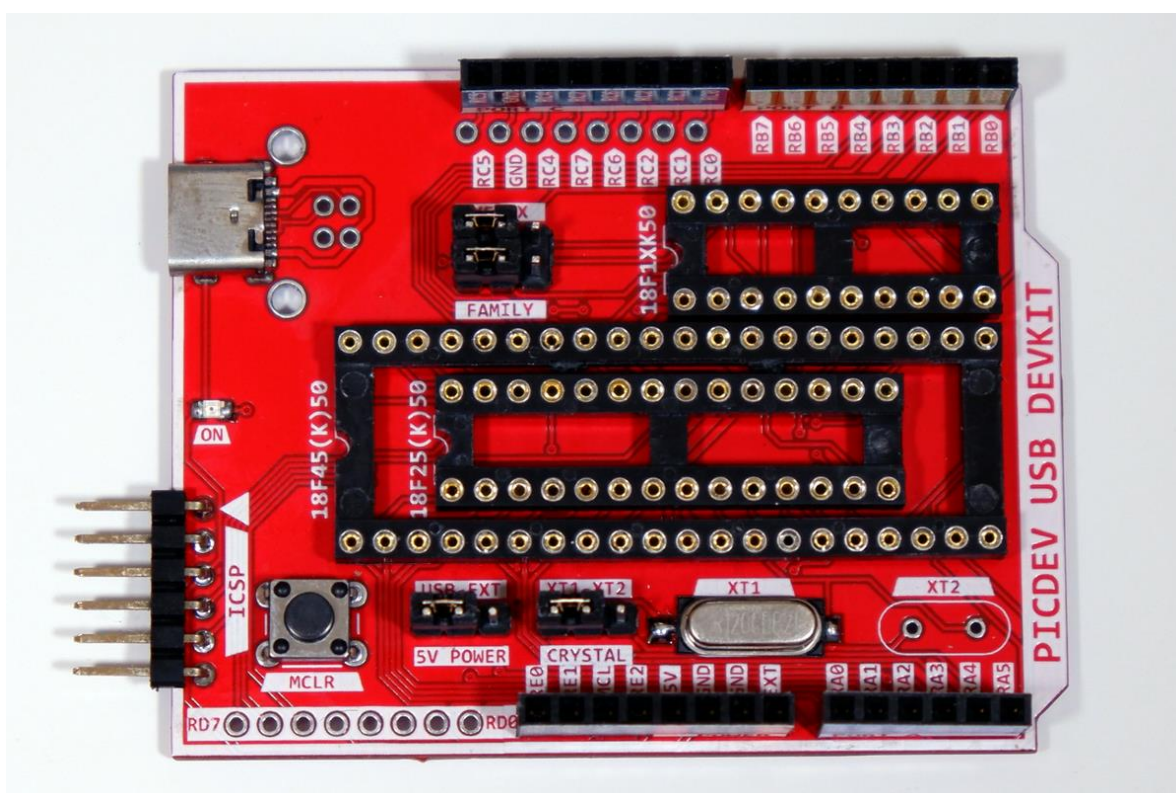
LET'S TAKE A CLOSER LOOK AT THE PICDEV USB

Hi, i'm PICDEV USB, your ultimate DEVKIT for USB supported PIC!
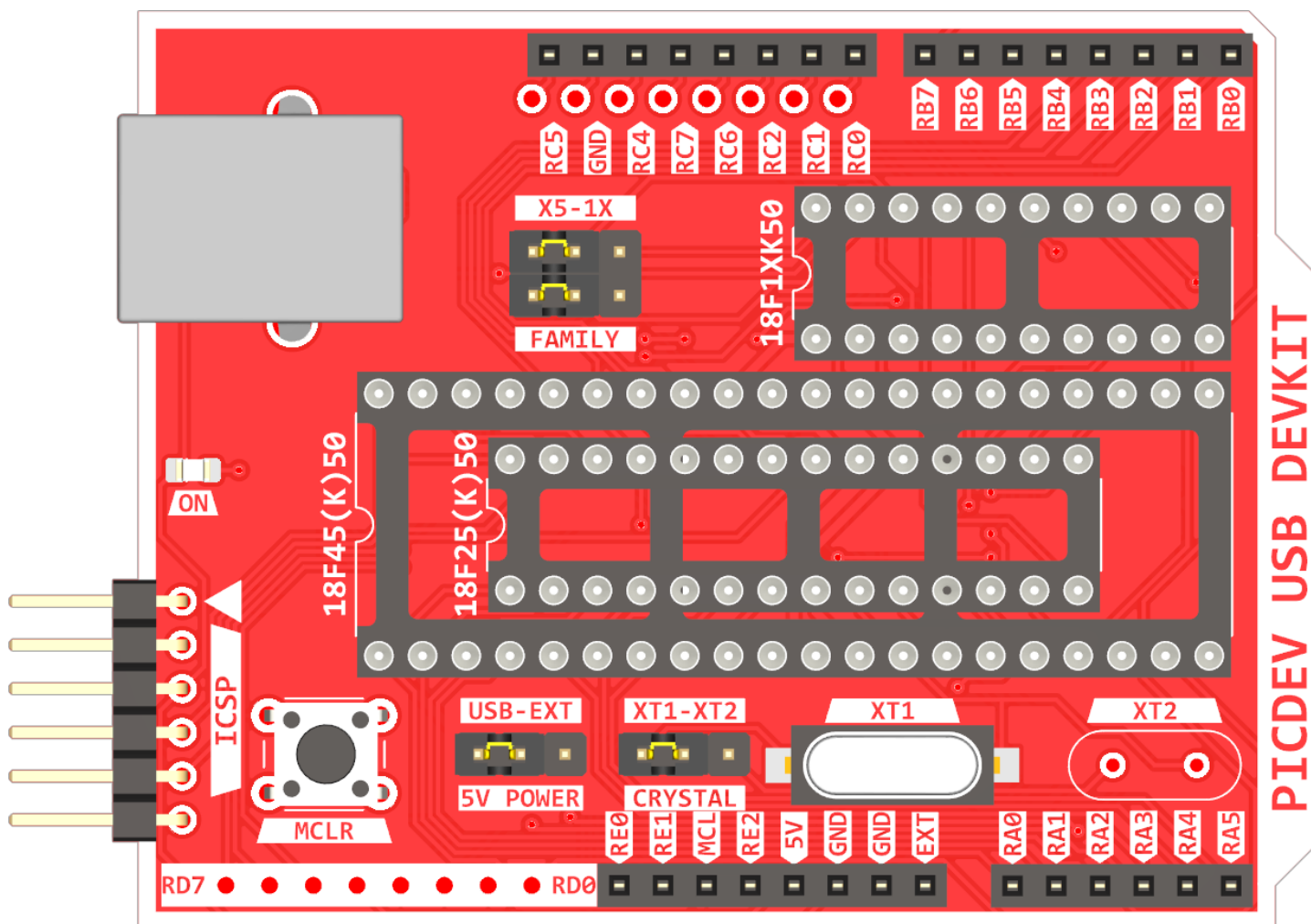
METE HOCA PICDEV USB combines two families and three series USB supported PIC sockets in an Arduino UNO form factor. It has a MCLR button, an onboard 12 MHz crystal oscillator, ON LED, Type-A or Type-C USB data connection socket, USB-EXTERNAL 5V power select jumper and crystal oscillator select jumper.

There is footprint for second crystal for versatility. You can solder your desired crystal to XT2 (probably a 20 MHz one) and select it via its jumpers. MCLR button is connected to all microprocessors' MCLR pins for easy reset.

PICDEV USB has five pin headers (RDx header is not populated) for easy access to microcontroller ports. You can check every header connection from the table at the next section below.

HEADER CONNECTION PINS TABLE

PICDEV USB headers are makes most microcontroller pins accessible for user and you can check them from this table.

	18F1XK50	18F25(K)50	18F45(K)50
RA0	X (PGD)	RA0	RA0
RA1	X (PGC)	RA1	RA1
RA2		RA2	RA2
RA3		RA3	RA3
RA4	X (OSC2)	RA4	RA4
RA5	X (OSC1)	RA5	RA5
RB0		RB0	RB0
RB1		RB1	RB1
RB2		RB2	RB2
RB3		RB3	RB3
RB4	RB4	RB4	RB4
RB5	RB5	RB5	RB5
RB6	RB6	X (PGC)	X (PGC)
RB7	RB7	X (PGD)	X (PGD)
RC0	RC0	RC0	RC0
RC1	RC1	RC1	RC1
RC2	RC2	RC2	RC2
RC6	RC6	RC6	RC6
RC7	RC7	RC7	RC7
RC4	RC4	X (D-)	X (D-)
GND			
RC5	RC5	X (D+)	X (D+)
RE0			RE0
RE1			RE1
MCL	RA3	RE3	RE3
RE2			RE2
5V			
GND			
GND			
EXT			
RD0			RD0
RD1			RD1
RD2			RD2
RD3			RD3
RD4			RD4
RD5			RD5
RD6			RD6
RD7			RD7

SUPPORTED MICROCONTROLLERS IN PICDEV USB

The heart of PICDEV USB lies in its compatibility with 20-pin, 28-pin, and 40-pin USB-supported PIC18F series microcontrollers. You can check supported microcontrollers in three different sockets below.

18F25(K)50 (28-PIN) SOCKET*:

PIC18F2455, **PIC18F2550**, PIC18F24K50, PIC18F25K50

*Place **FAMILY** jumpers to **X5** position for these microcontrollers.*

18F45(K)50 (40-PIN) SOCKET*:

PIC18F4455, **PIC18F4550**, PIC18F45K50

*Place **FAMILY** jumpers to **X5** position for these microcontrollers.*

18F1XK50 (20-PIN) SOCKET*:

PIC18F13K50, **PIC18F14K50**

*Place **FAMILY** jumpers to **1X** position for these microcontrollers.*

METE HOCA

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Instagram: **metehoca**

Feel free to visit my website;

www.metehoca.com