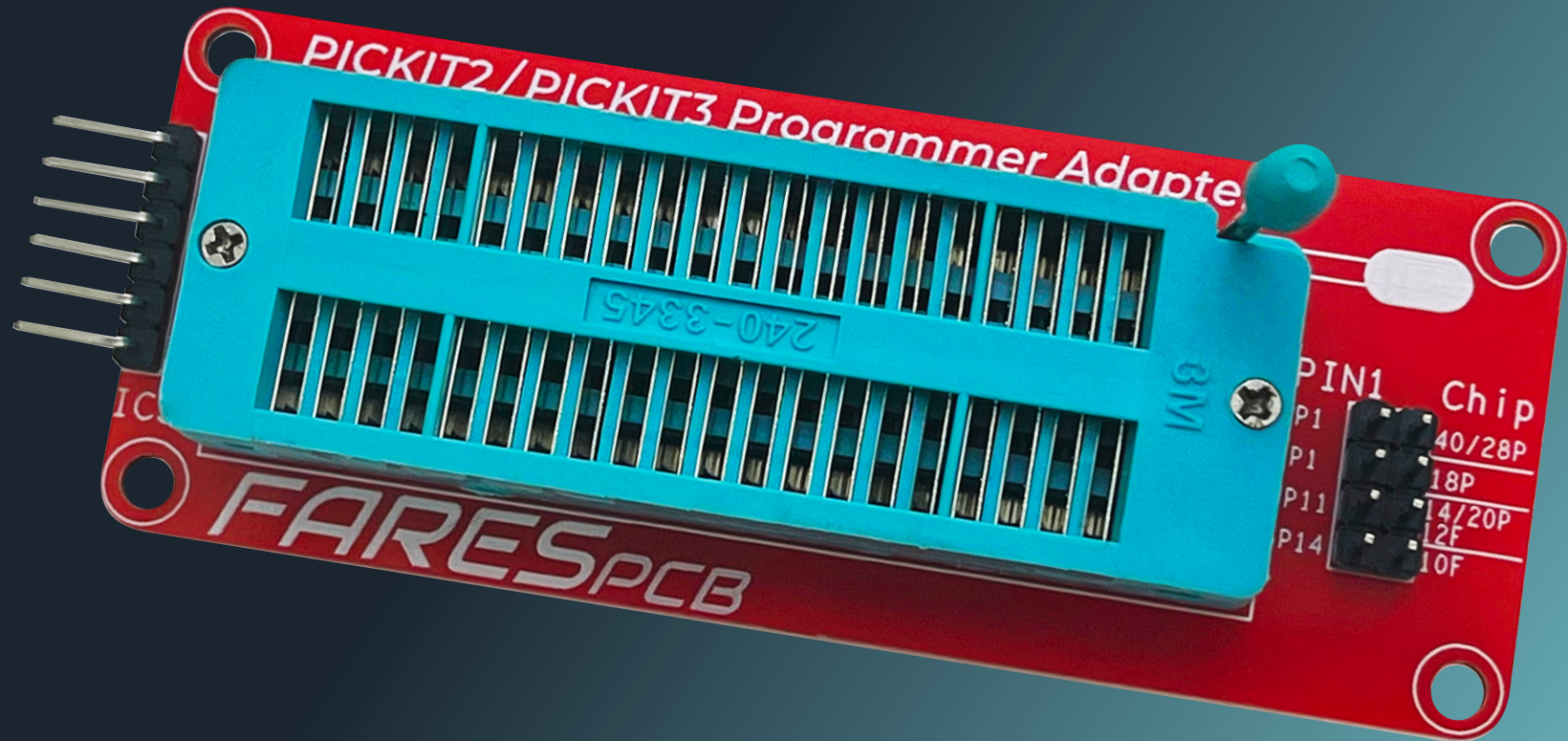




PICKit 2 / PICKit 3 Programmer Adapter

General Description

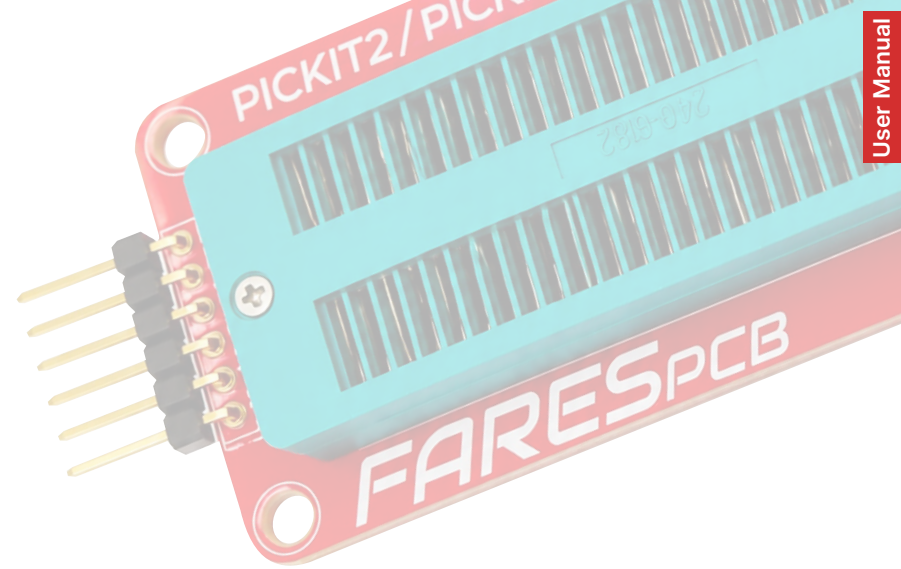
The **PICKit 2 / PICKit 3** Programmer Adapter is a universal programming adapter designed to simplify the programming of DIP-package PIC® microcontrollers using a **PICKit 2**, **PICKit 3**, or compatible ICSP programmer.

The adapter features a **40-pin zero insertion force (ZIF) socket** that supports both narrow-body and wide-body DIP devices. A simple single-jumper selection system configures the required programming-signal routing for different PIC microcontroller package sizes and device families, eliminating the need for complex external wiring.

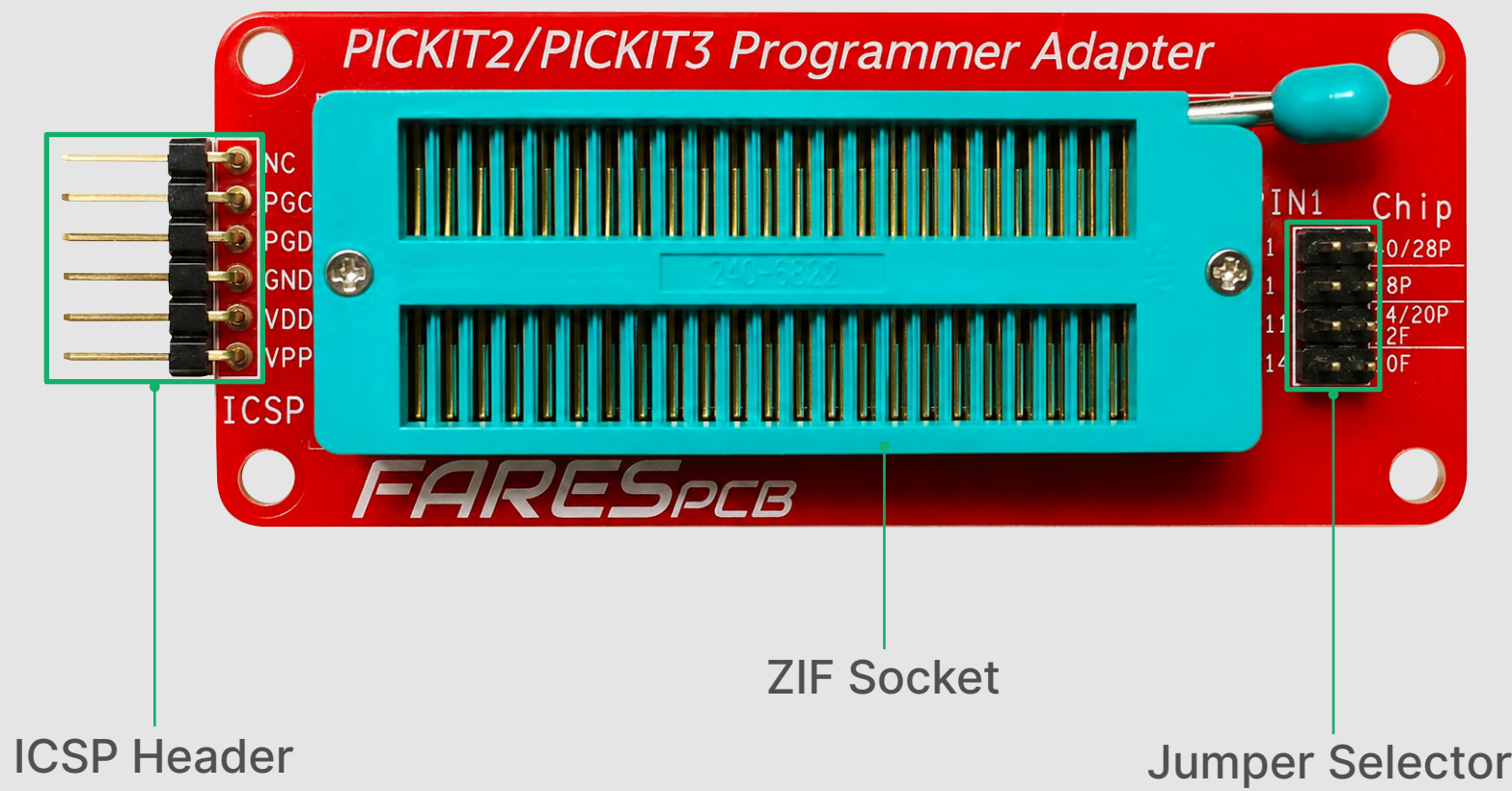
The board connects to the programmer through a standard **6-pin ICSP interface** and is fully compatible with the **FARES PCB PICKit 2** Programmer/Debugger. Clearly printed markings on the PCB identify the correct jumper position and Pin 1 placement for each supported device group, helping reduce setup errors and incorrect device insertion.

Features

- Universal 40-pin ZIF socket for DIP-package PIC microcontrollers.
- Supports narrow-body and wide-body DIP packages.
- Simple single-jumper device selection.
- Standard 6-pin ICSP programming interface.
- Compatible with **PICKit 2**, **PICKit 3**, and compatible ICSP programmers.
- Fully compatible with the **FARES PCB PICKit 2** Programmer/Debugger.
- Supports a wide range of DIP-package PIC microcontrollers that use the **PICKit 2 / PICKit 3** ICSP programming interface.
- Clearly printed jumper-selection and device-position guide.
- Clearly marked Pin 1 placement for each device group.
- No external power supply required when target power is provided by the programmer.
- Suitable for development, testing, education, and production programming.



PICKit 2 / PICKit 3 Programmer Adapter Overview



Interface Characteristics

Parameter	Specification
Compatible Programmers	PICKit 2 , PICKit 3 , and compatible ICSP programmers
Programming Interface	6-pin ICSP
Microcontroller Socket	40-pin ZIF socket
Supported Package Type	DIP
Device Selection	Single jumper
Target Supply Voltage	Supplied by the programmer when target power is enabled
External Power Supply	Not normally required
Programmer Connection	JST XH cable



Note: The target voltage and available current depend on the connected programmer and its software configuration.

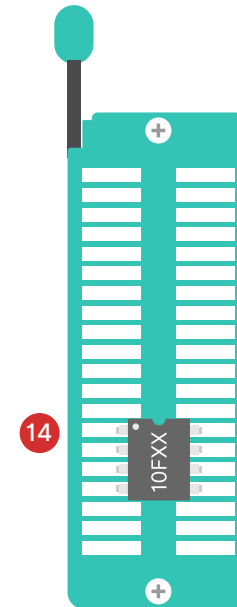
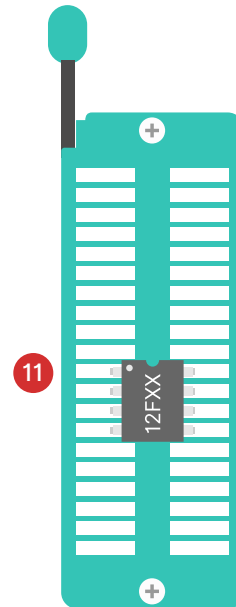
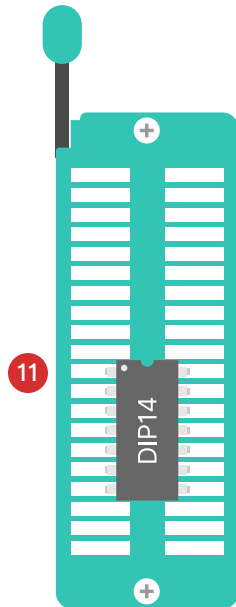
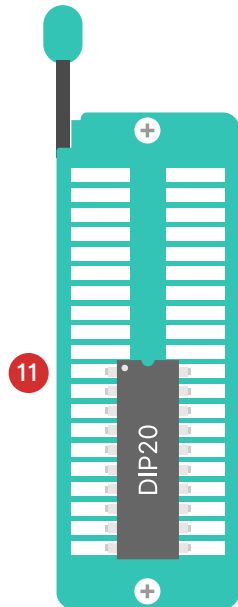
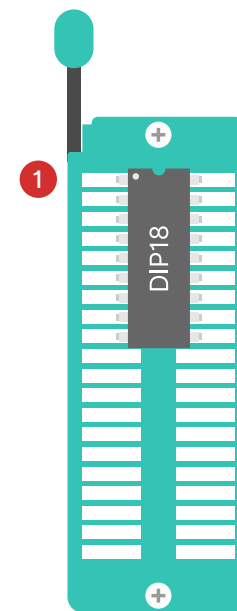
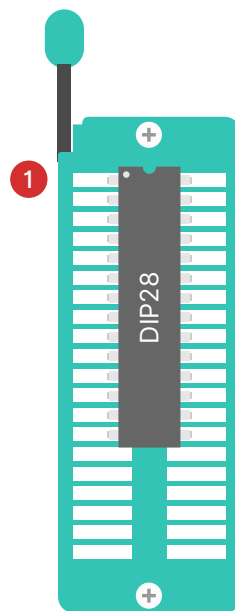
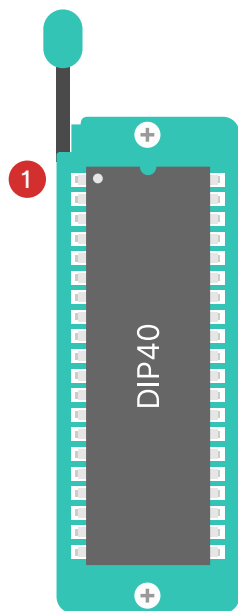
Jumper Selection and Device Placement

The jumper position determines how the programming signals are routed to the microcontroller.

Jumper Position	Supported Device Group	Microcontroller Pin 1 Position on ZIF Socket
1	40-pin and 28-pin PIC devices	ZIF socket Pin 1
2	18-pin PIC devices	ZIF socket Pin 1
3	20-pin and 14-pin PIC devices, PIC12FXXX devices	ZIF socket Pin 11
4	PIC10FXXX devices	ZIF socket Pin 14



Always select the correct jumper position before connecting the programmer or starting a programming operation.



Placement Summary

- **40-pin, 28-pin, and 18-pin devices:** Align the microcontroller's **Pin 1** with **Pin 1** of the ZIF socket.
- **20-pin, 14-pin, and PIC12Fxxx devices:** Align the microcontroller's **Pin 1** with **Pin 11** of the ZIF socket.
- **PIC10Fxxx devices:** Align the microcontroller's **Pin 1** with **Pin 14** of the ZIF socket.



Important: Package size alone may not guarantee compatibility. Confirm that the selected microcontroller uses a programming-pin arrangement supported by the adapter.

Configuration Example

Programming a PIC16F877A

Item	Setting
Device	PIC16F877A
Package	40-pin DIP
Jumper Position	1
Device Placement	Align microcontroller Pin 1 with Pin 1 of the ZIF socket

After inserting the device and closing the ZIF socket, connect the adapter to the programmer and select **PIC16F877A** in the programming software.

Operating Instructions

Step 1 — Disconnect the Programmer

Before inserting or removing a microcontroller, disconnect the programmer from the computer or disconnect the ICSP cable from the adapter.

This prevents accidental power application and reduces the risk of damaging the microcontroller or adapter.

Step 2 — Select the Jumper Position

Identify the device package or family and install the jumper in the corresponding position.



*Refer to the **jumper selection and device placement** table.*

Step 3 — Insert the Microcontroller

1. Raise the ZIF socket lever to open the contacts.
2. Insert the microcontroller in the position indicated by the PCB markings:
 - **Chip:** Identifies the supported device family or package size.
 - **Pin 1:** Indicates where Pin 1 of the microcontroller must be positioned on the ZIF socket.
3. Make sure all pins enter the socket correctly without bending.
4. Lower the ZIF lever completely to secure the device.

Step 4 — Connect the Programmer

- Connect the adapter to the **PICKit 2**, **PICKit 3**, or compatible programmer using the supplied 6-pin ICSP cable.
- Verify the orientation of the ICSP connector before applying power.

Step 5 — Configure the Programming Software

- Launch the appropriate programming software (ex: **PICKit2** v2.61 is compatible with **FARESPCB's PICKIT2** Programmer/Debugger) and select the exact PIC microcontroller installed in the adapter.
- Enable programmer-supplied target power when required.

Step 6 — Program and Verify the Device

Load the required firmware file, then perform the necessary operation:

- Read
- Erase
- Blank Check
- Program
- Verify

After programming is complete, disconnect the programmer before opening the ZIF socket or removing the microcontroller.

Precautions

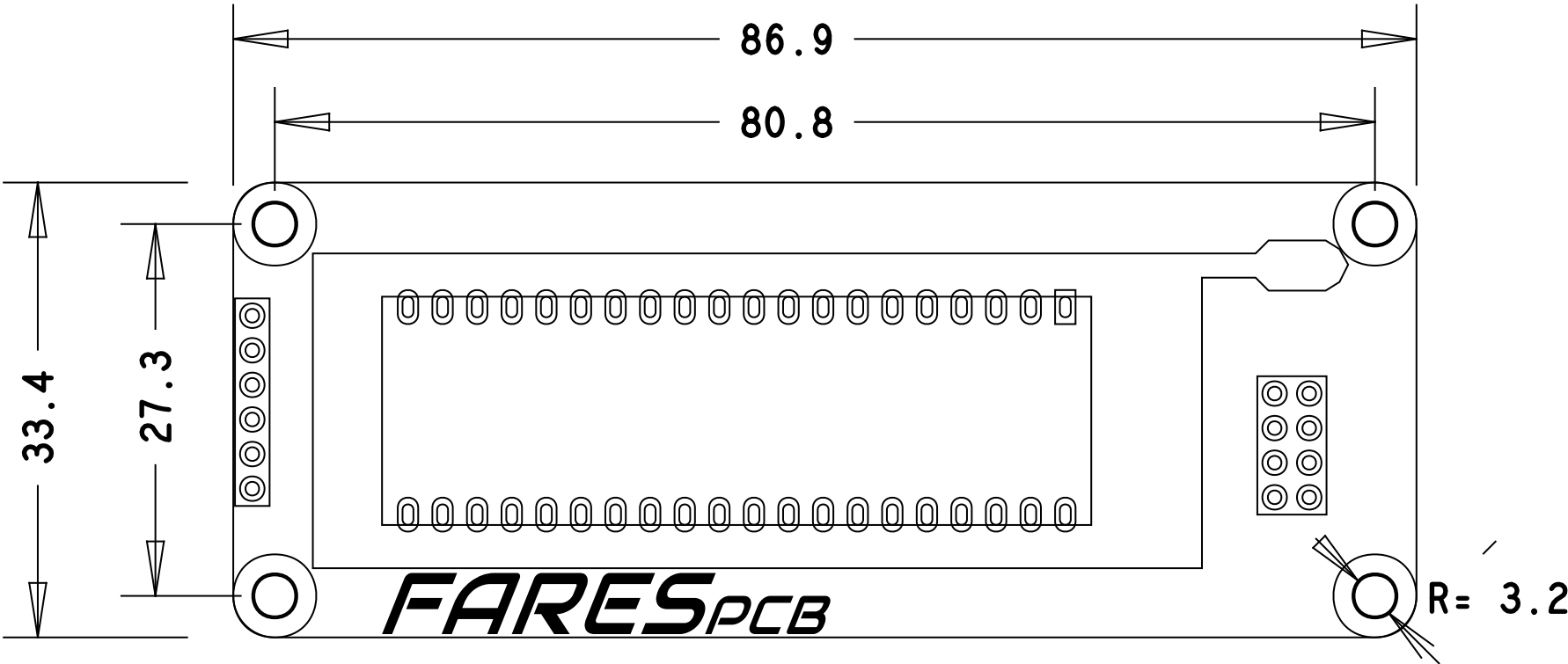
- Disconnect the programmer before inserting or removing a microcontroller.
- Verify the jumper position before applying power.
- Confirm the microcontroller's Pin 1 orientation before closing the ZIF socket.
- Ensure the selected device in the programming software matches the installed microcontroller.
- Do not insert or remove a device while programming, erasing, reading, or verification is in progress.
- Never force the ZIF socket lever.
- Do not force bent or misaligned microcontroller pins into the socket.
- Ensure the ZIF lever is fully closed before programming.
- Verify the orientation of the 6-pin ICSP cable before connection.
- Avoid touching the microcontroller pins or PCB contacts unnecessarily.
- **Observe appropriate ESD precautions when handling microcontrollers.**

Troubleshooting

Problem / Symptom	Possible Cause	Recommended Check / Solution
Programmer software reports a connection error	Incorrect jumper position	Select the jumper position specified for the device package or family
Device is not detected	Microcontroller is positioned incorrectly	Check the required Pin 1 position on the ZIF socket
Device ID mismatch	Incorrect device selected in the software	Select the exact installed PIC device
Programming fails	Incorrect microcontroller orientation	Check the Pin 1 marking and reinstall the device
Programming fails	Device pins are bent or not making contact	Inspect and straighten the pins carefully, then reinsert the device
Verification error	Poor ICSP cable connection	Inspect the cable and reconnect both ends securely
Programmer cannot detect the target	ZIF socket is not fully closed	Lower and lock the ZIF lever completely
Target-voltage error	Programmer target power is disabled	Enable target power in the programming software when required

Problem / Symptom	Possible Cause	Recommended Check / Solution
Target-voltage error	Another power source is connected incorrectly	Disconnect the external supply or verify the intended power configuration
Device ID reads incorrectly	Unsupported device or programming-pin arrangement	Check the required Pin 1 position on the ZIF socket
Programming is intermittent	Dirty or worn socket contacts	Clean the socket carefully or inspect it for mechanical wear
Programmer software reports a connection error	ICSP cable is reversed or incorrectly connected	Verify Pin 1 and connector orientation
Device remains write-protected	Configuration bits or code protection are enabled	Perform a device erase when supported, then reprogram the device

Mechanical Dimensions Diagram



All dimensions are in mm

Package Contents

- 1 × **PICKit 2** / **PICKit 3** Programmer Adapter.

Compatibility Notice

The adapter supports DIP-package PIC microcontrollers whose ICSP programming signals are compatible with the routing provided by the jumper-selection system.

Compatibility depends on:

- Device package
- Programming-pin locations.
- Required programming voltage.
- Programmer hardware support.
- Programming-software support.

Always verify that the selected PIC microcontroller is supported by both the connected programmer and its programming software before use.

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For the latest product updates and documentation, visit: www.fares-pcb.com
For technical inquiries and customer service, contact: support@fares-pcb.com

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