

# USB-ICP

## USB-ICP-LPC2K



## USB In-Circuit Programmer

USB-ICP supports In-System Programming (ISP) on NXP's ARM7 LPC2xxx microcontroller family. In-System Programming uses a two-wire serial interface to program and erase ISP enabled microcontroller devices without removing them from the system. The ISP function uses only six pins: VCC, GND, RXD, TXD, P0.14 (or P2.10) and RESETn. A small connector is all that is needed to interface your ISP application to the USB-ICP programmer.

**SAB-TFBGAxxx** adapter boards are also available for devices in 100pin, 180pin, and 208pin TFBGA packages. When used in conjunction with the USB-ICB-LPC2K, these facilitate programming devices in packages that normally are difficult to handle. For more information, visit our website at [www.teamfdi.com](http://www.teamfdi.com)

### Highlights

- USB port powered so no external Power Supply required
- Supports USB 2.0
- Plugs directly into any standard USB Port – great for laptops
- Supports NXP's ARM 7 LPC2xxx microcontroller family
- Uses NXP's free Flash Magic Software - downloaded from the web
- USB-ICP Kit Includes:
  - ◆ USB-ICP dongle
  - ◆ Standard 18" cable allowing direct connection to the user's application
  - ◆ Mini ISP cable for direct programming of SOMDIMM in FDI Touch Screen LCD Kits, DK-57TS-LPC2478
  - ◆ ISP design guide for the user's target board

# Technical Details



USB-ICP uses a standard RJ-45 for connection to the target cable.

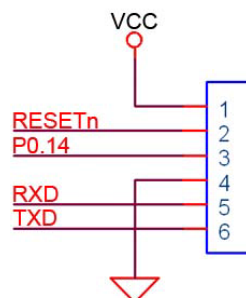
## Indicator LEDs

Green – “Link” Indicates the USB-ICP has been configured by the host PC

Yellow – “ACT” indicates USB Activity (Rx/Tx)

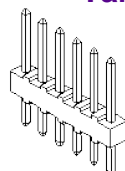


## Target Schematic



The ISP function uses only six pins: VCC, GND, RXD, TXD, P0.14 (or P2.10) and RESETn. The simple example circuit above is all that must be added to the user's application to use ISP with USB-ICP. (Consult your specific device datasheet for details on ISP connectivity)

## Target Connectors



6-pin 0.1" Header  
Standard ISP



6-pin 1mm Header  
Mini-ISP

## Example Part Numbers

Part Number	Description
22-03-2061	6pin 0.1" vertical through hole
68301-1017	6pin 0.1" vertical surface mount
22-05-2061	6pin 0.1" right angle through hole
SM06B-SHLS-TF	6pin 1mm right angle Mini-ISP

# Ordering Information

Part Number: USB-ICP-LPC2K  
Suggested Resale Price: \$79.00 (USD)

Order Online Now at:

[www.digikey.com](http://www.digikey.com)

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E-mail: [sales@teamfdi.com](mailto:sales@teamfdi.com)  
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## USB-ICP Family

Part Number	Supports
USB-ICP-LPC9xx	NXP LPC9xx
USB-ICP-80C51ISP	NXP P89C51 Flash
USB-ICP-LPC2K	NXP ARM LPC2xxx LPC17xx, LPC13xx, LPC11xx
Other USB-ICP Products	
SAB-TFBGA100	Socket Adapter Board (LPC2364/68)
SAB-TFBGA180	Socket Adapter Board (LPC2458)
SAB-TFBGA208	Socket Adapter Board (LPC2468/78)

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