# EPM900 - Overview

The Keil **EPM900** supports in-circuit debugging and parallel Flash ROM programming for the Philips P89LPC9xx device family. EPM900 connects directly to the  $\mu$ Vision2 Debugger that provides full control over the user program execution.



## Features

- USB interface for fast PC communication (power supply via USB)
- Real-time in-circuit emulation up to full device speed including programmable clock sources
- Flash Programming in parallel mode
- 8 buffered LEDs display I/O port 2 status information

## **Technical Data**

- All P89LPC932 pins connected to wrap area: 20mm x 45mm (0,7" x 1,8")
- Small board size: 59mm x 115mm (2,3" x 4,5")

## **LED Status Information**

The **Power** LED signals that the EPM900 is powered.

The **Stat** LED shows the following EPM900 status information:

- USB device detected: ON for 0.3 seconds.
- Start of the µVision2 debugger: ON
- User application runs under debugger: OFF

• Flash programming: ON

The **P2.0** - **P2.7** LEDs are driven by an buffer and show Port 2 status information. The LED driver is disabled by default to avoid oscillation on open device inputs. The P2 LEDs are enabled in µVision2 under **Project** - **Options for Target - Debug - EPM900 Settings - Enable P2 LED driver**.

### **Supported Devices**

The Keil EPM900 Emulator uses the Philips <u>P89LPC932</u> which is a superset of many other Philips LPC device variants like: <u>P89LPC920</u>, <u>P89LPC921</u>, <u>P89LPC922</u>, <u>P89LPC930</u>, <u>P89LPC931</u>. To connect this device variants the EPM900 board offers flexible connector pads which interface to the target system or to the programming adapter.