ProASIC^{PLUS} Starter Kit

The All-Inclusive, Low Cost Evaluation Kit for the ProASIC^{PLUS} Family

The ProASIC^{PLUS} starter kit is a complete solution that enables quick evaluation of Actel's ProASIC^{PLUS} device family and design prototyping.

ProASIC^{PLUS} devices combine the advantages of ASIC devices with the benefits of programmable devices through nonvolatile Flash technology, enabling engineers to create high-density systems using existing ASIC or FPGA design flows and tools.

Based on cost-effective .22µ Flash technology, ProASIC^{PLUS} offers a unique combination of features and benefits that give designers the best of both worlds. Like an ASIC, nonvolatile ProASIC^{PLUS} is live at powerup, offers a wide range of densities, and has very low power consumption. ProASIC^{PLUS} also adds reprogrammability and enhanced security to protect sensitive Intellectual Property. Its fine-grained architecture enables designers to leverage existing ASIC or FPGA design flows and tools. ProASIC^{PLUS} is the first high-density reprogrammable product that combines the capabilities of ASICs with the flexibility of FPGAs.
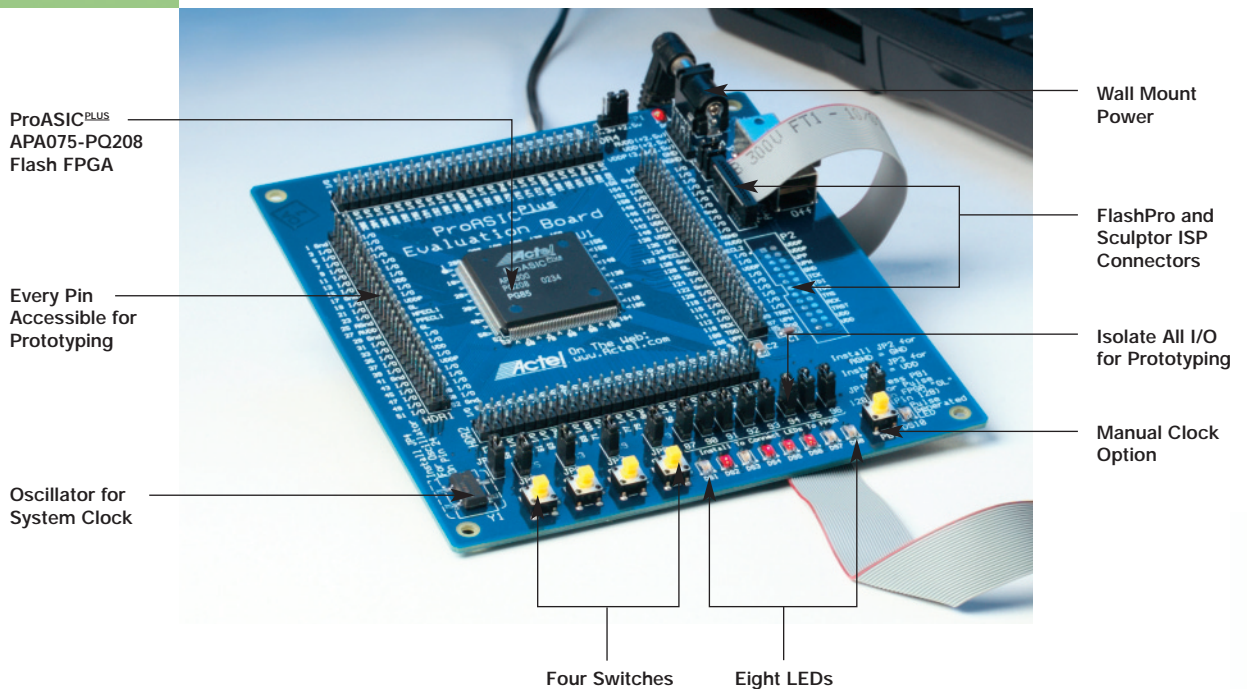
All-Inclusive and Low Cost

The low cost ProASICᴾᴸᵁˢ Starter Kit contains everything you need to start using the advanced features of Actel's ProASICᴾᴸᵁˢ family.

The ProASICᴾᴸᵁˢ Starter Kit includes the following:

— **Evaluation Board with an APA075 ProASICᴾᴸᵁˢ Device**

— **Actel Libero™ Gold Integrated Design Environment (IDE)**

— **FlashPro Lite and Programming Cable**

— **Power Supply**

— **User's Guide Including PCB Schematics**

— **Sample Design**

ProASICᴾᴸᵁˢ Evaluation Board

The ProASICᴾᴸᵁˢ evaluation board has on-board voltage regulation, enabling you to set the I/O voltages (V_{DDP}) to either 2.5V or 3.3V. You can generate the system clock using the on-board oscillator and ProASICᴾᴸᵁˢ PLLs. Eight LEDs and four switches provide simple inputs and outputs to the system. Prototyping headers connect to all the ProASICᴾᴸᵁˢ device I/Os enabling you to easily add components to the evaluation board. Finally, the board is equipped with programming headers to support ISP programming using FlashPro, FlashPro Lite, or Silicon Sculptor II.


ProASICᴾᴸᵁˢ
APA075-PQ208
Flash FPGA

Every Pin
Accessible for
Prototyping

Oscillator for
System Clock

Wall Mount
Power

FlashPro and
Sculptor ISP
Connectors

Isolate All I/O
for Prototyping

Manual Clock
Option

Four Switches   Eight LEDs

FlashPro Lite

FlashPro Lite is a portable, low-cost, in-system programmer for Actel's ProASIC^PLUS^ devices. This programmer draws power from the target board rather than an external power brick to create a very compact solution. FlashPro Lite's ultra small form factor, low cost, and easy-to-use software makes in-system programming ProASIC^PLUS^ devices a simple task.

Libero Gold

Actel's Libero Integrated Design Environment (IDE) is the most comprehensive and powerful FPGA design and development software available. Libero IDE consists of a powerful suite of FPGA development tools providing designers with an efficient and comprehensive start to finish methodology, from schematic/HDL entry, place-and-route, and programming. Libero Gold has a design capacity of up to 300k systems gates or the smallest member of a device family. Aside from Actel's Designer software FPGA tools from industry leaders Synplicity and SynapticCAD, Libero Gold also includes Mentor Graphics' Model*Sim* to give you a complete design solution.

All of these tools are combined into a single package giving you all the tools you need to evaluate the advanced features of ProASIC^PLUS^ devices or to start prototyping your own Flash designs with the ProASIC^PLUS^ APA075-based Starter Kit.
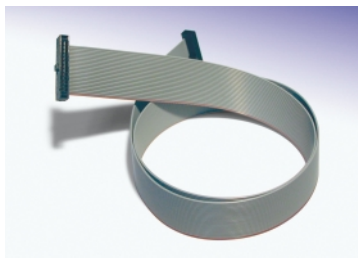
Programming Cable

FlashPro Lite uses a 26-strand dual row 50-mil cable from Samtec Inc. This cable is the same as the ISP module on the Silicon Sculptor. It is small enough to keep the entire programmer portable and can be easily replaced.
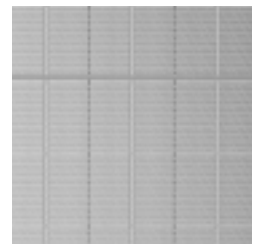
User's Guide

For those who have not used Actel's ProASIC^{PLUS} devices or Actel's Libero IDE, the ProASIC^{PLUS} Starter Kit contains a comprehensive user's guide that takes you step-by-step through the entire design process. The tutorial uses a simple design as an example, and takes you from creating a new project, all the way to programming the device in about an hour.

Schematics

The ProASIC^{PLUS} evaluation board schematic is also included in the kit. The schematic can be used as a guideline for your own board, or easily modified into your own design.

For more information about **Actel's ProASIC^{PLUS} Starter Kit,** visit our website at **www.actel.com**

www.actel.com

Actel Corporation	**Actel Europe Ltd.**	**Actel Japan**	**Actel Hong Kong**
955 East Arques Avenue	Dunlop House, Riverside Way	EXOS Ebisu Building 4F	39th Floor
Sunnyvale, CA USA 94086	Camberley, Surrey GU15 3YL	1-24-14 Ebisu Shibuya-ku	One Pacific Place
Telephone 408.739.1010	United Kingdom	Tokyo 150, Japan	88 Queensway
Facsimile 408.739.1540	Telephone +44 0 1276.401450	Telephone +81 0 3.3445.7671	Admiralty, Hong Kong
	Facsimile +44 0 1276.401490	Facsimile +81 0 3.3445.7668	Telephone 852.22735712