

# Breakout Savings with Three New Evaluation Kits

**I/O Breakout Boards Make Hardware Evaluation Quick and Easy**

Introducing three new low-cost I/O breakout boards: the MachXO™ 2280 Breakout Board, the ispMACH® 4256ZE Breakout Board, and the Power Manager II POWR1014A Breakout Board. The Lattice Breakout Board Evaluation Kits offer a convenient way to conduct hardware evaluations by providing easy access to densely-spaced PLD I/Os. For example, the center-to-center spacing of the package balls of the LCMXO2280 256-ball BGA device of the MachXO2280 Breakout Board are only 1.00 mm BSC (Basic Spacing between Spacing). Electrical traces of the Breakout Board connect each I/O to header landings that have 2.54mm (100mil / 0.1 inch) centered holes. By adding test probes, jumper wires, or pin headers to the header landings, engineers can easily evaluate the MachXO sysIO™ buffer, ispMACH 4000ZE I/O cells, or POWR1014A voltage monitors, high-voltage FET drivers, and open drain outputs.

Each Breakout Board is a 3" x 3" form factor and features a USB B-mini connector for power and programming, an LED array, and prototype area. All Lattice Breakout Boards provide an easy-to-use platform for evaluating and designing with the MachXO2280 PLD, ispMACH 4256ZE CPLD, or the POWR1014A Power Manager II. Along with the board and USB programming cable, each kit includes a pre-loaded demonstration design. By using free Lattice design tools you may then reprogram the on-board PLD device to review your own custom designs. The Lattice Breakout Board Evaluation Kits are available for \$29.99 each.



**Easy to Use  
Evaluation Kits for  
Only**

**\$29<sup>99</sup>**

To order, contact your local Lattice representative or go to the Lattice online store at

[www.latticesemi.com/store/eval\\_boards\\_cpdl.cfm](http://www.latticesemi.com/store/eval_boards_cpdl.cfm)

or

[www.latticesemi.com/store/eval\\_boards\\_mixedsig.cfm](http://www.latticesemi.com/store/eval_boards_mixedsig.cfm)

Evaluation Kit	Ordering Number	Purchase Online	List Price
<b>MachXO 2280 Breakout Board</b>	LCMXO2280-B-EVN	<a href="http://www.latticesemi.com/store/eval_boards_cpdl.cfm">www.latticesemi.com/store/eval_boards_cpdl.cfm</a>	\$29.99
<b>ispMACH 4256ZE Breakout Board</b>	LC4256ZE-B-EVN	<a href="http://www.latticesemi.com/store/eval_boards_cpdl.cfm">www.latticesemi.com/store/eval_boards_cpdl.cfm</a>	\$29.99
<b>POWR1014A Breakout Board</b>	POWR1014A-B-EVN	<a href="http://www.latticesemi.com/store/eval_boards_mixedsig.cfm">www.latticesemi.com/store/eval_boards_mixedsig.cfm</a>	\$29.99

## MachXO 2280 Breakout Board Features

- Preprogrammed with hardware test program
- MachXO (LCMX02280C-3FTN256C)
- LED array
- USB mini jack socket (Program/Power)
- (8) 2x20 expansion header landings for IO and external power
- 1x8 expansion header landing for JTAG
- 40 hole prototyping area
- 3.3 supply rails
- USB connector cable



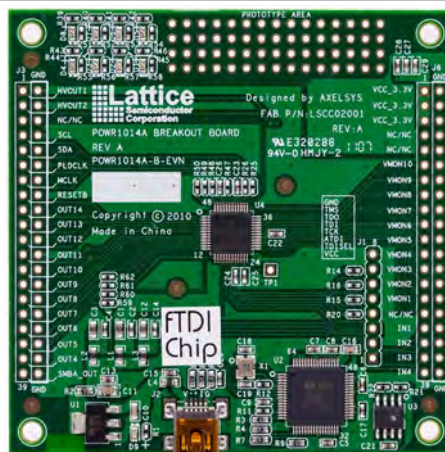
## ispMACH 4256ZE Breakout Board Features

- Preprogrammed with hardware test program
- ispMACH 4000ZE (LC4256ZE-5TN144C)
- LED array
- USB mini jack socket (Program/Power)
- (4) 2x20 expansion header landings for IO and external power
- 1x8 expansion header landing for JTAG
- 4x15 hole prototyping area
- 3.3 and 1.8V supply rails
- USB connector cable



## POWR1014A Breakout Board Features

- Preprogrammed with hardware test program
- ispPAC-POWR1014A-02TN481
- LED array
- USB mini jack socket (program/power)
- (2) 2x20 expansion header landings for IO and external power
- 1x8 expansion header for JTAG
- 4x15 hole prototyping area
- 3.3V supply rail
- USB connector cable



## Environmentally Friendly

The Lattice MachXO 2280, ispMACH 4256ZE and POWR1014A Breakout Boards are manufactured in compliance with a variety of environmental standards. The Breakout Boards are marked for CE, China RoHS Environmental-Friendly Use Period (EFUP) and Waste Electrical and Electronic Equipment (WEEE) directives.

## Pricing and Availability

Pricing for all Lattice Breakout Board Evaluation Kits is \$29.99. All kits are available for immediate ordering via the Lattice online store at [www.latticesemi.com/store/eval\\_boards\\_cpld.cfm](http://www.latticesemi.com/store/eval_boards_cpld.cfm) or [www.latticesemi.com/store/eval\\_boards\\_mixedsig.cfm](http://www.latticesemi.com/store/eval_boards_mixedsig.cfm) and through select authorized Lattice distributors listed at [www.latticesemi.com/sales](http://www.latticesemi.com/sales).

## Quick Links

### BREAKOUT BOARDS

[www.latticesemi.com/breakoutboards](http://www.latticesemi.com/breakoutboards)

### MachXO PLD FAMILY

[www.latticesemi.com/machxo](http://www.latticesemi.com/machxo)

### ispMACH 4000ZE CPLD FAMILY

[www.latticesemi.com/4000ze](http://www.latticesemi.com/4000ze)

### POWER MANAGER II FAMILY

[www.latticesemi.com/powermanager](http://www.latticesemi.com/powermanager)

### SALES

[www.latticesemi.com/sales](http://www.latticesemi.com/sales)

### ONLINE STORE

[www.latticesemi.com/store](http://www.latticesemi.com/store)

### APPLICATIONS SUPPORT

[www.latticesemi.com/techsupport](http://www.latticesemi.com/techsupport)

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## Learn More

For more information about how Lattice's Breakout Boards can save money and make your your design projects easier, please visit [latticesemi.com/breakoutboards](http://latticesemi.com/breakoutboards) or contact your local Lattice sales representative.

