Low Cost Boards Accelerate PLD Design and Hardware Evaluation

Lattice Semiconductor Corporation announced the immediate availability of 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. Lattice Breakout Board Evaluation Kits offer a convenient way for users to accelerate hardware evaluation and prototyping by providing easy access by hand to densely spaced PLD I/Os and pre-wired power and programming connections. For common end applications like I/O expansion and bridging, PLDs offer high I/O density at a low cost. This has made PLDs the preferred solution instead of discrete logic ICs or an application processor with more I/Os.

Breakout Boards provide a convenient way to access the fine-pitch pins or balls of a PLD package. For example, the center-to-center spacing of the package balls of the256-ball BGA package of the MachXO 2280 Breakout Board is only 1.00 mm BSC (Basic Spacing between Centers). Electrical traces of the Breakout Board connect each I/O to header landings that have 2.54 mm (100 mil / 0.1 inch) centered holes. By adding test probes, jumper wires or pin headers to the header landings, engineers can easily evaluate the MachXO sysI/O™ Buffer, ispMACH 4000ZE I/O cells, or POWR1014A voltage monitors, high-voltage FET drivers, and open drain outputs.

Each Breakout Board is 3” x 3” and features a USB B-mini connector for power and programming, an LED array and a prototype area. All Lattice Breakout Boards provide an easy to use platform for evaluating and designing with the MachXO 2280 PLD, ispMACH 4256ZECPLD or the ispPAC®-POWR1014A Power Manager II. Along with the board and USB programming cable, each kit includes a pre-loaded hardware test program. Using Lattice design tools that are provided free of charge, the user can reprogram the on-board PLD device to evaluate custom designs.

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