



Quick Compare: BDL42-300 vs BDL45-300

	BDL42-300	BDL45-300
		
Applications	<ul style="list-style-type: none"> Battery management systems (BMS) & battery simulation Data acquisition for analogue & digital signals Microgrids & renewables (detailed low latency models) Programmable analogue & digital signal generators Power electronics converters with up to 48 coupled switches 	<ul style="list-style-type: none"> Battery management systems (BMS) & battery simulation Electric motors Power grid connected HIL simulations High- and low-level microgrid, renewable (solar, wind) generation and storage systems Power electronics converters with up to 72 coupled switches
CPU	ARM Cortex A9 1GHz	Intel XEON E3 3.5GHz
CPU Cores	2	4
XILINX FPGA	ZYNQ XC7Z030 SoC	Kintex-7 325T SoC
Connectivity	Dual 5Gbps GTX optical ports	Dual 5Gbps GTX optical ports
Software	RT-Lab B Series (2 CPU cores activated *)	RT-Lab B Series (4 CPU cores activated **)
	eHS32 Electrical Hardware Solver	eHS32 Electrical Hardware Solver
I/Os	96 included as 64 digital + 32 analogue (128 I/Os total possible)	
Digital I/Os	32x channel INPUT, 40ns, 4.5V-50V range, 32 static digital inputs	32x channel INPUT, opto-couplers, 4.5V-50V range, 32 static digital inputs
	32x channel OUTPUT, 65ns, 5V-30V range, 32 static digital inputs	32x channel OUTPUT, 65-200ns, 5V-30V range, 32 static digital inputs, push-pull, FET
Analogue I/Os	16x channel INPUT, 500kS/s*** +/-20V adjustable range, 16 bit resolution	32x channels static inputs, 65ns, 5V-30V
	16x channel OUTPUT, 1MS/s*** 1 MS/s per channel simultaneous analogue output +/-16V output range, 16 bit resolution, 15mA	32x channels static inputs, 65ns, 5V-30V
Options	<ul style="list-style-type: none"> FPGA IP Digital I/O License for OP4200 RT-XSG FPGA Blockset Dev System CANbus driver (2 channels, 1Mbps, half duplex) DB37 to Spring Cage Terminal Adapter DB37 to SMB Adapter 	<ul style="list-style-type: none"> RT-Lab FX75 Series eHS64 Electrical Hardware Solver FPGA IP Digital I/O License for OP4510 RT-XSG FPGA Blockset Dev System CANbus Interface Kit & driver RS422 Expansion Board DB37 to Spring Cage Terminal Adapter IEC 61850-8-1 GOOSE driver IEC 61850-8-1 Sampled Value driver C37.118 Slave driver C37.118 Master driver DNP3 Outstation Slave driver DNP3 Master driver Modbus Slave driver Modbus Master driver Master Clock Time Synchronisation kit

* Supports real-time simulations of grid models of 60-100 3-Phase buses

** Supports real-time simulations of grid models of 120-200 3-Phase buses

*** Samples per second