



## Freescale - MPC8323E-RDB - MPC8323E-RDB Reference Design Board

### Product Overview:

The MPC8323E-RDB is a turnkey hardware/software reference platform designed to rapidly provide the core elements of tomorrow's multi-service gateway products.

The MPC8323E-RDB leverages the processing power of the MPC8323E PowerQUICC II Pro integrated communications processor. Built on Power Architecture™ technology, the MPC8323E family of products integrates a proper balance of architectural features (e300 core, dual integer units, 16 KB instruction and 16 KB data caches) along with a DDR 1/2 memory controller, RISC-based communications engine (QUICC Engine™) and an optional hardware security engine.



### Kit Contents:

- Encased CPE form factor board with power supply
- Freescale Linux® 2.6 (LTIB)

### Key Features:

- Flexible WAN interfaces
  - RJ45 100BT Ethernet and connectors WiMAX, ADSL2+/VDSL2
  - IPv4 router with VPN capability Up to 640 DMIPS e300 CPU QUICC Engine technology acceleration, 200 MHz
  - VPN termination and pass-through
- Flexible network interfaces
  - 10/100 Ethernet
- 4-port 10/100 Ethernet LAN

- Two FXS ports for analog phones
- Two USB 2.0 host (480 Mbps) type A ports
- Two MiniPCI slots, one PCI slot
- One serial port

## Ordering Information:

### Products:

Part Number	Manufacturer	Farnell P/N	Newark P/N
MPC8323E-RDB	Freescale	1692093	14M6284

### Associated Products:

Part Number	Manufacturer	Description	Farnell P/N	Newark P/N
MPC8323E	Freescale	MPU, E300, POWERQUICC II PRO	NA	47M2097
MAX811	Maxim	4-Pin $\mu$ P Voltage Monitors with Manual Reset Input	1737159	08J8504
74LCX373MTC	Fairchild	74LCX373 Low Voltage Octal Transparent Latch with 5V Tolerant Inputs and Outputs	1504633	78K6306
74LCX245WM	Fairchild	74LCX245 Low Voltage Bidirectional Transceiver with 5V Tolerant Inputs and Outputs	1013782	89K1183
M24256-BWMN6P	ST	256 Kbit serial I <sup>2</sup> C bus EEPROM with three Chip Enable lines	1224411	26M1752
DS1339U	Maxim	I2C Serial Real-Time Clock	1379717	27K7429
LM75	NSC	Digital temperature sensor	1469247	41K6305
AD5301BRMZ	ADI	2.5 V to 5.5 V, 120 A, 2-Wire Interface, Voltage Output 8-/10-/12-Bit DACs	9603956	19M0802
MAX3232CDBE4	TI	True RS-232 Transceivers	1287435	26M0603

## Similar Products:

Part Number	Manufacturer	Description	Support Device	Farnell P/N	Newark P/N
MPC8315E-RDB	Freescale	MPC8315 Reference Design Kit	MPC8315	1750497	26R6818
MPC8313E-RDB	Freescale	MPC8313 Reference Design Kit	MPC8313	1692097	NA

## Document List:

## Datasheets:

Part Number	Description	Size
MAX811	<a href="#">4-Pin <math>\mu</math>P Voltage Monitors with Manual Reset Input</a>	185KB
MPC8323E	<a href="#">MPC8323E PowerQUICC™ II Pro Integrated Communications Processor Family Hardware Specifications</a>	1.09MB
74LCX373MTC	<a href="#">74LCX373 Low Voltage Octal Transparent Latch with 5V Tolerant Inputs and Outputs</a>	647KB
74LCX245	<a href="#">74LCX245 Low Voltage Bidirectional Transceiver with 5V Tolerant Inputs and Outputs</a>	433.4KB
M24256-BWMN6P	<a href="#">256 Kbit serial I<sup>2</sup>C bus EEPROM with three Chip Enable lines</a>	340KB
DS1339U	<a href="#">I<sup>2</sup>C Serial Real-Time Clock</a>	555KB
LM75	<a href="#">Digital temperature sensor</a>	475KB
AD5301BRMZ	<a href="#">2.5 V to 5.5 V, 120 <math>\mu</math>A, 2-Wire Interface, Voltage Output 8-/10-/12-Bit DACs</a>	458KB
MAX3232	<a href="#">3.0V to 5.5V, Low-Power, up to 1Mbps, True RS-232 Transceivers</a>	272KB

## Application Notes:

File Name	Size
<a href="#">Design Checklist for PowerQUICC™ II Pro MPC8315E Processor</a>	721KB
<a href="#">Accommodating Layer 2 Padding (Shimming) with the Enhanced Three-Speed Ethernet Controller (eTSEC)</a>	455KB
<a href="#">Programming the User-Programmable Machine (UPM) for SDRAM Memory Devices</a>	561KB
<a href="#">Programming the PowerQUICC III/PowerQUICC II Pro DDR SDRAM Controller</a>	572KB
<a href="#">Hardware and Layout Design Considerations for DDR2 SDRAM Memory Interfaces</a>	547KB
<a href="#">PowerQUICC™ Data Cache Coherency</a>	491KB
<a href="#">Enabling and Checking DDR ECC on PowerQUICC II</a>	449KB

<a href="#">SEC 2/3x Description Programmer's Guide</a>	1.02MB
<a href="#">Hardware Debugging Using the CodeWarrior IDE</a>	1.57MB
<a href="#">DDR Interleaving for PowerQUICC® and QorIQ™ Processors</a>	590KB
<a href="#">How to Run the Latest Linux BSP on MPC8313ERDB Rev. Ax Boards</a>	190KB
<a href="#">MPC8313E-RDB Reference Platform</a>	292KB
<a href="#">AN3362 : Design Checklist for PowerQUICC II Pro MPC8313E Processor</a>	621KB
<a href="#">AN3354 : Configuring SGMII Ethernet on the PowerQUICC MPC8313E Processor</a>	466KB
<a href="#">AN3371 : Power Management in Linux for the PowerQUICC MPC8313E</a>	468KB
<a href="#">AN3545 : Migration from MPC8313E Revision 1.0 to Revision 2.0</a>	515KB
<a href="#">PowerQUICC™ II Pro (MPC83xx) PCI Agent Initialization</a>	449KB

## Hardware & Software:

File Name	Size
<a href="#">MPC8313ERM : MPC8313E PowerQUICC II Pro Integrated Host Processor Reference Manual</a>	13.3MB
<a href="#">Linux BSP for Freescale MPC8313E</a>	
<a href="#">MPC8315E - Debian RFS Recovery Image</a>	124MB
<a href="#">MPC8315E RDB NAS User Manual</a>	465KB
<a href="#">MPC8315E RDB RAID5 Acceleration User Manual</a>	81KB
<a href="#">MPC8315E Orcad Symbol File</a>	13KB
<a href="#">Linux BSP for Freescale MPC8315E-RDB</a>	836.5MB