PRODUCT OVERVIEW

The Marvell® PXA1802 LTE thin-modem combines Marvell’s leading silicon and cellular expertise to provide the state-of-arts mobile broadband connectivity for multitude of consumer devices, such as, high-performance, low-power smartphones, tablet devices, mobile hotspot devices, and laptops. These devices can be used worldwide since they support global access configurations for TDD-LTE (Time-Division Duplex-Long-Term Evolution), FDD-LTE (Frequency Division Duplex-Long-Term Evolution), TD-SCDMA (Time Division Synchronous Code Division Multiple Access), WCDMA (Wideband Code Division Multiple Access) and EGPRS (Enhanced GPRS). Featuring 40 nanometer (nm) technology, the Marvell PXA1802 integrates all 2G, 3G and 4G mobile broadband modem technologies on a single chip that is fully backward compatible, yet supports current China TD-SCDMA networks, worldwide WCDMA networks, and next-generation TDD/FDD networks.

The Marvell PXA1802 is the industry’s first LTE modem chipset to support next-generation LTE standards with Category 4 150Mbps (megabits-per-second) downlink throughput, Release 7 WCDMA HSPA+, and Release 8 TD-SCDMA HSPA+. The flexible and efficient architecture of the Marvell PXA1802 communication platform allows fast implementation on the latest LTE, WCDMA and TD-SCDMA terminals with minimum cost. With Marvell’s cutting edge cellular technology and seamless wireless connectivity, the new Marvell PXA1802-powered terminals offer ultimate performance for browsing, HD live video, music, 3D gaming, social networking and other bandwidth-hungry mobile applications at an attractive price. In addition, the Marvell PXA1802 communication platform is fully validated via extensive IOT, GCF and field trial testing in TD-SCDMA/WCDMA and LTE networks.

BLOCK DIAGRAM

Fig 1. Marvell PXA1802 Platform

SPECIAL FEATURES

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<th>FEATURES GROUP</th>
<th>FEATURES</th>
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<tr>
<td>Cellular Network Solution</td>
<td>LTE</td>
<td>• Release 8/9</td>
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<td>• UE Category 4 Support</td>
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<td>- 150Mbps DL/50Mbps UL</td>
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<td>• LTE FDD/TDD support</td>
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<td>• Support all Bandwidth Options</td>
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### FEATURES GROUP

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<th>FEATURES</th>
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| • TD-SCDMA | • Release 8/9  
- HSDPA with DLDC: 8.4Mbps  
- HSUPA Category 6  
- Multi-Carrier: 2 carriers at same time  
- Rx diversity support  
- 64QAM support  |
| • WCDMA | • Release 7  
- HSDPA: 21.1Mbps  
- HSUPA Category 6  |
| • GSM | • GSM/GPRS/EGPRS/EGPRS2/EGPRS  |
| • Protocol Stack | • Marvell-supported 2G/3G/4G protocol stack  
- Compliant with world’s leading carrier  
- Fully integrated platform solution validated via extensive IOT, GCF and field trial testing  |
| • RF Solution | • Multi-band LTE support  
• Multi-band 3G support  
• Quad-band EDGE support  
• DigRF3G/4G support  |
| • Modem Processors | • Modem RISC Core  
- Marvell-designed ARM9 with packet processing accelerators  
- L1 Instruction and Data Cache  
- L2 Cache  
- ITCM and DTCM  |
| • Modem DSP Core | • Micro-Signal Architecture VLIW DSP  
- L1 Instruction and Data Cache  
- Instruction and Data SRAM  |
| • Multi-radio Platform Capabilities | • 3G/WLAN/BT Coexistence  
• Enables support for IMS, VoIP and other advanced carrier services  |

### APPLICATIONS

Paired with Marvell’s industry-leading application processors, the PXA1802 enables seamless performance with bandwidth-hungry mobile applications and multimedia devices. The PXA1802 comes in data card and dongle form factors to support mobile connectivity for tablets, laptops and smartphone devices.

**Fig 2. Marvell PXA1802 SoC (not actual size)**

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**THE MARVELL ADVANTAGE:** Marvell chipsets come with complete reference designs which include board layout designs, software, manufacturing diagnostic tools, documentation, and other items to assist customers with product evaluation and production. Marvell’s worldwide field application engineers collaborate closely with end customers to develop and deliver new leading-edge products for quick time-to-market. Marvell utilizes world-leading semiconductor foundry and packaging services to reliably deliver high-volume and low-cost total solutions.

**ABOUT MARVELL:** Marvell (NASDAQ: MRVL) is a global leader in providing complete silicon solutions enabling the digital connected lifestyle. From mobile communications to storage, cloud infrastructure, digital entertainment and in-home content delivery, Marvell’s diverse product portfolio aligns complete platform designs with industry-leading performance, security, reliability and efficiency. At the core of the world’s most powerful consumer, network and enterprise systems, Marvell empowers partners and their customers to always stand at the forefront of innovation, performance and mass appeal. By providing people around the world with mobility and ease of access to services adding value to their social, private and work lives, Marvell is committed to enhancing the human experience. As used herein, the term “Marvell” refers to Marvell Technology Group Ltd. and its subsidiaries.

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