

Maxim makes complete U-turn toward foundries and 180nm technology platforms, says Petrov Group

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A "New Maxim," a US\$1.65 billion company in 2009, has emerged, according to The Petrov Group. Maxim Integrated Products has undergone a dramatic transformation since 2007.

Elements of Maxim's radical departure from its historical business model include:

- The end of its traditional approach of acquiring fabs; it has in fact been closing fabs and increasing outsourcing production to foundries
- The introduction of an 180nm BCD-based technology platform in 2010 that will become its workhorse process technology.

Maxim's new technology platform will be outsourced to foundries for both 200mm and 300mm wafers. Maxim's 300mm approach will significantly change analog IC economics, including in BCD-based PWM ICs.

Maxim participates in eight power domains. [Power management ICs accounted for US\\$616 million or 37% of Maxim's 2009 revenues](#) – US\$467 million in general-purpose and US\$149 million in application-specific ICs. Maxim has 571 single-function generic power IC products – 66% inductor-based, 9% charge pump, and 25% linear/LDO. It has 53 multi-function IC products or 8% of its grand total of 624 power IC products.

On average Maxim has 221 products per product line, US\$110 million of revenue per business unit, and US\$83 million of revenue per end-market sub-segment; [it introduces one generic product per day](#). Its core power domains are analog power conversion, power actuation, power distribution, battery management, and support power functions. Its growth power domains include digital power and lighting, and displays power.

Maxim's emerging power domain is the Smart Power-Grid in which Maxim targets an infrastructure market niche rather than an end-equipment type niche. This provides a relatively larger, global scale market opportunity for a range of Maxim's products. In partnership with Sagem Communications and ERD-France, Maxim has already developed an open standard (G3-PLC) using OFDM-based PLC technology. G3-PLC technology allows long-distance (10km) data transmission and communication over medium-voltage power lines, reducing the needed number of repeaters.

In the high-end consumer business Maxim has US\$230 million in power IC revenues of which US\$120 million are PWM ICs; Maxim focuses on handsets and battery-powered handheld equipment. This market segment represents Maxim's major business thrust, and supports its medium-term revenue growth objectives.

The benefits of new technology platforms will change the analog IC landscape as substantially as digital CMOS platforms did – by allowing low cost, high volume production, and high performance and reliability.

- General-purpose [single-function](#) products where high analog performance is the top attribute will remain in legacy 1.5- to 0.25-micron processes for a long time
- [All other power ICs](#), especially application-specific multifunction products, that is, mixed-signal analog products which require high integration and are cost-performance optimized, will start to migrate to state-of-the-art 180nm and finer BCD-based platform technologies.

Maxim's dramatic U-turn change from its legacy corporate strategy to foundry outsourcing underlines a general industry trend for most Analog IC vendors. Significantly, its transitioning to a new 180nm BCD workhorse platform technology, the S18 platform, will use 200mm and 300mm wafers. Volume production, combined with 300mm wafers, fundamentally changes the economics of the analog ICs business.

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