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– Manfred Choutka, Infineon



IP Strategy Fuels Infineon Technologies Processor Ecosystem

SUCCESS STORY

As the person responsible for marketing the C166 family of microprocessors at Infineon Technologies, Automotive Industrial and Multi-Markets Business Group, Manfred Choutka knew the importance of a strong processor support ecosystem and that many of his strategic customers now considered a compatible intellectual property (IP) offering as a key ingredient — but Infineon's IP team just wasn't setup to sell or support IP.

Consequently, he turned to IPextreme to prepare and market Infineon Technologies processor IP and he found “IPextreme made IP licensing and support easy for Infineon Technologies, and our customers.”



CORPORATE PROFILE

- Infineon is a leading innovator in the international semiconductor industry. They design, develop, manufacture and market a broad range of semiconductors and complete system solutions targeted at selected industries

CHALLENGE

- Meeting market demand for Infineon IP
- No internal resources to support deployment of IP into marketplace

SOLUTION

- Deploy silicon-proven IP through IPextreme

Choutka realized that, while the incremental revenue from licensing IP is attractive, any improvement that it could drive in Infineon Technologies much larger silicon revenue would be much more significant. Infineon Technologies needed an IP sales channel with the necessary skills but IP revenue alone could not justify a dedicated IP sales force on staff. The “business” of licensing IP is not a core competency for Infineon Technologies and they learned that “closing the deal is a surprisingly big part of selling IP, needing a lot of time from experienced people to handle all the licensing details.”

Infineon Technologies saw the strategic benefits of enabling customers to incorporate Infineon Technologies IP into their chip designs. In general, the wider the

adoption of a given processor, as a chip or IP, the greater the 3rd party support that develops around it. Processors that don't maintain a strong ecosystem of compilers, applications, operating systems and debug tools, soon wither in the marketplace. More importantly, high-volume chip customers would move to other processor architectures for all their product lines if Infineon Technologies did not give them the IP they desired for certain lines. Just handing-over these IP designs to competitors was not an acceptable option to Infineon's IP team, since it was important to defend their silicon revenue and maintain the processor ecosystem.

Infineon's IP team found IPextreme's proposal to be straightforward, with a clearly defined schedule of tasks and to ultimately provide the best value.

After signing, IPextreme took the Verilog RTL of Infineon Technologies 16-bit C166 processor, verified its quality, documented it and “packaged” it for end-users in their XPack technology. XPack is more than just a bundle of deliverables; it includes a graphical interface that enables IP users to safely configure the IP without forcing them to learn all about its internal functionality. XPack also drives all the common EDA tool flows.

For Choutka the most impressive part of the project was “how well the engineers collaborated on the project, even though the cross functional team was spread across two companies on two continents. The engineers at IPextreme really understood how to make a processor design portable and are great people to work with.”

In the process of packaging the design, IPextreme’s engineers gained sufficient understanding of the C166 that of 54 support queries from the first C166 IP customer, only one had to be referred back to Infineon Technologies. Says Choutka, “We don’t want to deal directly with IP customers since we don’t have the engineering resources to do so. Keeping our designers focused on next-generation chips instead of fielding support calls is just as important to us as licensing our IP.”

Choutka outlines why having IPextreme resell Infineon Technologies IP makes sense: “Internal re-use is not the same as IP licensing. A design and its documentation have to be taken up a level for external customers since they do not have our tools, methodology nor the original Infineon Technologies designers to call upon. Selling IP is also very different than selling chips. For starters, the semiconductor sales channel is simply not set up for IP, but a value-added-reseller like IPextreme knows the customer base, and knows how to sell IP.”

For its initial foray with IPextreme, Infineon Technologies chose the C166S processor for licensing to end customers. It is derived from the highly successful C166 microcontroller family and is fully instruction set compatible. With its fast interrupt response and context switching, the C166 family is ideally suited to automotive, industrial, mass storage and wired or wireless communications applications. The first C166S IP customer recently taped out their first chip and reports being “pleased with the package.” Several other C166 licenses have already taped-out according to Choutka.

Senior Director, Automotive and Industrial Business Group summarized, “Infineon Technologies is continually producing new semiconductor designs and licensing them as IP offers strategic benefits for our firm. Reselling our IP through IPextreme allowed us to market our IP far more efficiently than we could have in-house. To make the marketing, licensing and support of IP easy requires people truly experienced with IP, and that’s what IPextreme brought to the table.”

ABOUT IPEXTREME

IPextreme brings high-value intellectual property (IP) from large semiconductor companies to consumer and automotive System-on-Chip (SOC) designers worldwide. These products are silicon-proven to minimize design risk and provided in a process independent and EDA neutral format, for easy use by the broadest range of customers. With a decade of experience in developing, packaging, licensing and supporting IP, our team offers a complete business solution for semiconductor companies to strategically leverage their internal IP portfolio to grow overall revenue. IPextreme has offices in Campbell, California, Munich, Germany and Tokyo, Japan. www.ip-extreme.com.



www.ip-extreme.com

IPextreme, Inc.

307 Orchard City Drive
Suite 202
Campbell, CA 95008
800-289-6412 (toll-free)
408-608-0421 (fax)

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