QCOM, GOOG & INTC

Yesterday, February 3, Bloomberg reported that the **Google** unit of **Alphabet (GOOG)** would give some sort of endorsement to **Qualcomm, Inc.'s (QCOM)** new ARM based server processor at an investor event next week. The **actual wording of this "leak"** was pretty slick.

> "Google, the main unit of the world's most valuable company and biggest buyer of processors that run server computers, is planning to publicly give its support to early versions of Qualcomm's chips at an investor event next week, accord-ing to people familiar with the matter. The two have already cooperated on design work and Google will commit to using the processors if they meet per-formance goals, said the people, who asked not to be identified because the plans aren't yet public. Representatives of both companies declined to com-ment."

QCOM is hosting its own analyst meeting on February 11 at its own headquarters in San Diego. The event begins at 1:00 pm PST. In other words, it begins after the stock markets close on next Thursday.

The leak says that **GOOG** will commit to using **QCOM's** ARM processors "if they meet performance goals" (emphasis added).

Source: PCWorld and James Niccolai

The **QCOM** prototype (pictured above) consists of 24 proprietary ARM cores. The com-pany has experience working with ARM; e.g., it uses ARM cores in its Snapdragon mobile processors.

The data center ARM prototype is a System on Chip (SoC). It also uses **Xilinx (XLNX)** FPGAs to accelerate specific workloads. And it uses **Mellanox (MLNX)** interconnects and adapter cards in order to develop a complete platform solution. In the photo above, you can see a **XLNX** Kintex 7 FPGA, a 20nm accelerator that can act as a 100G Network Interface Card (NIC) with an onboard packet processor. These cards are connected to the server CPU. Here are two diagrams from the **XLNX** website that compare existing architecture to Kintex. This should also be helpful in understanding where connecting modules like the QSFP-28 are located in some servers.
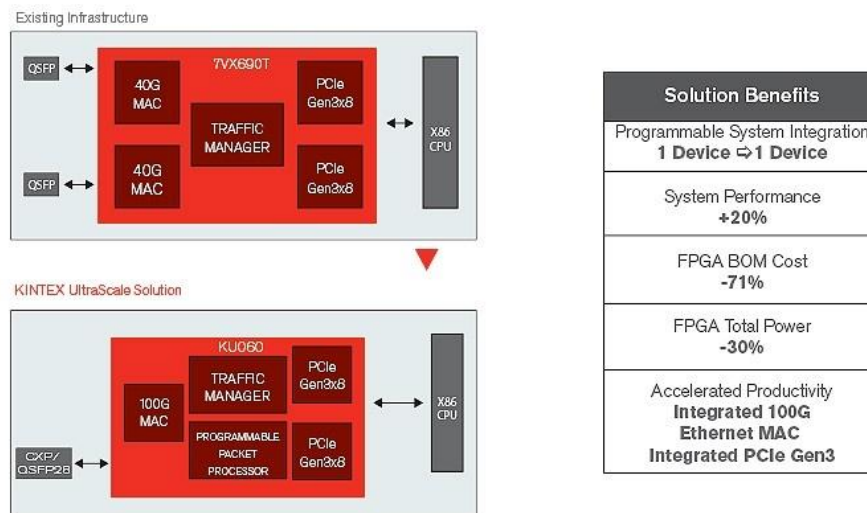
Source: Xilinx Corporation

MLNX will contribute Ethernet and InfiniBand interconnect modules, cables and adapter cards. That will enable the **QCOM** processor to be part of an overall server CPU platform. I would not be surprised that **MLNX** will also offer EZChip acceleration solutions as an alternative to the **XLNX** FPGA in later versions of the **QCOM** chip.

The Significance of any GOOG Endorsement

A Google endorsement of the **QCOM** ARM processor likely means more to the other ARM competitors than it does to **Intel (INTC)**. And, if this endorsement does, in fact, occur, it does not even mean that **Google** will use the **QCOM** solution in any degree.

Two years ago, **GOOG** also endorsed **IBM's** Power server board. POWER is **IBM's** alternative to x86 and ARM. In late April 2014, **GOOG** demonstrated its own home-built server board based upon **IBM's** Power8 processor at an **IBM** conference. And **Google** is a founding member of the **OpenPower Foundation** along with **MLNX** and **XLNX**.

In other words, **GOOG**, **MLNX** and **XLNX** are playing both sides of the anti-**INTC** movement. And they were playing both sides even before **INTC** acquired **Altera**.

The photo below is of the Google server using **IBM's** Power8 processor.

Source: PCWorld

Bottom Line: The stock market overreacted to the leak of a **Google** endorsement of **QCOM's** ARM server processor. The endorsement is more a negative for companies like **AMCC**, **AMD**, **AVGO (Broadcom Vulcan)**, **CAVM** and **MRVL**. If anything, **GOOG** is endorsing the **QCOM** solution over these competitors in the second source battles for server CPU slots at hyperscale data centers. **QCOM** will not have production ready chips available until 2018 – or later. I plan to use this weakness to buy more **INTC**.

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