

Processing on the edge

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One of the interesting things about looking into a new market with an existing product is trying to ascertain the strengths and weaknesses of your product as you enter that new arena. If you've been following my last few posts you know that I've been looking into the high performance computing market and trying to understand the role that our DSPs can play there. One of the things commonly associated with DSPs is real-time performance since most of the systems that make heavy use of DSPs are, in some way, processing data in real-time and trying to meet some kind of synchronous deadline or schedule. While this makes it a challenge when discussing traditional HPC systems (which are not generally real-time systems) it does lead people to speculate about other areas they think DSPs might be useful and there does seem to be one recurring theme that has been coming up more and more:

Life on the edge is getting harder and harder.

The edge I'm referring to here is the point at which data is captured before being sent back to some central hub for processing. Across many different markets and applications, systems that live out in the real world collecting data are being overwhelmed by the advances in sensor technology (be it camera, radar, or other) and are increasingly unable to transport or store all the raw data coming in. So if the data cannot come to the processor, the processor must come to the data and the data must be analyzed (in some way) in real-time such that the amount required to be analyzed later is reduced. The number of different applications that seem to be tottering on this edge is truly remarkable. So what processors can handle harsh environments, consume relatively low power, are good at handling real-time data, and still provide a high level of compute power?? Hmmm...

Given all the challenges one encounters when entering a new market it's definitely nice to see some new possibilities where proven strengths can be leveraged.

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