

Intel Expands Availability of Intel® Quark™ Processors for IoT to Reach the Intelligent Edge

New Intel Quark Processors Offer End-to-End Security, Manageability and Performance Breakthroughs

Nov. 3, 2015 — Intel today announced additions to the Intel® Quark™ brand with new processors to provide low-power offerings for things. The new Intel® Quark™ microcontroller D1000, Intel® Quark™ microcontroller D2000, and Intel® Quark™ SE microcontroller for IoT extend Intel's product roadmap to the very edge of the Internet of Things (IoT), enabling a consistent architecture from things to the cloud, with a broad portfolio of Intel products spanning from Intel® Quark™ to Intel® Xeon® processors.

Intel Quark Processors

The Intel Quark processors for IoT provide flexible, low-power computing for a wide variety of small form factor applications bringing low-cost connectivity, integration and compatibility to the next wave of smart things.

- The Intel Quark microcontroller D1000 has fine-grained power management features that enable battery-powered and line-powered sensors to provide secure, intelligent processing for wired and wireless real-world applications at the edge.
- The Intel Quark D2000 microcontroller includes powerful processing in an energy-conscious envelope, offering developers a platform to build devices on the edge that are fully compatible with other Intel products. Additionally, solutions providers can deploy compatible software throughout the solution to tie different pieces together.
- Intel Quark microcontrollers D2000 and SE feature a full Intel x86 instruction set architecture for compatibility and scalability, offering low-power performance that can be scaled throughout a solution for end-to-end deployments.
- The Intel Quark SE microcontroller for IoT includes an integrated sensor hub that keeps power to a minimum by intelligently handling and processing data from external sensors. Intel Quark SE microcontroller also features pattern-matching technology that allows it to recognize patterns from incoming sensor data, providing real-time and actionable insights.
- Intel Quark processors for IoT feature security to protect against malicious intrusions that could compromise networks.
- Intel Quark processors for IoT feature extended temperature with ranges from -40 °C to +85 °C - ideal for small form factor IoT applications.
- Intel® System Studio for Microcontrollers empowers IoT software developers to create fast, intelligent things with Intel Quark processors. This Eclipse*-based suite has proven tools to locally build, debug and analyze software using familiar workflows - from system bring-up to IoT applications.

Powering the Future of IoT

Intel is working to develop future processors that take advantage of Intel's low-power, high-performance semiconductors to offer powerful, built-in machine learning analytics to meet the next wave of IoT. The Intel Quark SE microcontroller for IoT will feature highly efficient, hardware-based associative memory to enable intelligence based on context rather than pre-existing code. The technology can take any data type, comparing new data to existing data it has been trained on, and identify the closest match for a given scenario. The Intel Quark SE microcontroller for IoT will offer adaptive analytics that can learn and refine over time using standardized tools for easier development and faster time to market.

Intel Quark-Powered IoT Solutions in Action

- [Honeywell*](#) announced a connected worker solution for industrial safety. Using intelligent wearables featuring Intel® Quark™ technology, the industrial wearable solution can help monitor environments of mission-critical workers like firefighters, miners or first responders.

- [Yanzi](#)* announced it's working with Intel to develop a secure and scalable IoT solution that can improve work environments, increase productivity, and increase overall value of building assets by using Intel Quark technology and real-time analytics to better understand everything from lighting use to indoor air quality to space utilization and even noise levels in an office building.
- Child Angel's* advanced location device, powered by Intel Quark technology and using the Intel® XMM™ 6255 modem, extends intelligence to a wearable on a child's wrist, allowing them more freedom while providing an extra layer of care with location and biometric sensing and real-time analytics.

The Intel Quark microcontroller D1000 is available today, while the Intel Quark microcontroller D2000 will be available by the end of this year. The Intel Quark SE SoC for IoT will be available in the first half of 2016.

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