Embedded Internet of Things (IoT) Ecosystem: Next Gen Embedded System Hardware, Software, Tools, and Operating Systems 2016 - 2021

Description: Embedded systems are highly customized, developed and programmed as per user requirements. Conventional embedded systems are electronic components that possess a microprocessor, peripherals, memory card, and software program that run instructions, operating system and tools (debuggers, static and non-programmable), and follows firmware programming embedded in the micro-chip.

Smart embedded systems will require changing contemporary embedded system design and architecture to suit real-time operations, smaller size of the unit and lowered power consumption and become cost efficient. Use of microcontroller and technologies such as Systems on Chip (SoC) and Reduced Instruction set Computing Chips (RISC) will have greater scope in IoT.

This research provides analysis of the products that will be developed to support IoT, changes in traditional RTOS required to match performance with IoT, changes in hardware required to match needs of IoT, types of peripherals, and emerging tools to support processing of embedded systems in IoT.

The report provides five year forecast for Embedded Systems in IoT for the period of 2016 - 2021. It provides regional segmentation by industry for embedded systems and components.

Key Findings:
- Transport and cargo, oil industries, consumer electronics, Home Automation, HVAC and Utility markets will take North America to $108B in embedded systems for IoT through the year 2021 with a CAGR of 20.8%.
- Use of IoT and embedded system will be high in EMEA due to positive response to Industrial IoT and growth of embedded systems in electrical grids, automobile and healthcare. The markets in EMEA through 2021 will reach to $112 billion with a CAGR of 19%
- Hardware MCU vendors such as ARM, Texas Instruments, Intel/Wind River and Freescale are now looking to play role in IoT. The new powerful but low cost MCUs are in development. SoCs for IoT that have larger memories, higher clock rates, low power consumption and directly accessed memory will be in production
- The majority of the devices will be in building automation, healthcare, automobile, Oil and Gas and Utility industries. Many embedded devices are of size about 300KB and thus require RTOS and APIs that can handle operations with high performance at lower memory and lower RAM

Target Audience:
- Electronics manufacturers
- Wireless service providers
- IoT infrastructure providers
- Wireless device manufacturers
- Wireless infrastructure providers
- Embedded H/W, S/W, and OS providers

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