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## **Software Development Kit for SmartMesh IP Accelerates Development of Wireless Sensor Industrial Internet of Things Applications**

MILPITAS, CA – March 19, 2015 – Linear Technology’s SmartMesh IP™ wireless sensor networking products now provide the ability to program industrial Internet of Things (IoT) applications directly on the embedded ARM Cortex-M3, running Micrium’s  $\mu$ C/OS-II real-time operating system. Users no longer need a separate processor for sensor interface and edge data analytics, reducing the cost, footprint and power consumption of the integrated wireless sensor node. Application development time is accelerated with a library of reference code and source code examples. Based on 6LoWPAN, SmartMesh IP mesh networking products include a pre-compiled networking stack that delivers >99.999% network reliability at ultralow power. This is particularly important for industrial IoT applications, where wireless sensor networks (WSNs) may be deployed in harsh and remote environments.

The On-Chip Software Development Kit (SDK) provided with the LTC5800-IPM (system-on-chip) and LTP5901/2-IPM (PCB modules) has been architected to ensure that developers can stably run both the pre-compiled SmartMesh IP networking stack and their applications simultaneously. To support the growing community of developers on this platform, the DustCloud Developer Community [www.dustcloud.org](http://www.dustcloud.org) provides an interactive forum for developers building applications on SmartMesh IP. It contains source code, software reference designs and detailed documentation for the SDK, as well as a developer discussion forum.

Applications written within the SDK may:

- Read and control peripherals - general purpose input-output (GPIO) pins, analog-to-digital converter (ADC) inputs, universal asynchronous receiver/transmitter (UART), serial peripheral interface (SPI) master, inter-integrated circuit (I2C) master, 1-wire master
- Process data – such as statistical analysis and local decision-making and control
- Send and receive wireless messages – through the SmartMesh IP wireless mesh network

Linear Technology's Dust Networks® product group develops the industry's lowest power and most reliable standards-based wireless sensor networking products. Dust Networks products are field proven, with over 45,000 customer networks deployed in 120 countries. With an average power consumption of less than 50µA in heavy usage applications, SmartMesh IP and SmartMesh WirelessHART products deliver over 10 year battery life, enabling wireless sensor nodes to be placed anywhere. Since all SmartMesh products include pre-compiled network stacks and dynamic mesh optimization software, developers can focus on rapid industrial IoT application development and rely on Dust Networks' man-years of mesh networking expertise embedded in every product.

The On-Chip SDK is now available as part of the SmartMesh IP product line. For more information, visit [www.linear.com/solutions/5457](http://www.linear.com/solutions/5457)


**Photo Caption:** SmartMesh IP On-Chip Software Development Kit (SDK)

### **Summary of Features: SmartMesh IP On-Chip SDK**

- Enables Customer Software Application Development on SmartMesh™ IP Motes' Internal ARM Cortex-M3
- No Network Stack Development Required – SmartMesh IP Network Software Provided as Pre-Compiled Library
- Proven SmartMesh IP Network Performance >99.999% Data Reliability and >10 Year Battery Life
- Eliminates Need for External Microprocessor
- Dustcloud Developer Community, [www.dustcloud.org](http://www.dustcloud.org), provides Interactive Support Forum

## About Linear Technology

Linear Technology Corporation, a member of the S&P 500, has been designing, manufacturing and marketing a broad line of high performance analog integrated circuits for major companies worldwide for over three decades. The Company's products provide an essential bridge between our analog world and the digital electronics in communications, networking, industrial, automotive, computer, medical, instrumentation, consumer, and military and aerospace systems. Linear Technology produces power management, data conversion, signal conditioning, RF and interface ICs,  $\mu$ Module<sup>®</sup> subsystems, and wireless sensor network products. For more information, visit [www.linear.com](http://www.linear.com)

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