Bridging the IoT Security Chasm

Wednesday, July 12 | 12:00pm

The “Internet of Things” (IoT) has been hailed as a major growth driver for the semiconductor industry. Billions of IoT devices, all designed to connect to the Internet, are streaming to market and permeating all walks of life.

But the IoT is a two-edge sword. While offering many benefits, it also enables undesirable intrusions into our homes, offices, cars, and critical infrastructures – many of which are now connected but are less secure.

Most IoT devices perform simple functions, communicate machine-to-machine, and are very small and cost-sensitive. IoT has no on-chip security and the Internet has little control over what connected devices can do. Hackers continue to take full advantage of such vulnerability with impunity.

To bridge this chasm in IoT device security, Multibeam employs its Direct Electron Write (DEW) technology to personalize ICs by writing unique data to each chip during production. The most crucial security data embedded deep into each IC by Multibeam’s ChipLock™ DEW system is the device-unique key (DUK).

The ChipLock™-embedded DUK is “unknowable” and impervious to attacks, while its implementation is simple, cost-efficient and compatible with high-volume manufacturing. The DUK establishes the hardware “Root-of-Trust” to prevent unauthorized access with secure authentication.

This presentation will answer the following questions:

- What makes IoT devices different and more vulnerable to hacking?
- What are the key attributes of an “ideal” hardware security solution for IoT?
- How does the ChipLock™ DEW system implement hardware security cost-efficiently?
- How does the ChipLock™ solution compare with other hardware security solutions?

Also discussed will be the increasing cyber-crime cost to businesses and the expanding market opportunity of embedded IoT device security for semiconductor manufacturers.