

## Intel Announces World's First Global 5G Modem

### Delivering Gigabit Speeds and Ultra-Low Latency, the Intel® 5G Modem Will Help Revolutionize Autonomous Driving, Wireless Broadband and More

Jan. 4, 2017 — 5G is a historic inflection point for the technology industry – bringing seamless connectivity, massive computing power and rapid access to cloud resources for every person, thing and industry. Intel is at the forefront of the move to 5G with an unparalleled expertise across wireless, networking, cloud computing and data analytics – the foundation of the 5G era.

Today, we are adding the Intel® 5G modem to our set of 5G building blocks. It's the world's first global 5G modem to enable initial 5G spectrum trials and deployments worldwide with a baseband chip that supports both sub-6 GHz and mmWave bands. Supporting ultra-wideband operation and enabling multi-gigabit throughput with ultra-low latency, the modem pairs both with Intel's sub-6 GHz 5G RFIC and 28 GHz 5G RFIC to deliver a global reach across the key bands of interest for 5G systems.

Intel's new 5G transceiver is the first 5G RFIC to support both sub-6 GHz and mmWave spectrum. It joins, and works with, the mature 28 GHz RFIC announced at Mobile World Congress in 2016 as part of the Intel® Mobile Trial Platform.

Designed to be used in segments where 5G will see initial traction, the Intel 5G Modem is expected to be used by leading operators and industry leaders in early 5G deployments including automotive, home broadband, mobile devices and others.

#### Key Features – 5G Modem

- World's first single chip to support 5G operation in both sub-6 GHz and mmWave bands
- Achieves key 5G requirements, including expected speeds exceeding 5 Gbps, hundreds of MHz of aggregated bandwidth and ultra-low latency
- Pairs with the world's first 5G sub-6 GHz RFIC and the mature 28 GHz 5G mmWave RFIC
- Compliant to multiple industry forum 5G specifications
- Supports key 5G NR technology features, including low latency frame structure, advanced channel coding, massive MIMO and beamforming
- Pairs with LTE modems such as Intel's XMM™ 7360 LTE modem to provide 4G fallback, and 4G/5G interworking

## Key Features – 5G RFIC

- Supports initial 5G spectrum worldwide with one SKU when combined with Intel's 5G mmWave RFIC
- Supports the 3.3-4.2 GHz portion of the sub-6 GHz bands enabling deployments and trials in China and Europe with flexible sub-channelization
- Supports 28 GHz, enabling deployments and trials in the United States, Korea and Japan
- Supports 2x2 and 4x4 MIMO configurations, including dual-polarization sub-channelization
- Compact design with small die size

## Availability

The Intel 5G RFIC is expected to sample in the first half of 2017. The Intel 5G Modem is expected to sample in the second half of 2017 and move into production soon afterwards.

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