VIRTUS CHIPSET FACT SHEET

Singapore, 24 May 2012

JOINTLY-DEVELOPED BY NTU & I²R

Technical Specifications

- Complete solution for IEEE 802.11ad standard, including integrated antenna, RF, MAC/PHY
- 2-chip solution (RF: 0.18um SiGe process; MAC/PHY: 65nm process)
- Data rate: ~ 2.5Gbps (about 1,000 times faster than Bluetooth v2.0)
- System power consumption: < 500mW
- Output power level: > 4dBm
- Applications: Type IV for mobile/portable applications

Key Features

- RF Transceiver chip (developed by NTU)
  - Wideband tuning range and low-phase noise voltage-controlled oscillator (VCO) with strongly-coupled LC tanks
  - Compact, passive and integrated low pass filter with low insertion loss, excellent linearity and superior stop-band performance
  - New standing-wave switch with near-zero insertion loss
  - Fully integrated Electro-Static Discharge (ESD) protection circuits for all types of Input/Output (I/O) pads for millimetre-wave applications

- MAC/PHY Baseband chip (developed by I²R)
  - Unique parallel processing architecture, to keep chip processing speed low
  - Novel low-power multi-code rate decoder architecture
  - Non-linear analog signal processing
Modes of Measurement

1 Gigabyte (GB) = 8 Gigabits (Gb)
1 Megabyte (MB) = 8 Megabits (Mb)

Bit: Smallest unit of information stored on a computer

Byte: The number of bits needed to represent letters of the alphabet and other characters. General unit used to measure disk storage capacity

Modes of Application

**Instant Wireless Sync**
- TP-based P2P applications
- Using I/O PAL

**Wireless Display**
- HD streams over HDMI or DP using A/V PAL
- CE, PC and TV inputs

**Cordless Computing**
- Combination of wireless display using A/V PAL, sync and I/O using I/O PAL

**Internet Access**
- Using native Wi-Fi, 802.11ad support