

**MEDIATEK**

# Toward 5G Era

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# Asia's Biggest Fabless IC Design Company

**Headquarters:** Science Park, Hsinchu, Taiwan

**Publicly Listed:** Taiwan Stock Exchange under the code "2454"

**Employees:** More than 10,000 employees worldwide (25 sites)

**Product Lines:** Wireless communications, optical storage, digital home, wireless connectivity & broadband networking

**2013 Revenue\*:** NT\$ 136 billion (US\$4.58 billion)

# Global Operations



# Strong Leadership Across Digital Consumer Markets



3

Smart Phone

1

Digital TV

1

DVD/BD Player

1

Optical Disc  
Driver

3

Broadband DSL

Source : 2012 Strategy Analytics, 2011 Displaysearch, 2012 iSuppli & 2012 MediaTek company data.

# Millimeter Wave Communication

## Key Considerations

- Propagation channel
  - Path loss
  - Directivity
  - Outage
  - Human obstruction
  - Spectrum availability
- Suitable applications
  - Heavily influenced by channel characteristics
  - Mobile radio access
  - Backhaul
- System design
  - Application-dependent
  - Robustness
  - Efficiency
    - Spectral efficiency
    - Energy efficiency
- Device architecture
  - Feasibility of low-cost user devices
  - Tradeoff between cost and feature



# Internet of Things

## Key Considerations

- Key drivers in IoT market
  - Cost savings not yet disruptive
  - Reliability
  - Energy (battery life)
  - Ease of Use
  - No economy of scale: stovepipes, Fragmentation, non-interoperability.
- IoT Security is a system wide problem
- IoT Challenges of Interests to Mediatek
  - Layered architecture with device plug and play
  - Long Range Communication
  - Local Communication
  - Security



*everyday genius*