# Investor and Analyst Call

12 June 2012



Peter Schiefer Division President Power Management & Multimarket (PMM)





- Overview
- Growth Drivers and Market Opportunities
  - Mobile Devices & Cellular Infrastructure
  - Power Supplies (SMPS) & DC/DC Conversion
- Summary

#### **Disclaimer:**

This presentation contains forward-looking statements about the business, financial condition and earnings performance of the Infineon Group.

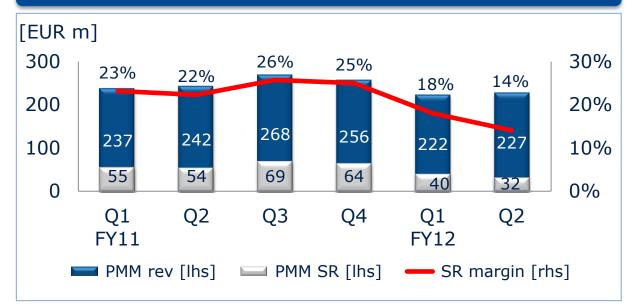
These statements are based on assumptions and projections resting upon currently available information and present estimates. They are subject to a multitude of uncertainties and risks. Actual business development may therefore differ materially from what has been expected.

Beyond disclosure requirements stipulated by law, Infineon does not undertake any obligation to update forward-looking statements.

# Power Management & Multimarket (PMM) at a Glance



## **Revenue and Segment Result development**



### **Revenue split by region\***



## **Top customers**

























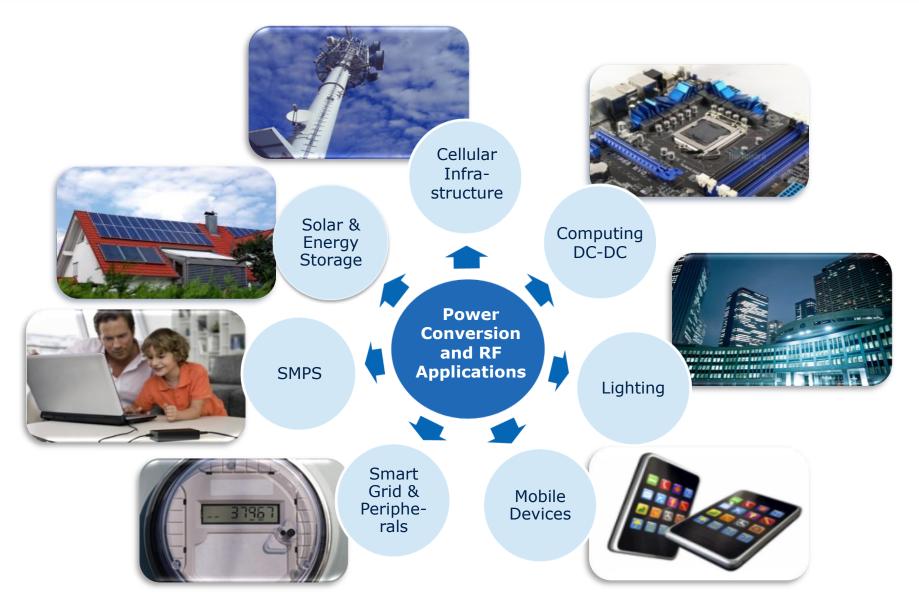




<sup>\*</sup> Based on revenues by fulfillment region from 1st half FY2012.

# There are Seven Globally Defined Focus Application Segments for PMM

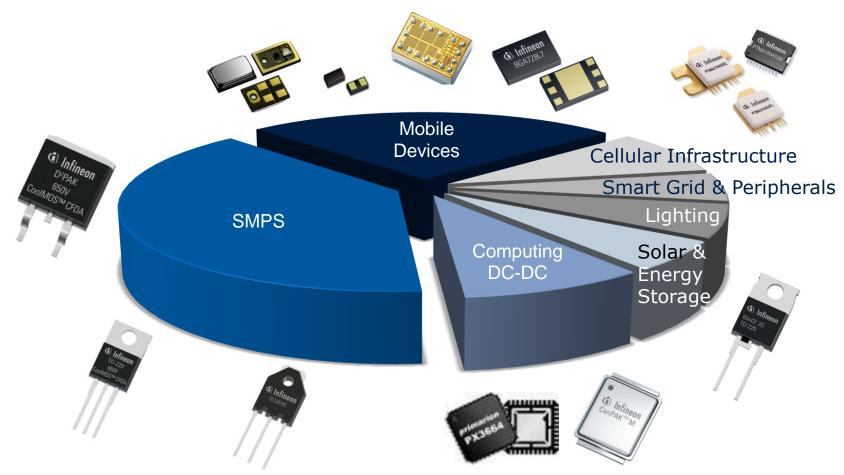




# More than 80% of Revenues Driven By Seven Major Applications



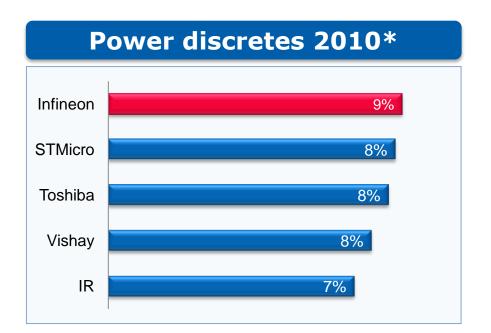
# Revenue split by major application segments\*

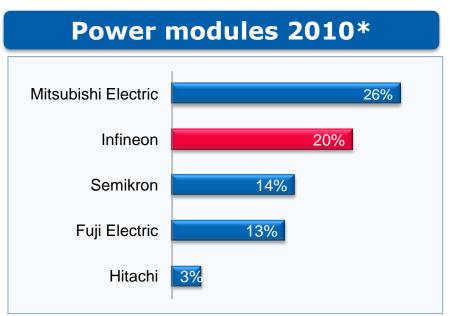


<sup>\*</sup> Expected revenue split for FY 2012.

# Infineon's Market Share for Power Discretes and Modules







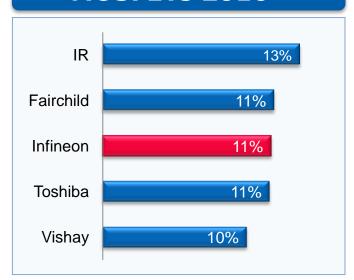
- Innovative and optimized chip process technologies.
- Tailored assembly and module technology.
- Leading-edge manufacturing, e.g. 300mm power.

<sup>\*</sup> Source: IMS Research "Power Semiconductor Discretes & Modules", August 2011.

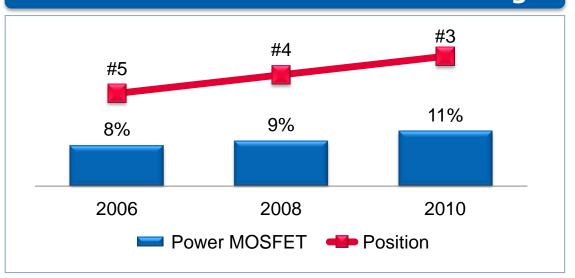
# Market Share Gain Track Record Discrete Power MOSFETS



#### **MOSFETs 2010\***



# Market share track record and ranking\*\*



- Market share gains over the last several years expected to continue via increased bundling of power discretes with power ICs.
- Strong product portfolio and technology leadership is creating success in high margin markets, enabling reduction in gap to #1.

<sup>\*</sup> Source: IMS Research "World Market for Power Semiconductor Discretes & Modules, Edition 2011", August 2011.

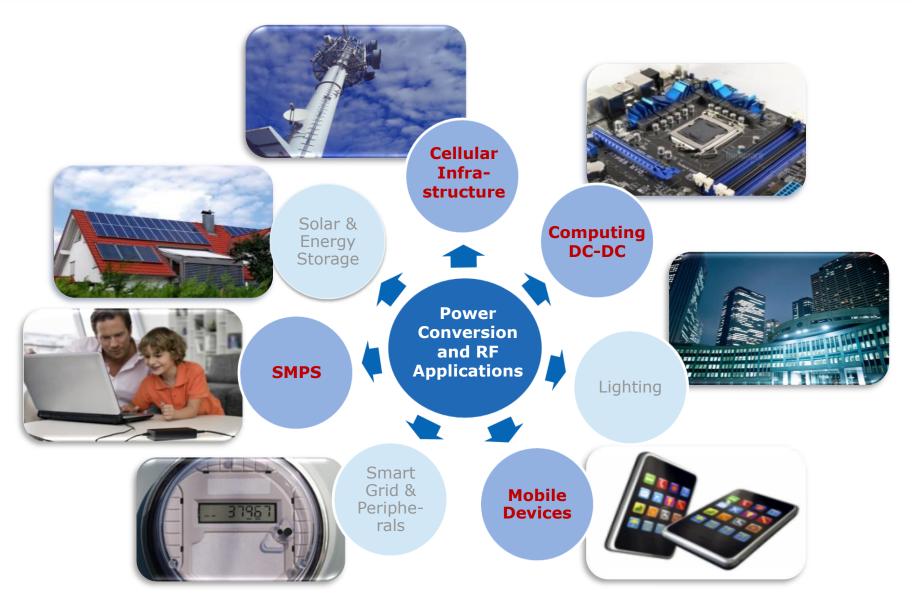
<sup>\*\*</sup> Source: IMS Research "World Market for Power Semiconductor Discretes & Modules, Edition 2008/2010.



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# Closer Look at Four Major Revenue Contributors Within PMM





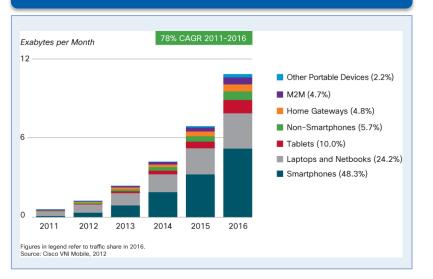


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# Smartphones and Netbooks Will Drive the Increase in Mobile Traffic



## **Global Mobile Data Traffic**



# **Mobile Devices**



## **Key Drivers**

- Number of mobile devices sold increases.
- Wider offer of consumer content by newer generation of devices.
- Higher traffic generation by newer devices (smartphone generates data traffic equal to 24 basic feature phones).
- Mobile network connection speeds increase.

# Mobile Devices (Mainly Smartphones)



#### **Products**



## **Addressed markets**

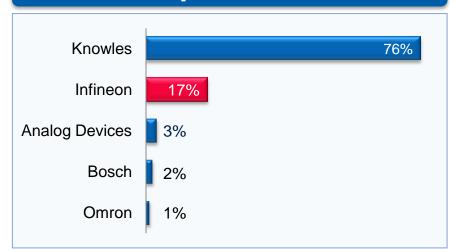
- Navigation (GPS, Glonass, Galileo, Baidu) ⇒ LNA chip sets.
- ASM (antenna switch module)⇒ CMOS switch.
- ESD protection ⇒ TVS diode.
- Microphones ⇒ ASIC, MEMS.

- First to deliver modules for simultaneous reception of both <u>GPS</u> and GLONASS signals.
- ASM: outstanding CMOS RF technology.
- TVS diodes: success with superior technology and competitive cost.

# Silicon MEMS Microphone



## Market position 2011\*



#### **Market drivers**

- Trend to multi-microphone for noise-cancellation and stereo recording in smartphones.
- Integration of additional functionality (e.g. digital interface).

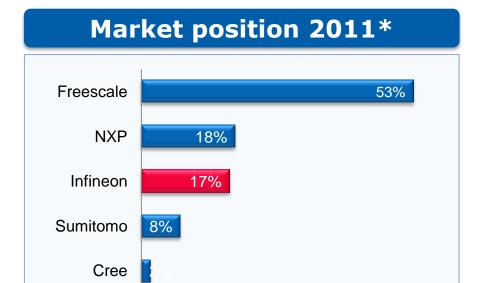
- Flexible business model combining Infineon's technology know-how in MEMS and ASIC design with customer expertise in acoustics and microphone packaging.
- Leading edge roadmap to best-in-class SNR\*\*, narrow sensitivity and high dynamic range for improved matching of multi-microphone and size reduction.

<sup>\*</sup> Source: IHS iSuppli, 2011. Market shares by silicon-based units.

<sup>\*\*</sup> SNR: Signal-to-Noise Ratio.

# RF Power Amplifier for Cellular Infrastructure







- Strong customer base (e.g. Ericsson, Huawei)
- Roll-out of UMTS standard in emerging countries.
- Upgrade to LTE standard in developed countries.

<sup>\*</sup> Source: ABI Research RF Power Amplifiers October 2011.



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# Growth Drivers for AC/DC and DC/DC Power Conversion



#### Social networks

 Uploading of messages, photos, documents, audio files and videos is generating exabytes of data each year.

## **Cloud computing**

 Outsourcing of enterprise computing power and storage.











# Significant importance of energy consumption

- Globally, one new data center per week.
- Energy consumption of up to 100 MW per data center (equal to ~80,000 households).
- Highest efficiency of AC/DC and DC/DC power conversion is of utmost importance.

# Modern Data Centers are Very Focussed on Efficiency and are Setting Benchmarks



Example: Facebook's first company-owned data center in Oregon uses 38% less energy compared to their other facilities

### **CoolMOS™**

## **Power supply**







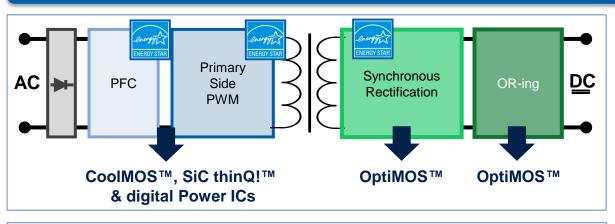
As per US Environmental Protection Agency (EPA), the carbon footprint of data centers will exceed the airline industry in 2012.



# Highest Efficiency in Power Architectures Through System Understanding



# AC/DC and DC/DC



- Highest efficiency key for today's computing applications.
- Computing applications typically range from 50 W to ~3 kW.









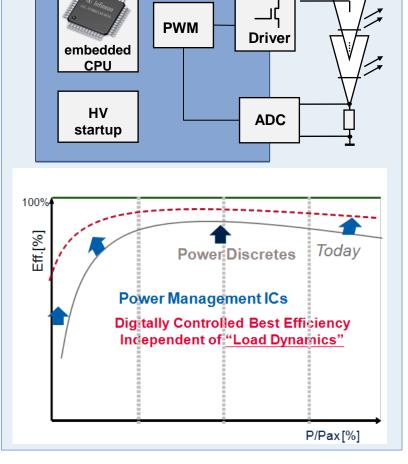




# Advantages of Digital Power Management



# **Digital power**



# **Key Features**



- The "digital power" platform is a firmware based solution with fully integrated digital control loops.
- Providing application flexibility and allows easy changes to meet rapidly changing market requirements.
- **Fast development** (time to market) as most parameters can be modified 'on the fly' via PC software.
- Comprehensive and accurate control information accessible via controller's digital bus interface for advanced system power management.
- Increased efficiency especially during light-load condition by changing control modes.



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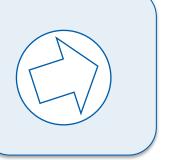
# Summary







- PMM is one of Infineon's fastest growing segments.
- Growth drivers are:
  - the need for ever higher energy efficiency;
  - digital power: digitally controlled AC/DC and DC/DC power conversion;
  - bundling of power discretes and power ICs;
  - social media, cloud computing;
  - mobile society (connectivity).
- Infineon is best positioned at crucial products.



- Book-Bill recovery in recent months bodes well for growth in current and future quarters.
- Current foreign exchange trends are also helpful.



# ENERGY EFFICIENCY MOBILITY SECURITY

Innovative semiconductor solutions for energy efficiency, mobility and security.







# Financial Calendar



Date	Location	Event
31 Jul 2012*		Q3 FY12 Results
29-30 Aug 2012	Frankfurt	Commerzbank Sector Conference Week
26 Sep 2012	Munich	Baader Investment Conference
14 Nov 2012*		Q4 FY12 Results
15-16 Nov 2012	Barcelona	Morgan Stanley TMT Conference
27-28 Nov 2012	Scottsdale, AZ	Credit Suisse Technology Conference

<sup>\*</sup> preliminary date

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