

Americas Summit

# Smartphones for the Masses

## Qualcomm Reference Design Program

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Senior Director, Product Management

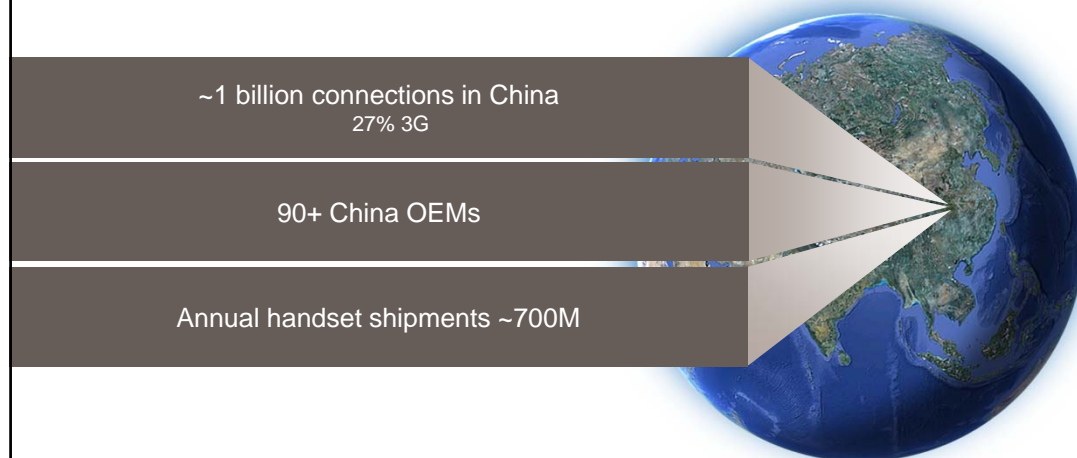




# **Bringing Leading Technology to Emerging Accounts**

## Opportunity for Growth

China Emerging Account Conversion to 3G



Source: 3G Connections: Wireless Intelligence, Nov. '12, including 1x; Handset shipments: iSuppli, Q4'12, all technologies  
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## Qualcomm Reference Design (QRD) Program

A Complete Offering for High Volume Smartphone Manufacturers



Superior  
Technology

Competitive  
Price

Complete  
Reference Design

Ecosystem,  
Channel  
Support

Brand

**40+**  
OEMs

**100+**  
Launches

**100+**  
in Design

**<60** Days  
Launch Time-to-Market

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## QRD Addresses Critical Needs

A Pre-engineered Solution that Combines Strong Support, Flexibility and Scale



Low cost smartphones



Reduced time to launch



Design flexibility and feature innovation

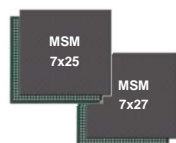


Broad portfolio enablement

## Our Industry-Leading QRD Portfolio

Quad Core and “Krait” Designs

Q2'11/Q3'11



First High Volume

Q4'11



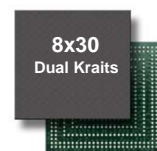
First 1GHz  
Single Core

Q2'12



Dual Core

Q1'13



Dual and Quad Core

## Qualcomm Engaged Across a Growing Account Base

Unique Ability to Support Diverse Requirements

oppo

lenovo

Coolpad 酷派

HUAWEI

SIM  
SIM Technology

步步高  
(BBK)

ZTE中兴

ALCATEL

MI

Haier

金立  
金品质 立天下

天语  
-TOUCH

HQ  
HUSSIN







Greenorange  
智慧筑梦 青橙

BYD

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## QRD Hardware Ecosystem Enables Rich Variety of Choices

 MEMORY	 CAMERA	 DISPLAY	 CAPACITIVE TOUCH PANEL	 I <sup>2</sup> C SENSOR	 RF
<b>eMMC + LPDDR</b> <ul style="list-style-type: none"> <li>▪ Samsung</li> <li>▪ Hynix</li> <li>▪ Sandisk</li> <li>▪ Micron</li> </ul> <b>LPDDR</b> <ul style="list-style-type: none"> <li>▪ Samsung</li> <li>▪ Elpida</li> <li>▪ Hynix</li> </ul>	<b>Sensor IC</b> <ul style="list-style-type: none"> <li>▪ OmniVision</li> <li>▪ Aptina</li> <li>▪ Samsung</li> <li>▪ Hynix</li> <li>▪ GalaxyCore</li> <li>▪ Superpix</li> </ul> <b>Module</b> <ul style="list-style-type: none"> <li>▪ Sunny</li> <li>▪ Truly</li> <li>▪ Qtech</li> <li>▪ Lite Array</li> </ul>	<b>Driver IC</b> <ul style="list-style-type: none"> <li>▪ Novatek</li> <li>▪ Himax</li> <li>▪ Orise</li> <li>▪ Ilitek</li> <li>▪ Renesas</li> </ul> <b>LCD Module</b> <ul style="list-style-type: none"> <li>▪ Truly</li> <li>▪ Tianma</li> <li>▪ BOE</li> <li>▪ TCL</li> <li>▪ BYD</li> </ul>	<b>CTP IC</b> <ul style="list-style-type: none"> <li>▪ Atmel</li> <li>▪ FocalTech</li> <li>▪ Synaptics</li> <li>▪ Cypress</li> </ul> <b>Module</b> <ul style="list-style-type: none"> <li>▪ O-Film</li> <li>▪ Truly</li> <li>▪ Mutto</li> <li>▪ Top Touch</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bosch</li> <li>▪ Freescale</li> <li>▪ ST</li> <li>▪ Memsic</li> <li>▪ AKM</li> <li>▪ InvenSense</li> <li>▪ Taos (AMS)</li> <li>▪ Avago</li> <li>▪ Lite-On</li> </ul>	<ul style="list-style-type: none"> <li>▪ Skyworks</li> <li>▪ RFMD</li> <li>▪ Avago</li> <li>▪ Murata</li> <li>▪ Panasonic</li> <li>▪ Epcos</li> <li>▪ Triquint</li> <li>▪ Kyocera</li> </ul>

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## Engaged Across Leading Software Companies



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## Only Single Platform to Support Top Three China Carriers

MSM8x30



- TD-SCDMA/LTE
- CDMA/LTE
- HSPA+/LTE



~150M Connections



~225M Connections



~675M Connections

*\*New Opportunity\**

Source: Wireless Intelligence, Nov. '12

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## QRD Program in Brazil



- **Qualcomm collaboration with Ministry of Communications of Brazil**
  - Accelerate smartphone and tablet adoption and foster mobile broadband services
  - Support local development of wireless technologies, products and applications
- **Qualcomm establishing Research and Development Center in Brazil**
  - Focused on mass-market tablets
  - Working with Brazilian manufacturers
  - Developer lab to support smartphone and tablet apps

## QRD – Enabling Smartphones for the Masses

### Single / Dual / Quad Core

- Introducing MSM8x25Q with Snapdragon processor
- Quad core chipset and QRD for high volume 3G smartphones

### Product Leadership

- Expanding QRD support to Snapdragon S4
- Broad portfolio includes support for LTE

### Key Technology Support

- Android ICS/Jelly Bean with CTS testing
- HD video/audio, peer-peer, local language input & UI
- Multimode connectivity leadership for high volume smartphones

### Commercialization Support

- Acceptance Test Lab & field testing
- SI support for localization
- ISV ecosystem for pre-integrated & optimized apps

# Thank You

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