



Vietnam: Maximizing 4G LTE potentials & accelerating the path to 5G

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Rapidly moving into a gigabit world

15 Operators in 11 Countries with Gigabit Class LTE planned or trialed

47 Operators in 37 Countries trialing or deploying Gigabit modem features

183 LTE-A commercial deployments, ~86% CAT6 or above ^{2Q}

581 Commercially launched LTE networks in 186 countries

Source: GSA Evolution to LTE report, Jan '17), Qualcomm Technologies internal analysis

Immersive
VR

Connected
Cloud
Computing

4G LTE drives mobile experience

Rich
Entertainment

Instant
Apps

Mobile innovations will drive the IoT



Smart homes



Healthcare



Mobile computing



Wearables



Automotive



Smart cities



Networking

Rapid
replacement cycles

Unmatched
scale

Integrated and
optimized technologies

Qualcomm supports accelerating 4G LTE in Vietnam

Catalyzing migration to 4G

Fostering “Made-in-Vietnam”
device manufacturing

Growing IoT ecosystem



3G/4G growth accelerating

>51M

3G/4G mobile connections
in Vietnam today

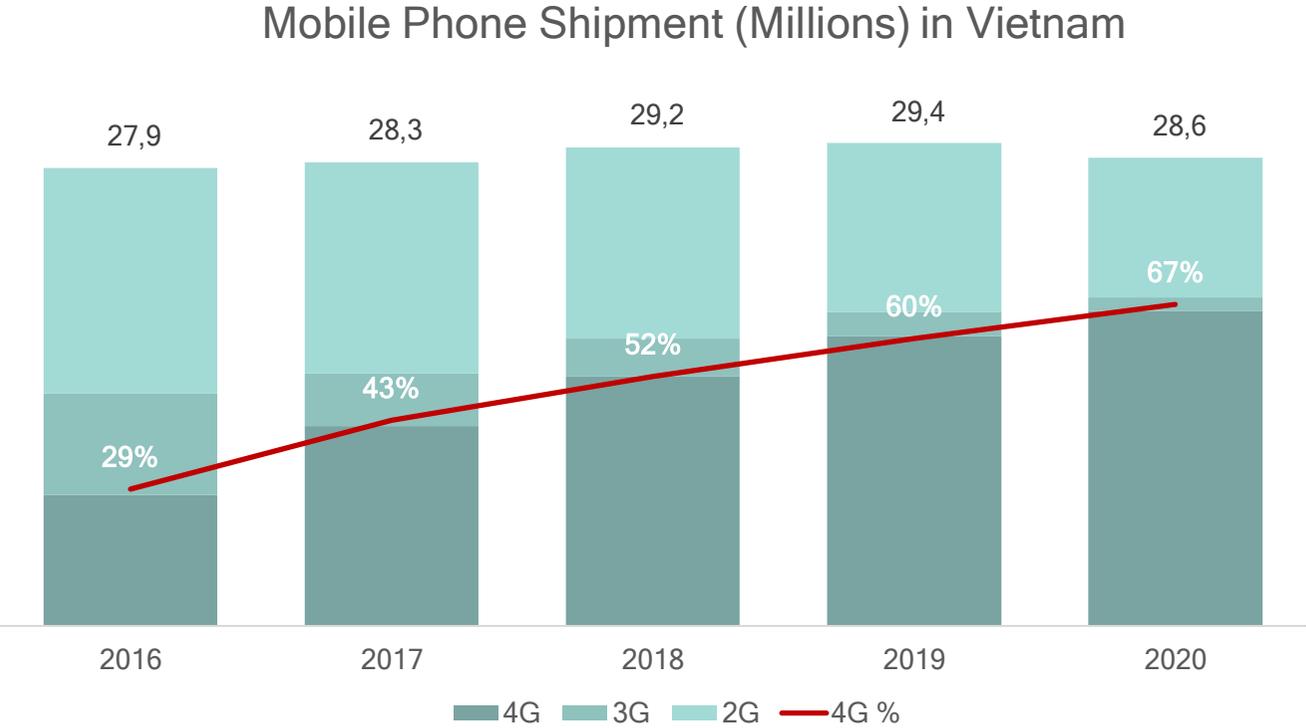


>107M

3G/4G mobile connections
in Vietnam by 2020

2G/3G to 4G migration

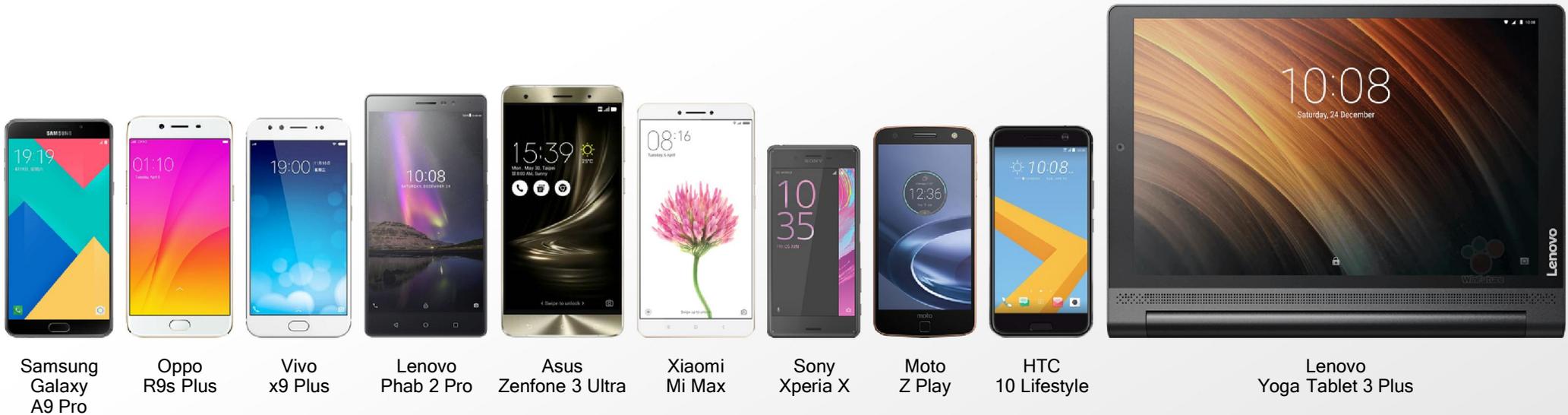
67% 4G LTE mobile phone shipment by 2020.



Source: IDC, 2017

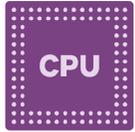
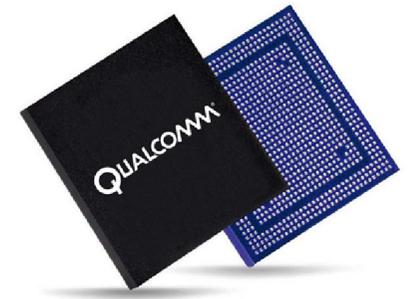
Qualcomm Snapdragon Mobile Platform

Supporting 4G LTE user experiences across all tiers



1000+
designs

Qualcomm 205 Mobile Platform brings 4G LTE connectivity to feature phones



CPU



HD Video
Playback



Secure
Payment



4G LTE



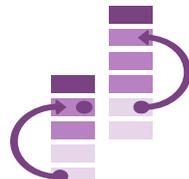
VoWiFi



GPU



Camera



Power Mgmt.
/Audio Codec



VoLTE

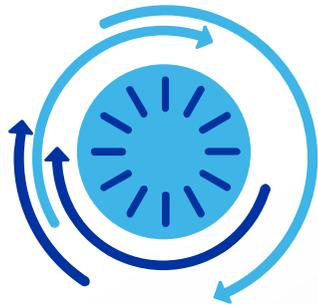


GPS



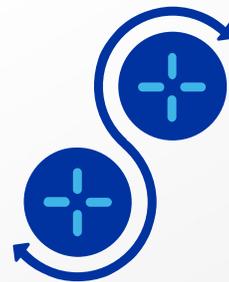
Accelerating “Make in Vietnam” Vision

Invent



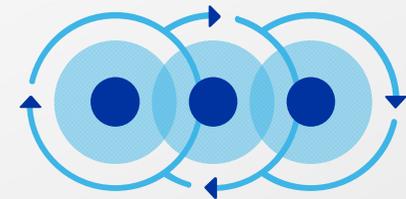
-
- Passionately engineering new technologies

Share



-
- Proliferating with licensing and chipsets

Collaborate



-
- Supporting implementation across the ecosystem
 - Customer engineering for local OEMs and industry

Partnering with local tech giants for mobile innovation



Fast charging
Wireless charging
Dual SIM Dual VoLTE
GHz+ processing
4K video record, playback
GNSS Sensor fusion
Machine intelligence 4K display
OFDMA Carrier Aggregation
4x4 MIMO 256 QAM
LTE in unlicensed spectrum
Gigabit LTE Advanced MIMO
LAA LTE Broadcast
Wi-Fi 11ac MU-MIMO
LTE voice Computer vision
Advanced graphics
Security technologies
Envelope tracking
Multimode, multiband
transceivers



Bkav



Smart Farming by
Sensors and Drones



Accelerating
Wearable



Empowering
Smart Home



Evolving LTE IoT

Smart City and
Industry 4.0



Distributed
renewables
integration

Smart building
management

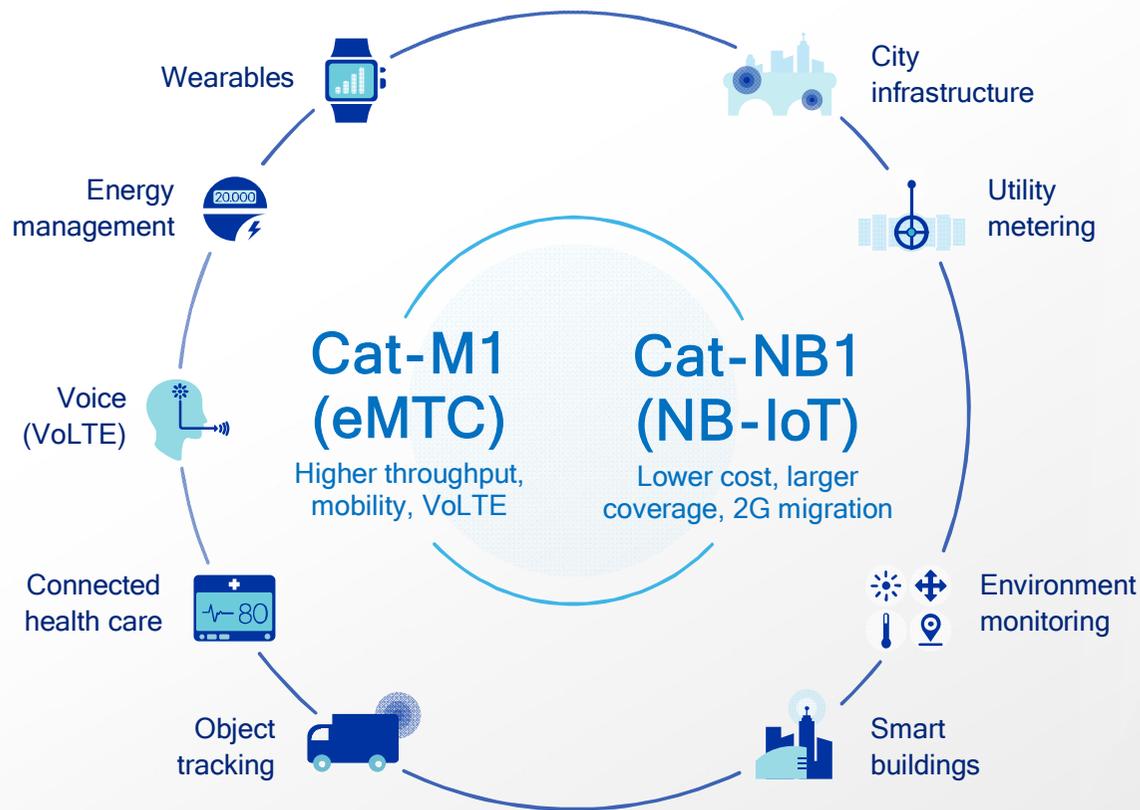
Demand
response

Wireless vehicle
charging

Smart parking
meters and garages

Scaling LTE to connect the IoT

Global multi-mode provides optimal approach



LTE advancements continue to lead the way to 5G

Pioneering technologies to establish 5G foundation



Gigabit LTE

Enhanced mobile
broadband



C-V2X

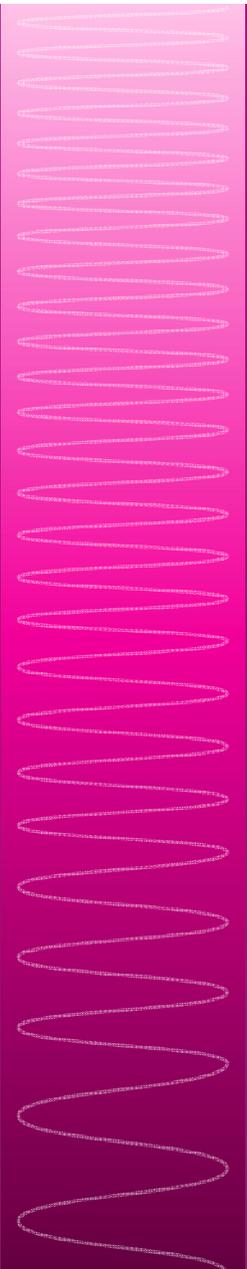
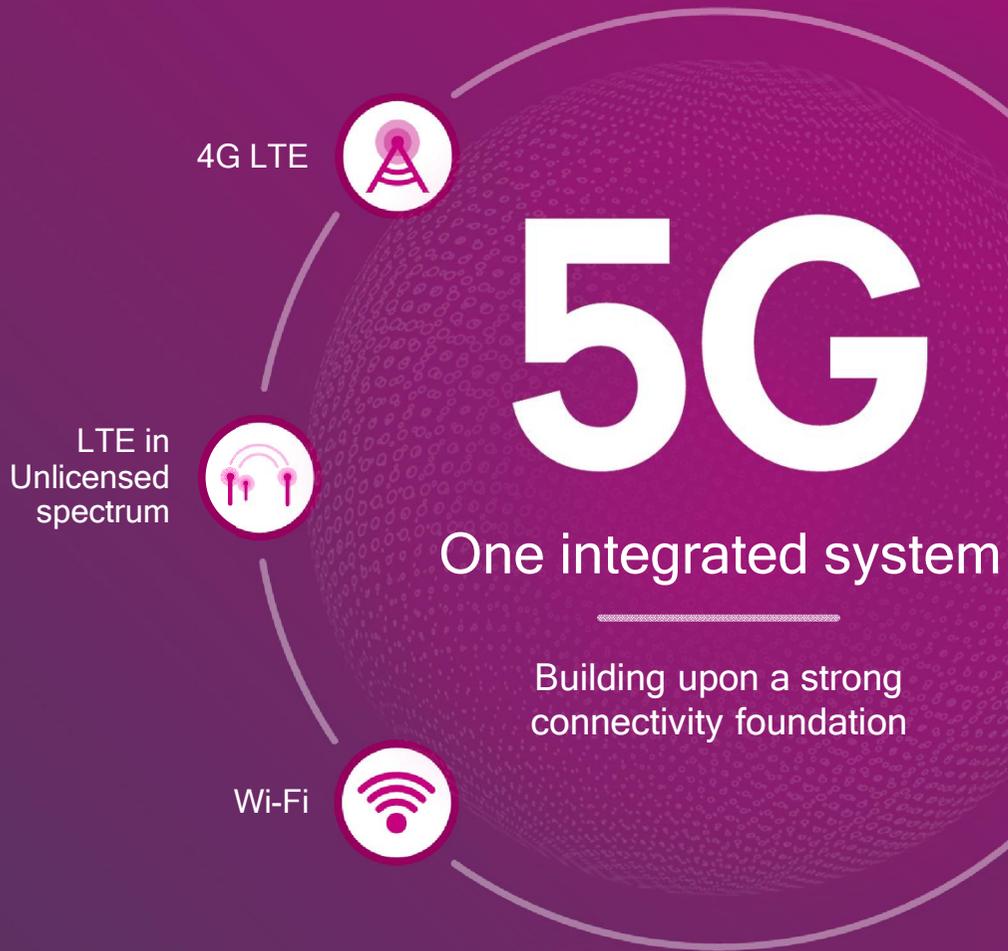
Mission-critical
services



C-IoT

Massive Internet
of Things





High bands
above 24GHz
(mmWave)

Mid bands
1GHz to 6GHz

Low bands
below 1GHz

Committed to accelerating mobile innovation in Vietnam

- 4G LTE as the national mobile internet broadband
- Transformation to Industry 4.0
- Partnering with local players to build up “Made in Vietnam” ecosystem
- Participation in smart cities, smart farming, smart business and health care IoT



Thank you

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