



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
tried

47

Operators in 37
Countries trialing or
deploying Gigabit
modem features

183

LTE-A commercial
deployments,
~86% CAT6 or
above

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

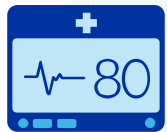
Rich
Entertainment

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

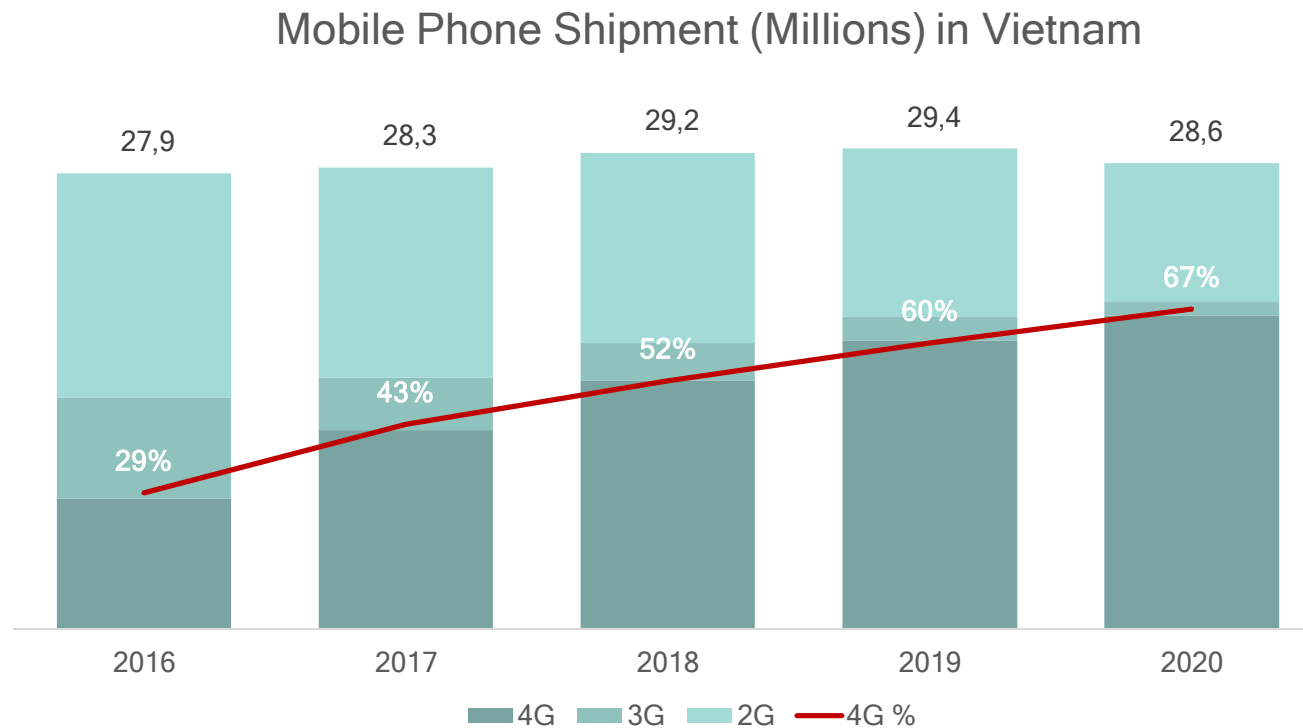


>107M

3G/4G mobile connections
in Vietnam by 2020

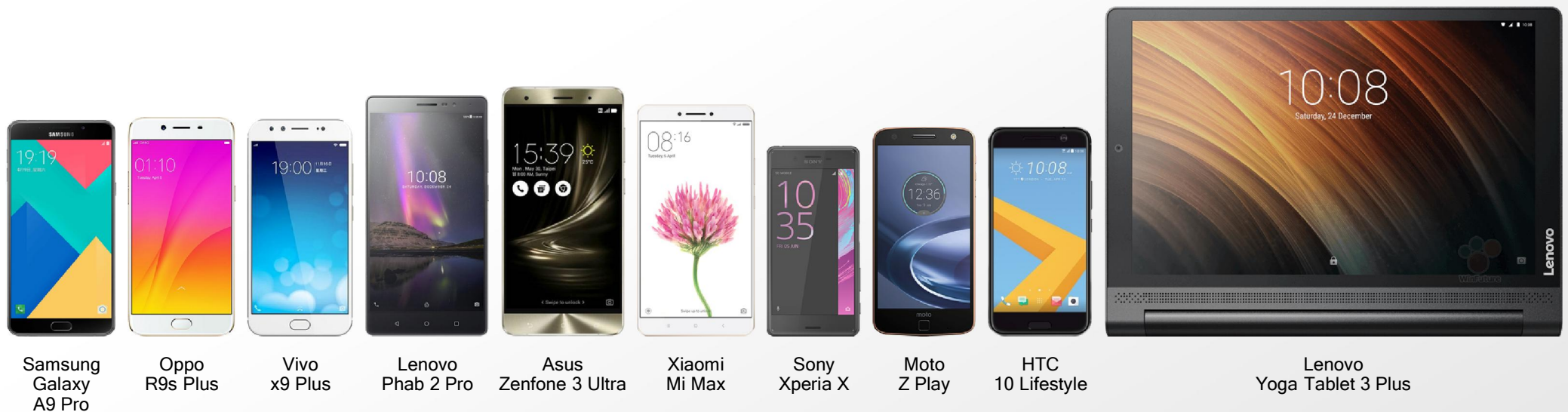
2G/3G to 4G migration

67% 4G LTE mobile phone shipment by 2020.



Qualcomm Snapdragon Mobile Platform

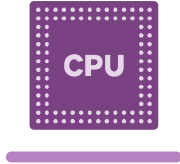
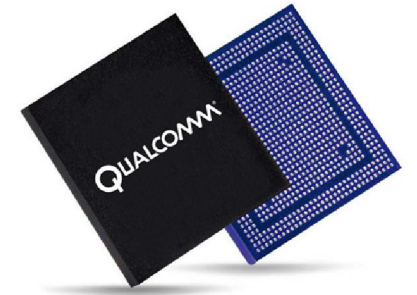
Supporting 4G LTE user experiences across all tiers



1000+
designs

Qualcomm 205 Mobile Platform

brings 4G LTE connectivity to feature phones



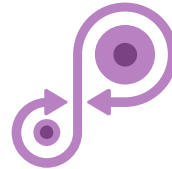
CPU



HD Video
Playback



Secure
Payment



4G LTE



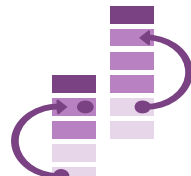
VoWiFi



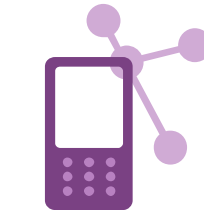
GPU



Camera



Power Mgmt.
/Audio Codec



VoLTE

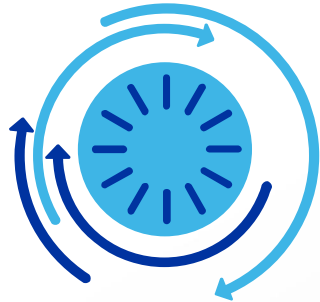


GPS



Accelerating “Make in Vietnam” Vision

Invent



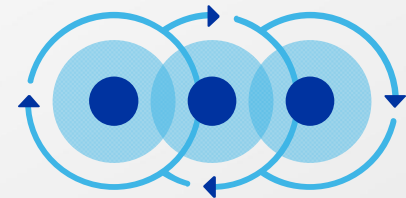
-
- Passionately engineering new technologies

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



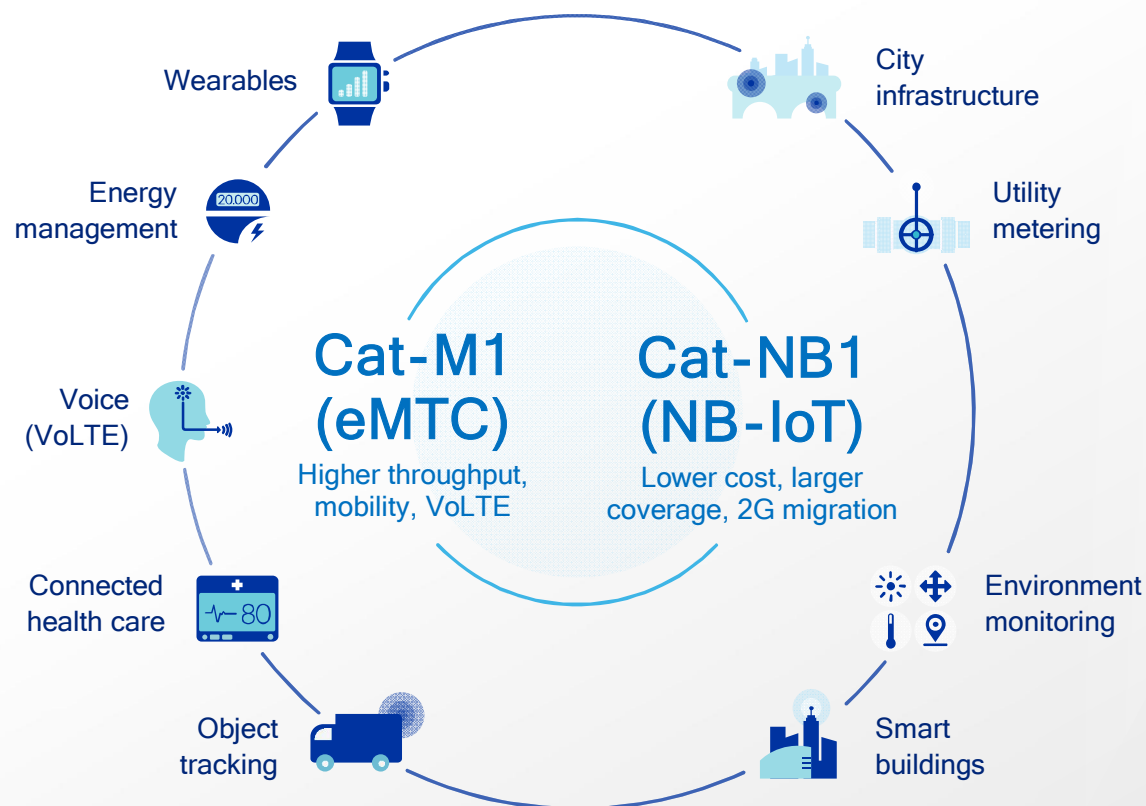
Evolving LTE IoT

Smart City and
Industry 4.0



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

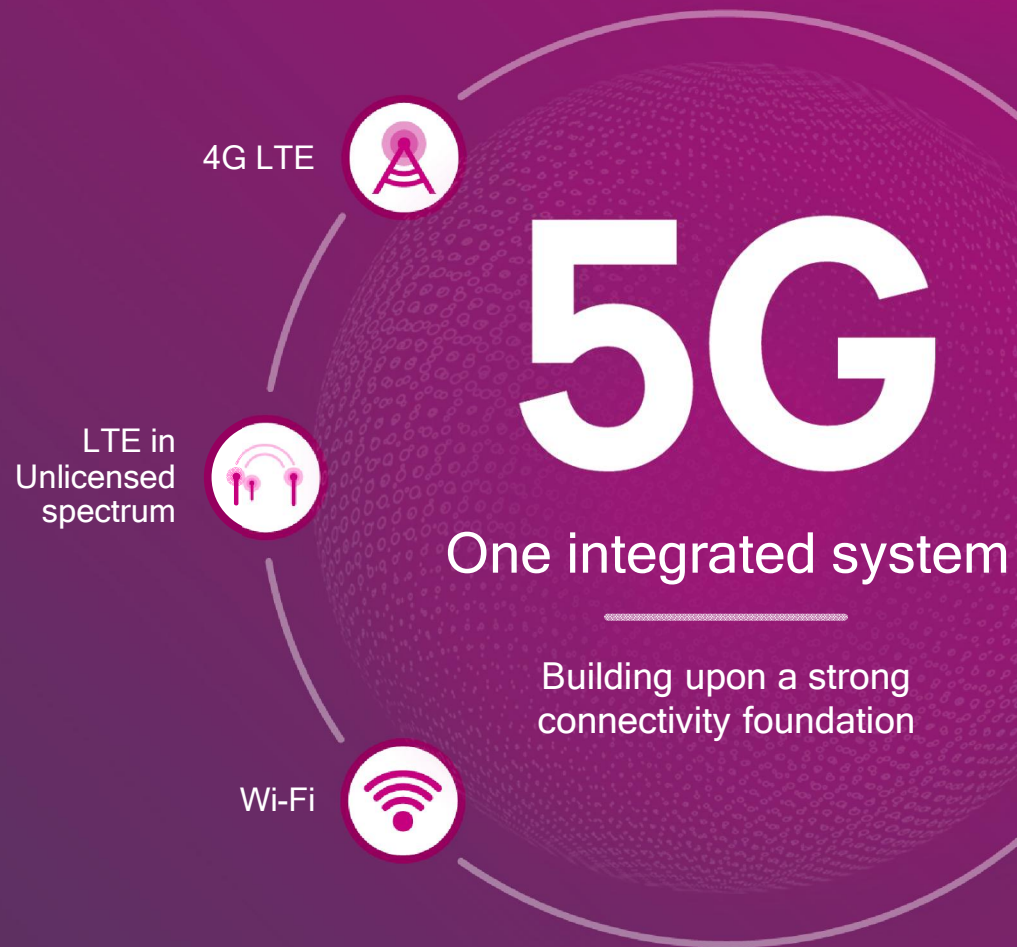
Mission-critical
services



C-IoT

Massive Internet
of Things





High bands
above 24GHz
(mmWave)

A vertical bar on the right side of the slide represents the radio frequency spectrum. It contains a white sine wave that oscillates with varying frequency. The frequency is highest at the top (corresponding to high bands) and lowest at the bottom (corresponding to low bands). Three white arrowheads point to the right, indicating specific frequency ranges: the top arrowhead points to the high-frequency section, the middle arrowhead points to the mid-frequency section, and the bottom arrowhead points to the low-frequency section.

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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