

Deploying mobile technology at global scale

>1 Billion

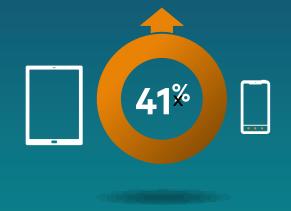
3G/4G based devices shipped in 2013 enabled by Qualcomm® technology\*



## Users turn to mobile devices for everything



Time spent per day using smartphones (compared with 113 minutes watching TV)



Simultaneous use of both tablet and Smartphone



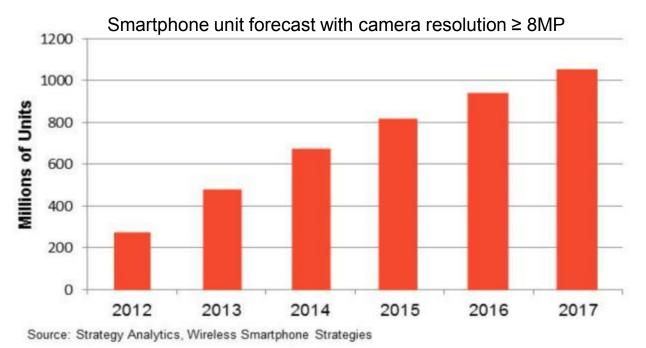
Personalized data streams transforming the user interaction paradigm

# UHD 4K on Mobile Higher Resolutions driving the need for better compression efficiencies



Continuous desire to capture image & video at higher fidelity

**Camera**: 2MP>>5MP>>8MP>>13MP>>**16MP Camcorder**: 480p>>720p>>1080p>>**2160p** 

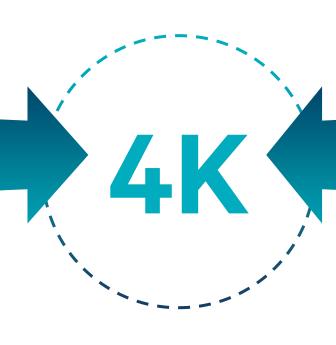


Hundreds of millions of mobile devices capable of capturing 4K video

# Ecosystem and technology drivers are aligning for the rise of 4K

# **Ecosystem Drivers**

- Content availability
- Content distribution
- 4K component cost
- 4K device availability



#### Technology Advancements

- Network speed
- Video compression
- Processing horsepower
- Display technologies

## 4K content is becoming rapidly available

The transition to 4K will be faster than 1080p due to user generated content and over-the-top (OTT)

**NEWS** 

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#### YouTube uploads

More video is uploaded to YouTube in one month than the 3 major US networks created in 60 years



A growing number of movies and TV shows have been digitally captured and mastered in 4K (or higher) resolution



#### 4K broadcast

Standards for distribution are being ratified and intended for services beginning in 2014 and beyond



Premium content

# Improving user experiences across all product tiers

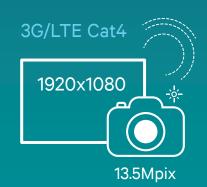


**210** (8909)





**410** (8916)





610/615 (8936/39)





808/810 (8992/8994)



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<sup>\*</sup>As compared to the previous Qualcomm RF solution

verage of top Graphics Benchmarks performance, normalized to Adreno 306

## Snapdragon Video Codec Support and Performance

| Snapdragon Video   | SD 210            | SD 410            | SD 610 / 615 | SD 805  | SD 810   |
|--------------------|-------------------|-------------------|--------------|---------|----------|
| Decoder            | 1080p30           | 1080p30           | 1080p60      | 2160p30 | 2160p30  |
| H264 BP/MP/HP      | <b>√</b> (5)      | ✓                 | ✓            | ✓       | ✓        |
| MPEG4 SP/ASP (6)   | SW                | ✓                 | ✓            | ✓       | ✓        |
| DivX 3.11          | x                 | ✓                 | ✓            | ✓       | ✓        |
| H.263 P0           | SW                | ✓                 | ✓            | ✓       | ✓        |
| MPEG-2 MP          | x                 | ✓                 | ✓            | ✓       | <b>✓</b> |
| VP8                | ✓                 | ✓                 | ✓            | ✓       | ✓        |
| VP9 <sup>(1)</sup> | x                 | х                 | х            | х       | X        |
| HEVC Main          | ✓                 | SW <sup>(9)</sup> | ✓            | ✓       | ✓        |
| HEVC Main 10       | x                 | х                 | х            | х       | х        |
| VC1 SP/MP/AP       | x                 | ✓                 | ✓            | ✓       | ✓        |
| Encoder            | 720p30            | 1080p30           | 1080p30      | 2160p30 | 2160p30  |
| H264 BP/MP/HP      | <b>√</b> (2)      | ✓                 | ✓            | ✓       | ✓        |
| MPEG4 SP/ASP       | SW <sup>(3)</sup> | ✓                 | ✓            | ✓       | ✓        |
| H.263 P0           | SW <sup>(3)</sup> | ✓                 | ✓            | ✓       | ✓        |
| VP8 <sup>(1)</sup> | х                 | ✓                 | ✓            | ✓       | ✓        |
| VP9 <sup>(1)</sup> | х                 | х                 | х            | х       | х        |
| HEVC Main          | x                 | x                 | x            | x       | ✓        |

# Thank you

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