What You Will Hear Today

Growing Market
- Voice, Video, Pictures, Music, Messaging, Health & Fitness, Sleep, Sports

Super-Fast Performance
- Smarter AON Co-Processor
- 4G Low Power Modem
- >85% Faster
- 12nm SoC
- Choice of brands, IDs, price points, use cases

Powerful Yet Flexible
- Smarter AON Co-Processor

Hyper-segmentation
- Voice, Video, Pictures, Music, Messaging, Health & Fitness, Sleep, Sports

Enhanced and Personalized Experiences
- Smarter AON Co-Processor
- BBK Z6 Ultra
- >25% Longer Battery Life
- Mobvoi Tic Watch Pro Next Gen

Choice of brands, IDs, price points, use cases
Wearables Industry: Growing Rapidly

The Growing Value of Wearables
Forbes, June 2020

Wearables have biggest year since 2015...
Health Explosion is on its way
Wareable, June 2020

Mobvoi’s connected Ticwatch Pro 4G LTE takes on Apple and Samsung in the UK
Digital Trends, December 2019

Chinese Smartphone Makers Focusing on Smartwatch Opportunity
CCS Insights, June 2020

Worldwide Smartwatch Forecast, 2020-2024

Source: IDC Worldwide Quarterly Wearables Tracker, June 2020. Watch includes both Basic Watches and Smart Watches. Basic watches incorporate a microprocessor, are capable of digitally processing data, and have wireless connectivity, but do not run third-party applications. Smart watches meet all four requirements.
Growing Market = Hyper-Segmenting Market

- Adult Smartwatch
- Kid Smartwatch
- Senior Smartwatch

- 5-7 years ago
- 2-3 years ago
- TODAY

- Mass Market
- Flagship
- Entry
- Tracker

- Luxury
- Fashion
- Phone Companion
- Sports & Fitness
- Enterprise

Smartwatch
Tracker
How do we use the smartwatch?

The “5-95” Rule

5% Interactive

95% Ambient
The “5-95” Rule

Traditional Architecture
Hybrid Architecture: Powerful Yet Flexible

The “5-95” Rule

BIG
SoC

LITTLE
Co-Processor

Interactive 5%
Ambient 95%
<table>
<thead>
<tr>
<th>Luxury</th>
<th>TAG Heuer</th>
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<td>Xiaomi</td>
<td>China Mobile</td>
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<td>Kids &amp; Seniors</td>
<td>GreatCall</td>
<td>Coolpad</td>
<td>360</td>
<td>T-Mobile</td>
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</table>

Introduced in 2018, Based on Hybrid Architecture

Qualcomm Snapdragon Wear 3100 is a product of Qualcomm Technologies, Inc. and/or its subsidiaries.
Smart + Sports

• Up to 12 Hours GPS Tracking + Heart Rate
• Up to 48 Hours smartwatch use
• 70+ sports modes
• Offline outdoor maps

SUUNTO 7
Sports and life, combined

Wear OS by Google

Qualcomm snapdragon wear 3100 platform

The estimated figures are valid only when using Suunto Wear app. Actual battery life may vary considerably depending on settings, applications, and many other factors.
Sleek design
Extended battery life
Rich ambient modes

Smart + Fashion

Source: Fossil
Smart + Connected

- 4G LTE
- 21 days battery in power save mode
- 3D flexible display

Source: Oppo.com
What’s Next?
Enhancing Hybrid Architecture

SoC

Super-Fast Performance + Connectivity

Ultra-Low Power Platform

Co-Processor

Smarter Always-On (AON) Co-Processor

Enhanced, Personalized Experiences
Introducing the...

Qualcomm® Snapdragon Wear™ 4100+ Platform

Next generation connected smartwatch platform based on our ultra-low power hybrid architecture

Qualcomm Snapdragon Wear is a product of Qualcomm Technologies, Inc. and/or its subsidiaries.
Snapdragon Wear 4100+ Value Proposition

>85% Higher Performance
Improvements across: CPU, GPU, Memory, Modem, Camera

Offloaded Use Cases
Display, Steps, cHRM, Tilt, Time, Maps

>25% Lower Power
12nm + Platform Optimizations

Super-Fast Performance + Connectivity

Ultra-Low Power Platform

Smarter AON Co-Processor

Across Modes
Interactive, Ambient, Sports, Watch

Enhanced, Personalized Experiences

QualcommSDW429w and Qualcomm QCC1110 are products of Qualcomm® Technologies, Inc. and/or its subsidiaries
SDW4100+ : Advancing the hybrid architecture

**Snapdragon Wear 3100**
- Quad-Core Cortex-A7
- Qualcomm® Adreno™ A304
- LPDDR3 400MHz
- MDSP
- ISP
- SEE

**Snapdragon Wear 4100+**
- Quad-Core Cortex-A53
- Qualcomm® Adreno™ A504
- LPDDR3 750MHz
- ADSP
- MDSP
- ISP x2
- SEE

### Significant Faster Processor

- **28nm**
  - 4x A7 @ 1.1GHz
  - Adreno 304
  - 400MHz
- **12nm**
  - 4x A53 @ 1.7GHz
  - Adreno A504
  - 750MHz

### Stronger Always-On (AON) Software Interface

### Smarter AON Co-Processor
- Richer Ambient Mode
  - (16 colors → 64K colors)
- More Capable Watch Mode
  - (Steps, cHRM, Alarms, Haptics, Tilt-to-Wake)

*Qualcomm Adreno is a product of Qualcomm Technologies, Inc. and/or its subsidiaries*
Snapdragon Wear 4100+ Highlights

- **CPU**: Qualcomm® SDM429w (Qualcomm®)
- **Modem**: QCC1110
- **Display**: MIPI-DSI, SPI
- **GPU/MDP**: A504
- **Camera**: 16MP
- **Security**: QSEE4.0,5
- **Wi-Fi/BT**: 802.11 abgn
- **Sensor Hub**: QSEE4.0.5
- **Bluetooth**: 5.0
- **Modem/GPS RF**: NQ330 NQ440
- **Power Management, Fuel Gauge, Charger, Haptics**: PMW3100
- **Offloaded Ultra Low Power AON Use Cases**: AON Co-Processor QCC1110
- **Dedicated DSP for Modem + Location w/ Separate Power Rails**: MDSP
- **Dedicated DSP for Sensors + Audio**: ADSP
- **High Performance CPU, GPU, Memory, Camera**: 4x A53, Up to 1.7GHz
- **LPDDR3**: up to 750MHz
- **Low Power 12nm**: 12nm
- **Dedicated DSP for MDSP + Location**: Dual Display Architecture
- **8-16 bit Support**: Low Power 12nm
- **Highly Integrated PMIC**: Offloaded Ultra Low Power AON Use Cases
- **Support for Range of Sensors incl Sleep, cHRM...**: Support for Range of Sensors incl Sleep, cHRM...
Snapdragon Wear 4100+ Value Proposition

>85% Higher Performance
Improvements across: CPU, GPU, Memory, Modem, Camera

Super-Fast Performance + Connectivity

Ultra-Low Power Platform

Enhanced, Personalized Experiences

Smarter AON Co-Processor

Qualcomm® SDM429w 12nm

Qualcomm® QCC1110 12nm
Super Fast Performance
More fluid and feature-rich experiences

85% Higher Performance
85% Faster
2.5x Faster
2x Better Camera

Compared to Snapdragon Wear 3100 Platform, CPU performance gain calculated at \((1.7 \text{GHz} \times 2.3 \text{ DMIPS/MHz}) / (1.1 \text{GHz} \times 1.9 \text{ DMIPS per MHz}) = 85\%\)
Super Fast Performance
More fluid and feature-rich experiences

85% Higher Performance
Faster app launches
CPU

85% Faster
Concurrent use cases
Memory

2.5x Faster
Smoother, responsive UX
GPU

2x Better Camera
Richer photo / video experiences
Camera

Compared to Snapdragon Wear 3100 Platform, CPU performance gain calculated at \(\frac{(1.7\text{GHz} \times 2.3 \text{DMIPS/MHz})}{(1.1\text{GHz} \times 1.9 \text{DMIPS per/MHz})} = 85\%\)
### Plus Leading Edge 4G Modem

**Take Your Experiences With You**

#### Efficient Modem Architecture
- Dedicated Modem DSP and power rails
- Right-sized modem

#### New Low Power Features
- 12nm
- Power optimizations for VoLTE, music, voice assistant
- eDRX to manage active and idle cycles

#### Performance Flexibility
- Support for Cat 4, 3, 1
- Single / Dual antenna for better range

#### Ecosystem Acceleration
- eSIM support
- Easy onboarding
- Simplified operator certs / GTM

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- Voice Assistant On Your Wrist
- Music Streaming On-The-Run
- Phone-Free VoLTE & Messaging
- Real-time Maps On-The-Go
Snapdragon Wear 4100+ Value Proposition

Super-Fast Performance + Connectivity

Ultra-Low Power Platform

Enhanced, Personalized Experiences

Offloaded Use Cases
Display, Steps, cHRM, Tilt, Time, Maps

Smarter AON Co-Processor

Qualcomm® SDM429w

12nm

Qualcomm® QCC1110
Always On Co-Processor
Designed to Offload AON Use Cases

What is it?
- Tiny (5.2mm x 4mm)
- Ultra low power
- Integrates M0, PMU, custom designed SRAM
- Smart memory and performance partitioning
- Runs Sensor Execution Environment (SEE)
- Runs highly efficient event-driven RTOS

What does it make possible?
- Support for range of sensors (Sleep, cHRM, ...)
- Support for extended functionality in Watch mode (Steps, cHRM, Tilt, Time, Maps, ...)
- Supports dual display architecture (8-16 bit)
- Leverages Android open tool-chain
- Extensible over time
Snapdragon Wear 4100+ Value Proposition

- Snapdragon Wear 4100+
- Super-Fast Performance + Connectivity
- 25% Lower Power
- Ultra-Low Power Platform
- Enhanced, Personalized Experiences
- Ultra-Low Power Platform
- Qualcomm® QCC1110
- Smarter AON Co-Processor
- 12nm + Platform Optimizations

Qualcomm® SDM429w
Lower Power
Platform power reductions SDW4100+ vs SDW3100

New Process Node
- Lower active power
- Higher energy efficiency

Low Power Platform Architecture
- Dual Dedicated DSPs
  - Modem + GNSS
  - Sensors + Audio
- Dynamic Clock and Voltage scaling

GPS Enhancements
- Qualcomm® Sensor Assisted Positioning for Wearables 2.0
- Support for: GPS, BDS, GLONASS, Galileo
- Low power tracking

Enhanced BT Architecture
- Bluetooth 5.0
- A2DP Streaming
- HFP voice

Qualcomm Sensor Assisted Positioning is a product of Qualcomm Technologies, Inc. and/or its subsidiaries.
Lower Power
Platform power reductions SDW4100+ vs SDW3100

<table>
<thead>
<tr>
<th>Activity</th>
<th>Power Reduction</th>
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<tbody>
<tr>
<td>GPS Active</td>
<td>22%</td>
</tr>
<tr>
<td>VoLTE Call</td>
<td>29%</td>
</tr>
<tr>
<td>Stream Music over 4G</td>
<td>35%</td>
</tr>
<tr>
<td>MP3 Over BT</td>
<td>35%</td>
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<tr>
<td>Voice Assistant over LTE</td>
<td>37%</td>
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<tr>
<td>Scrolling through Notifications</td>
<td>42%</td>
</tr>
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</table>

Snapdragon Wear 4100+ verses Snapdragon Wear 3100 platform. Measurements based on SDW3100 and SDW4100 WTPs.
Extended battery life
Maximizing on-wrist time across various segments

- **Fashion Watch**
  - 25% Longer Battery Life
  - 1.2" Display
  - 360 mAH Battery

- **Sportswatch**
  - 18 Hours Sports Mode
  - 1.4" Display
  - 450 mAH Battery

- **Connected Smartwatch**
  - 25% Longer Battery Life
  - 1.3" Display
  - 420 mAH Battery

Based on Qualcomm internal measurements and projections on typical DoU scenarios SDW4100+ vs SDW3100. Battery life in actual devices would vary based on configuration and use cases.
What do we make possible?
Snapdragon Wear 4100+ Value Proposition

- **Super-Fast Performance + Connectivity**
- **Ultra-Low Power Platform**
- **Smarter AON Co-Processor**
- **Across Modes**: Interactive, Ambient, Sports, Watch
- **Enhanced, Personalized Experiences**

- Qualcomm® SDM429w
- Qualcomm® QCC1110
Across Modes
Interactive, Ambient, Sports, Watch

Enhanced, Personalized Experiences

...when you are interacting with the watch
...when you are in ambient mode
...when you go for a run
...when you forget your charger

Qualcomm® SDM429w
12nm

Qualcomm® QCC1110
Immersive Interactive Experience
Choice of Watch Faces, Apps, Services

SDW3100
SDW4100+

Music
Messaging
Fitness
Navigation
Phone
Payments
Assistant
Video
Music
Phone
Payments
Camera
Productivity
Fitness
Navigation
Richer Ambient Mode
Fashion Meets Smart

SDW3100
• 16 colors (4 bit)
• Smooth second hand
• Live complications
• Adaptive brightness and touch

SDW4100+
• Up to 64K colors (16 bit) for crisper image rendering - New
• Number kerning - New
• Support for Sleep, cHRM - New
• Smooth second hand
• Live complications
• Adaptive brightness and touch
Powerful Sports Mode
Sports Meets Smart

SDW3100
- 16 colors (4 bit)
- Sensors offload

SDW4100+
- Up to 64K colors (16 bit) for crisper image rendering - New
- Number kerning - New
- Sensors and Maps offload - New
Enhanced Watch Mode
Week-Long Battery Life

SDW3100
- 16 colors (4 bit)
- Time & Date

SDW4100+
- Up to 64K colors (16 bit) for crisper image rendering - New
- Number kerning - New
- Steps and Heart Rate - New
- Battery Indicator - New
- Alarms, Reminders, Haptics - New
- Time & Date
Portfolio of Wearable Platforms

SDW4100 Platforms
- 4100+ Qualcomm Snapdragon wear
- SDM429w + AON Co-Processor QCC1110

SDW3100 Platforms
- 3100 Qualcomm Snapdragon wear
- MSM8909w + AON Co-Processor QCC1110

- 2500 Qualcomm Snapdragon wear
- MSM8909w

SHIPPING NOW
Announcing First Customers
旋转双摄 | Z6 巅峰版
能视频的电话手表

Xiaotiancai
1st Smartwatch for Kids based on SDW4100
1st Wear OS by Google Smartwatch based on SDW4100
Wearables growing and segmenting
• Require a powerful and flexible architecture
• Hybrid = best of experience and battery life, introduced w/ SDW3100
• Suunto 7 represents what is possible (Sports + Smarts)

Advancing with SDW4100+ announcement today
• Super-Fast Performance and Connectivity (>85% perf improvement)
• Smarter AON Co-Processor (From 16 to 64K colors)
• Ultra-Low Power Platform (>25% longer battery life)

Enabling Enhanced, Personalized Experiences
• Immersive experience when you interact
• Richer experience when you are in ambient
• Powerful experience when you go for a run
• Enhanced experience when you lose your charger

First products coming soon
• BBK = Flagship Kid Watch
• Mobvoi = First Wear OS by Google smartwatch