It’s time.
Wearables at Qualcomm

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

Everything from head to toe

Targeting toddlers and the elderly

From chips to full solutions

Helping consumers

Leading the industry

Wearable devices in market

200

Share of Wear OS by Google smartwatches

80%

Provider of 4G LTE connected wearables

#1

Smart glasses
Smart headsets
Wearable cameras
Smart cards
Smart apparel
Smart shoes
Smart watches
Medical bands
Connected fitness trackers
Stay connected
Get fit and stay fit
Be safe and secure
Play, listen, entertain
Authenticate, Pay
Manage your home

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Get fit and stay fit
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Qualcomm Snapdragon Wear
Wearable brand and platform
Investing to grow the wearables market
Announcing

Qualcomm Snapdragon Wear 3100 platform

Next generation smartwatch platform based on new ultra-low power system architecture
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<tr>
<th>Gen 1</th>
<th>Gen 2</th>
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<td>Snapdragon™ 400 Platform</td>
<td>Snapdragon Wear™ 2100 Platform</td>
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<table>
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<tr>
<th>Category</th>
<th>Gen 1 Brands</th>
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<tr>
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<td>Yves Saint Laurent</td>
<td>Montblanc</td>
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<td>Fashion</td>
<td>Boss, Diesel, Emporio Armani, Fossil, GC, GUESS</td>
<td>Marc Jacobs, Movado, Porsche Design, Skagen</td>
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<td>Sports</td>
<td>LG, Huawei, Misfit, Nixon</td>
<td>Misfit, Nixon</td>
<td>Lexmark</td>
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<tr>
<td>General purpose</td>
<td>ASUS, Huawei, LG</td>
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If Wear OS by Google, then Snapdragon Wear

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100 smartwatches shipping from 25 brands

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Announcing First Snapdragon Wear 3100 Customers

“Qualcomm Technologies brings Fossil Group the latest technology... and this latest chip is no exception. Our collaboration enables our constant reinvention of the smartwatch.”

Steve Evans, Executive Vice President
Fossil Group
Announcing First Snapdragon Wear 3100

Customers

“...We are excited about the new possibilities that Snapdragon Wear 3100 brings to our customers and are working with Qualcomm Technologies to bring another beautiful smartwatch to the industry.”

Eric Pradon, SVP, Finance/Administration
Louis Vuitton Malletier
Announcing
First
Snapdragon
Wear 3100
Customers

“...Summit 2 is a versatile companion...created for urban explorers, business travelers and performance seekers...This watch is built to seamlessly power them through their everyday adventures stylishly and reliably.”

Nicolas Baretzki, CEO
Montblanc
What is Snapdragon Wear 3100?
Expanding the smartwatch segment

Snapdragon Wear 2100
Core performance
For a compelling smartwatch experience

Snapdragon Wear 3100
Performance + connected + features
Strengthen the foundation
Make the smartwatch more useful
For fashionistas, sports, and travelers
Make the smartwatch last longer
For everyone
Smartwatch Usage

The “5-95” Rule

5% Interactive

95% Ambient
Smartwatches Today
Phone Based Architecture

- 5% Interactive
- 95% Ambient

A7
DSP / M4
Smartwatches Today
Phone Based Architecture

- 5% Interactive
- 95% Ambient

A7
DSP / M4
Smartwatches Today
Phone Based Architecture

- A7
- DSP / M4

5% Interactive
95% Ambient
Snapdragon Wear 3100
Smartwatch Based Architecture

- Big: 4 x A7
- Small: DSP
- Tiny: Co-Processor RTOS

5% Interactive
95% Ambient
Snapdragon Wear 3100
Smartwatch Based Architecture

- Big: 4 x A7
- Small: DSP
- Tiny: Co-Processor, RTOS

5% Interactive
95% Ambient
Snapdragon Wear 3100
Smartwatch Based Architecture

Big: 4 x A7
Small: DSP
Tiny: Co-Processor RTOS

5% Interactive
95% Ambient
Ultra low power co-processor

Tiny, yet mighty
- 5.2mm x 4mm

Designed for ultra low power
- Near threshold computing
- Runs highly efficient event-driven RTOS
- Custom designed SRAM
- Low power interface to high res displays
- 20x lower active power versus AP

Powerful as stand-alone
- Integrates M0, PMU, memory
- Deep learning engine for custom workloads

More powerful in concert with the AP
- Partitions audio, display and sensor experiences for lowest power
- Leverages Wear OS open tool-chain
- Extensible over time
Building on what works, Bringing in a lot of new
Snapdragon Wear 3100: Next Generation Smartwatch Platform

**New ultra-low power co-processor**
Designed from the ground up to re-imagine smartwatch experiences

**New hierarchical system architecture**
With optimal partitioning across A7, DSP, and QCC1110

**New dual-display architecture**
AP via MIPI, QCC1110 via SPI

**Open Sensor framework**
Next-gen sensor processing with open execution environment in the DSP and co-processor, enabling higher differentiation and faster TTM

**New wearable PMIC**
for lower power operation while reducing size and increasing integration

**New RFFE w/ Gallium Arsenide PAs**
Optimized for power efficiency and wearable form factors

**New NFC chips**
Support for smaller antenna design and higher reader interoperability
What does Snapdragon Wear 3100 make possible?
1. Rich interactive mode
2. New personalized experiences
3. Extended battery life
<table>
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<th>Feature</th>
<th>Details</th>
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<tr>
<td>Rich interactive mode</td>
<td>Strengthen the foundation</td>
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<tr>
<td>The Latest Wear OS by Google experience</td>
<td>Increasingly rich, fluid experiences for the wrist</td>
</tr>
<tr>
<td>Integrate new smartwatch features</td>
<td>New! Open sensor framework + New! Next gen NFC + New! GPS/sensor fusion + New! MP3 Playback Offload</td>
</tr>
<tr>
<td>Make the connected experience more efficient</td>
<td>Robust 4G LTE multi-mode modem + New! RFFE with GaAs power amplifiers</td>
</tr>
<tr>
<td>Build on core performance</td>
<td>Quad-core processors + Adreno graphics + Rich multimedia engine</td>
</tr>
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</table>
New personalized experiences

Extended battery life

Rich interactive mode
New personalized experiences
Enhanced ambient mode: fashion meets smarts

Today

Snapdragon Wear 3100

- A7
- DSP
- Co-Processor
- RTOS

Smooth second hand, multi-color, live complications, adaptive brightness, full touch

Available at launch
New personalized experiences
Dedicated sports experiences: Sports meets smarts

Today

Heart rate
145
32.8 km/h
00:45:17

Up to
3 Hours
GPS + HR

Snapdragon Wear 3100

A7
DSP

Up to
15 Hours
GPS + HR*

Co-Processor
RTOS

Range of Experiences: Run, Swim, Hike, Bike, ...

Available via future release

*Qualcomm Internal Calculations. Based on typical sports watch 450mAh battery capacity.
Authentic Sports Experience Designed by a Major Sports Brand

“We are excited about Snapdragon Wear 3100 and are working closely with Qualcomm to bring a highly credible sports watch experience to the smart watch domain. Stay tuned for more details.”

CEO
Major Sports Brand
New personalized experiences
Traditional watch mode: analog watch meets smart

Today

Snapdragon Wear 3100

Up to 1
Week
with 20% Battery*

Up to 30
Days
with Full Battery*

A7

DSP

Co-Processor
RTOS

Available at launch

Custom watch face,
Smooth second hand, multi-color,
Complication, Wake-on tilt

*Qualcomm Internal Calculations. Based on typical fashion watch 340mAh battery capacity.
Battery life based on combination of 1st software release and next release. Display On Demand
New personalized experiences

1. Rich interactive mode

2. New personalized experiences

3. Extended battery life
Extended battery life
Platform power reductions vs SDW2100

- Lowest power mode: 67%
- GPS: 49%
- Key word detection: 43%
- Clock update once a minute: 35%
- MP3 playback: 34%
- Voice query BT/Wi-Fi: 13%

Source: Based on measurements on SDW2100 and SDW3100 WTPs
Extended battery life
Typical DoU

OLED display for fashion

- 300mAh: 4.6 Hrs
- 350mAh: 5.4 Hrs
- 400mAh: 6.1 Hrs

Reflective display for sports

- 300mAh: 9.3 Hrs
- 350mAh: 10.7 Hrs
- 400mAh: 12.3 Hrs

*Based on Qualcomm internal measurements and projections on typical DoU scenarios. Battery life in actual devices would vary based on configuration and use cases.

Battery life improvement between 4 hours to 12 hours
Typical battery life range: 1.5 - 2.5 days

* Based on battery capacity, display type, device configuration
Extended battery life
New week-long battery life

Continue using your beautiful watch for the week, even if you forget your charger

*Qualcomm internal calculations. Based on typical fashion watch 340mAh battery capacity. Display on-demand.
Qualcomm Snapdragon Wear 3100 platform

Wear OS by Google
Based on
- New ultra-low power system architecture
- In collaboration with Wear OS by Google

Features
- New ground-up low-power co-processor
- New open sensor framework
- New power management sub-system
- New GaAs power amplifiers
- New NFC chips

Enables
- Rich interactive mode
- Personalized experiences
- Extended battery life

First customers
- Fossil Group
- Louis Vuitton
- Montblanc
- Plus Project Stamina
Thank you

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