





C-9

Immersion Corporation
U.S. Patent No. 8,638,301
Infringement Contentions to Fitbit, Inc.

U.S. Patent No. 8,638,301	Fitbit, Inc. Accused Product ¹
Claim 27. A system comprising:	<p>The Accused Product, the Fitbit Ionic, (hereinafter “the Accused Product”) provides a system.</p> <p>The Accused Product provides system of an interaction between a fitness smart watch and a smartphone. See http://www.pocket-lint.com/news/140955-fitbit-ionic-release-date-specs-and-everything-you-need-to-know-about-fitbit-s-gps-smartwatch; http://www.trustedreviews.com/reviews/fitbit-ionic; https://www.wareable.com/smartwatches/fitbit-ionic-review. For example, the Accused Product practices a system as a fitness smart watch synchronizing with a smartphone that allows for a fitness watch to interact and exchange data with a smartphone. As highlighted in the red boxes in the picture below, the picture shows that the Accused Product has the capability to synchronize with a smartphone via Bluetooth technology to exchange data using features such as notifications.</p> <div style="text-align: center;">  <div style="display: flex; flex-direction: column; align-items: flex-end;"> <div style="margin-bottom: 10px;">  <p>Multi-Sport Modes Track specific workouts in modes like Run, Bike or Weights to see real-time stats on screen & get post-workout summaries.</p> </div> <div style="border: 2px solid red; padding: 5px; margin-bottom: 10px;">  <p>Smartphone Notifications See call, text or calendar notifications on screen & get push notifications from your favorite apps. Available when your phone is nearby.</p> </div> <div style="border: 2px solid red; padding: 5px;">  <p>Syncs Wirelessly Sync stats wirelessly & automatically to computers and 200+ leading iOS, Android and Windows devices.</p> </div> </div> </div> <p style="text-align: center;">Source: Fitbit, Inc., <i>Ionic</i>, (2017), available at https://www.fitbit.com/shop/ionic.</p> <p>As another example, the Accused Product includes a Fitbit app that is available for iOS, Android</p>

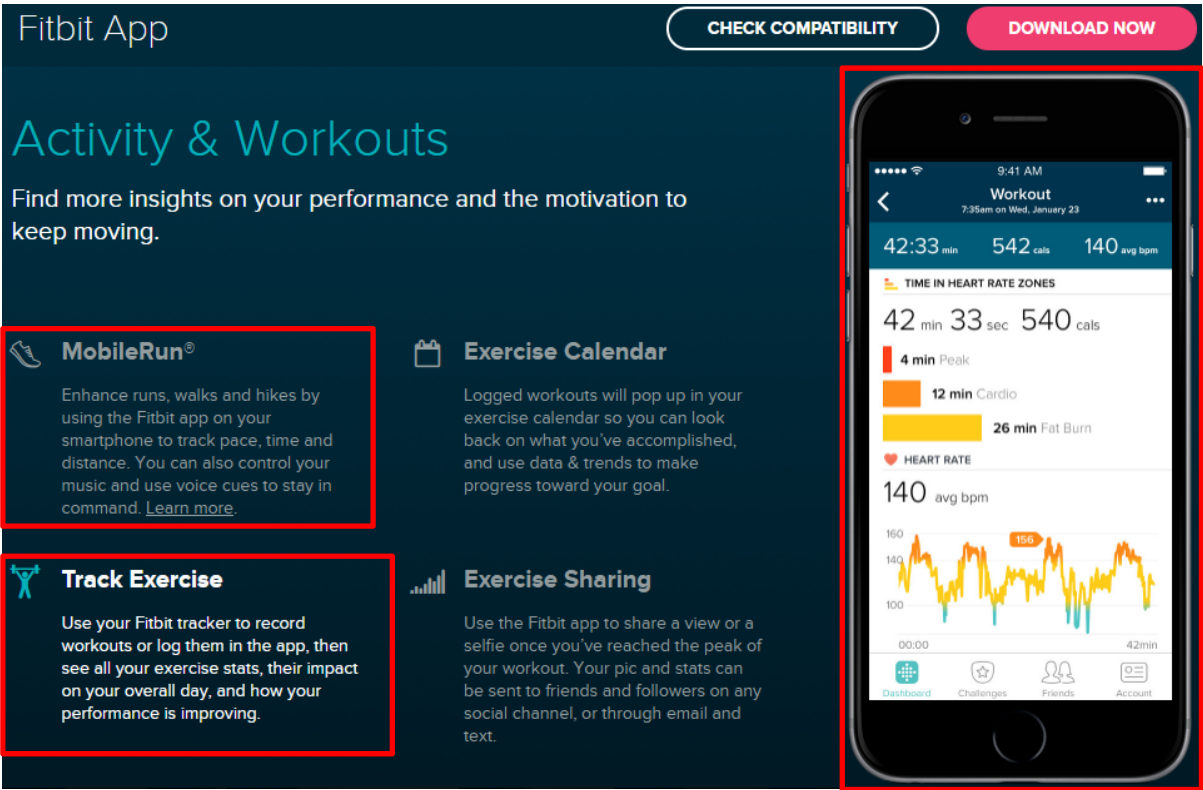
¹ The Fitbit Accused Products include all those listed in the accompanying P.L.R. 3-1 disclosure statement and any other device uncovered during discovery capable of a system, method, apparatus, or device with haptic feedback. This includes, but is not limited to, devices with haptic feedback capability such as fitness wristbands and clips, heart rate-monitoring fitness wristbands, smart fitness watches, and accessories.

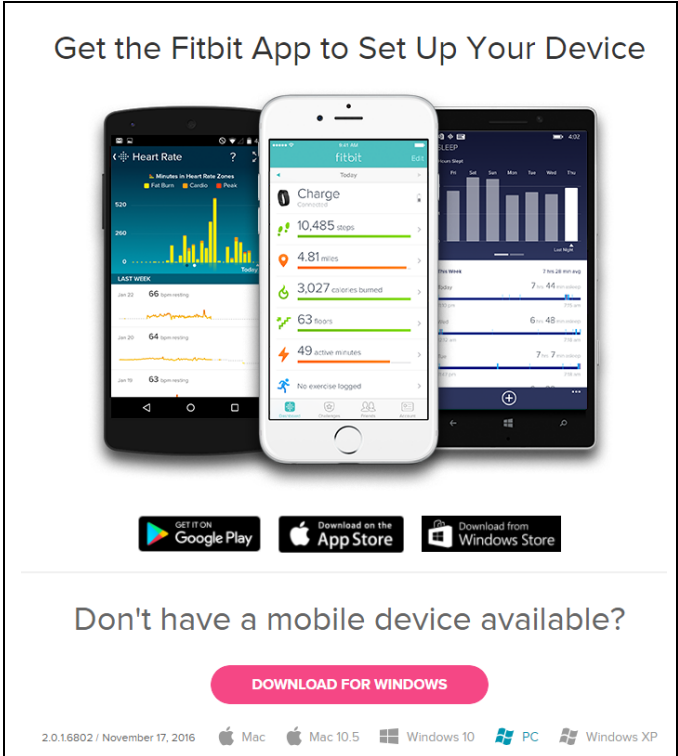
Although these infringement contentions depict screenshots for Fitbit Accused Products, it should be understood that the claims and theories of infringement are equally applicable to other fitness wristbands and clips, heart rate-monitoring fitness wristbands, smart fitness watches, software, application programming interfaces, accessories, and other manufactured-based products by the Defendant.

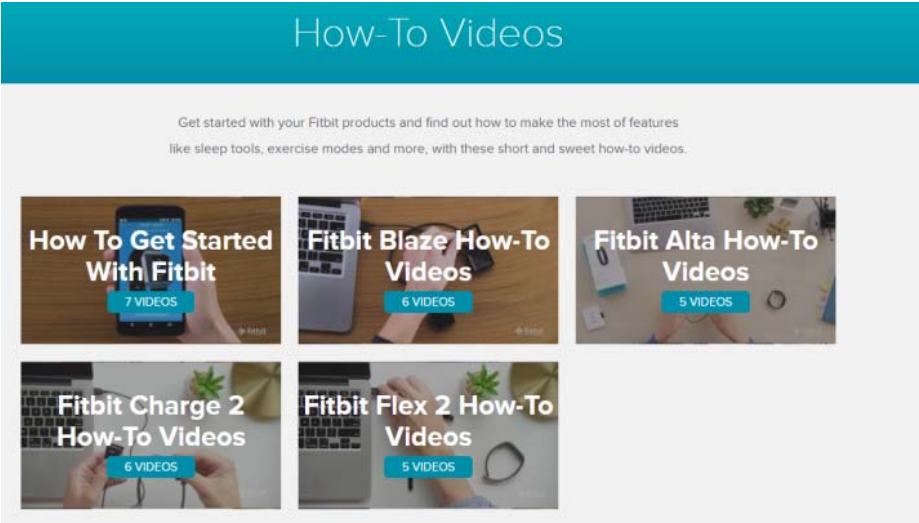
Immersion reserves the right to add additional information and infringement theories once discovery begins in this case, particularly once the Defendant produces its technical documents, source code, and schematics.


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	<p>and Windwos 10 devices. As highlighted in red underlines in the first picture below, the Accused Product uses a free Fitbit app that allows for connection and use of key features such as notifications, music control and other features between the Fitbit Ionic and a mobile device.</p> <p><u>Set up Fitbit Ionic</u></p> <p><u>For the best experience, use the Fitbit app for iOS, Android, or Windows 10. If you don't have a smartphone or tablet, you can also use a Bluetooth-enabled Windows 10 PC.</u></p> <p>Your Fitbit account asks for information such as height, weight, and gender in order to calculate your stride length and to estimate distance, basal metabolic rate, and calorie burn. Your name and average daily step count are visible to other Fitbit users. You have the option to share your age, height, weight, or location with Fitbit friends, but the information you provide is private by default.</p> <p>Source: Fitbit, Inc. <i>Fitbit Ionic Product Manual</i> (2017), p. 9, available at https://staticcs.fitbit.com/content/assets/help/manuals/manual_ionic_en_US.pdf (emphasis added).</p> <p>As a further example, as highlighted in red underlines in the picture below, the Accused Product sets up the Fitbit Ionic device by connecting (“pairing”) the Ionic device to the mobile device after the Fitbit app is installed on the mobile device (The Fitbit app is available for more than 200 mobile devices, such as iPhone, Android, Windows), as highlighted in red underlines in the picture below.</p>

U.S. Patent No. 8,638,301	Fitbit, Inc. Accused Product ¹
	<p>Set up with your phone or tablet</p> <p><u>The free Fitbit app is compatible with more than 200 devices that support iOS, Android, and Windows 10 operating systems.</u></p> <p>To get started:</p> <ol style="list-style-type: none"> 1. Find the Fitbit app in one of the locations below, depending on your device. If you're unsure if the Fitbit app is compatible with your phone or tablet, see http://www.fitbit.com/devices. <ul style="list-style-type: none"> • Apple App Store for iOS devices such as an iPhone or iPad. • Google Play Store for Android devices such as the Samsung Galaxy S6 and Motorola Droid Turbo 2. • Microsoft Windows Store for Windows 10 devices such as the Lumia phone or Surface tablet. 2. <u>Install the app. If you don't have an account with the store, must create one before you can download the app.</u> 3. When the app is installed, open it and tap Join Fitbit to be guided through a series of questions that help you create your Fitbit account, or log in to your existing account. 4. <u>Continue following the on-screen instructions to connect, or "pair", Ionic to your phone or tablet. Pairing makes sure the watch and phone or tablet can communicate with one another (sync data back and forth).</u> <p>When you're done pairing, read through the guide to learn more about your new watch and then explore the Fitbit dashboard.</p> <p>Source: Fitbit, Inc. <i>Fitbit Ionic Product Manual</i> (2017), p. 9, available at https://staticcs.fitbit.com/content/assets/help/manuals/manual_ionic_en_US.pdf (emphasis added).</p> <p>As further example, as highlighted in the red underlines in the picture below, the Accused Product allows transfers of data between the Fitbit Ionic and the Fitbit dashboard within the Fitbit app on the mobile device. By way of example, a user may track her progress and see her exercise history, and more on her Fitbit dashboard.</p> <p>Sync data to your Fitbit account</p> <p><u>Regularly sync Ionic with the Fitbit app to transfer data to your dashboard. The dashboard is where you'll track your progress, see your exercise history, track your sleep patterns, participate in challenges, and much more. We recommend syncing at least once a day.</u></p> <p><u>The Fitbit app uses Bluetooth Low Energy technology to sync data with Ionic and to update apps installed on your watch.</u></p> <p>Source: Fitbit, Inc. <i>Fitbit Ionic Product Manual</i> (2017), p. 10, available at https://staticcs.fitbit.com/content/assets/help/manuals/manual_ionic_en_US.pdf (emphasis added).</p>

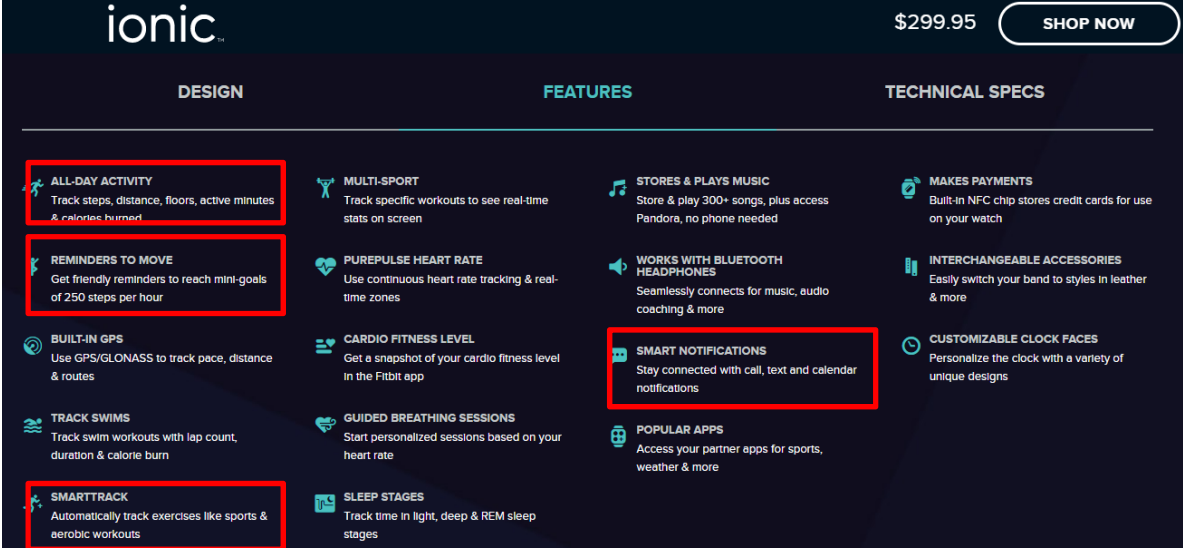
U.S. Patent No. 8,638,301	Fitbit, Inc. Accused Product ¹
	<p>added).</p> <p>As a further example, as highlighted in the red boxes in the picture below, the Accused Product appears to allow the transfer of data from the Fitbit Ionic device to the Fitbit dashboard or app on the mobile device to be displayed as summary of results. Accordingly, the Accused Product provides a system of an interaction between a Fitbit Ionic device or fitness watch and a mobile device (e.g. iPhone, Android, or Windows) by connecting the two devices and transferring data between them.</p>  <p>The screenshot shows the Fitbit App interface. On the left, there are four feature cards: 'MobileRun' (enhance runs, walks and hikes), 'Exercise Calendar' (logged workouts pop up), 'Track Exercise' (record workouts or log them in the app), and 'Exercise Sharing' (share a view or a selfie). On the right, a smartphone displays a 'Workout' screen with statistics: 42:33 min, 542 cals, 140 avg bpm. It also shows 'TIME IN HEART RATE ZONES' with a 4 min Peak, 12 min Cardio, and 26 min Fat Burn. A heart rate graph is visible at the bottom of the phone screen.</p> <p>Source: Fitbit, Inc. <i>Fitbit App</i> (2017), available at https://www.fitbit.com/app (emphasis added).</p> <p><u>INDIRECT INFRINGEMENT</u></p> <p>Fitbit indirectly infringes the '301 patent, under 35 U.S.C. § 271(b), by inducing infringement by others, such as manufacturers, resellers, developers, and customers, and end-users, and/or providing the fitness watch and a smartphone as components for use in a system of an interaction between a fitness watch and a smartphone that practices the invention in accordance with the element-by-element mapping of features to claim elements set forth in this chart for this claim and its dependent claims.</p> <p>As the element-by-element mapping shows, Fitbit provides ample “help” documentations that instruct a user in how to use the system to perform each of the functions which are described.</p>





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	<p>Further, Fitbit provides instructions on how a user can set up a device and install software such that the features are enabled.</p> <p>At that site, Fitbit specifically instructs the user to download the Fitbit App from one of several websites (e.g., Google Play, Apple App Store, or Windows Store). Further, if the user does not have a mobile device, Fitbit instructs that the user can download an application for an Apple or Windows personal computer. Fitbit provides further instructions and help to set up a user's device, as well.</p> <div>  </div> <p>Source: Fitbit, Inc., “Get the Fitbit App to Set Up Your Device” (2017), available at https://www.fitbit.com/setup; see also https://www.fitbit.com/app.</p> <p>Fitbit also provides answers on its website to popular topics and questions that other users have had setting up their devices. Further, Fitbit provides a support community to educate users about certain features. (See Fitbit, Inc., “Get the skinny on your Fitbit device,” http://help.fitbit.com/.) Fitbit provides web pages with answers to popular topics and questions that other users have had setting up their devices. Further, Fitbit provides a support community to educate users about certain features. In addition, users can request certain features or options to be implemented in the Fitbit’s software and/or API such as on Fitbit’s “Ideas Board” online forum, which Fitbit provides at https://community.fitbit.com/t5/Feature-Requests/idb-p/features. Fitbit also provides How-To Videos to help users, as illustrated in the screenshot shown below. (See, e.g., Fitbit Inc., “How-To Videos,” https://www.fitbit.com/how-to (“Get started with your Fitbit products and find out how to make the most of features like sleep tools, exercise modes and more, with these short</p>


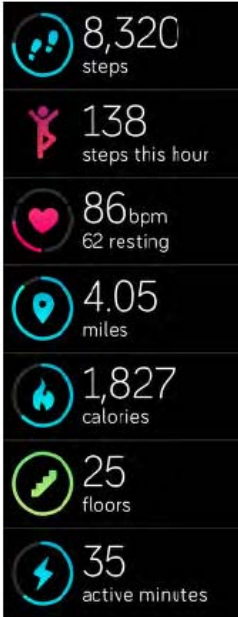
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	<p>and sweet how-to videos.”.)</p>  <p><i>Source:</i> Fitbit Inc., “How-To Videos,” available at https://www.fitbit.com/how-to.</p> <p>As another example, Fitbit provides a Fitbit Ionic manual to help the user set up and use the features of the device, along with user manuals for all Fitbit devices, which may be accessed through links which Fitbit provides at http://help.fitbit.com. See, e.g., http://help.fitbit.com (providing links to access user manuals for the Fitbit Ionic, Flex 2 and other Fitbit products). For instance, the Fitbit Ionic manual teaches and explains to the user how to set up notifications and haptic effects for notifications. Fitbit also provides an online Help page to answer a user’s question, “How do I get notifications from my mobile devices?” at http://help.fitbit.com/articles/en_US/Help_article/1979. As shown in the exemplary screenshot below, this page provides further teaching and explanation about notifications and how they sync between the mobile phone and the Fitbit Ionic, as well as other devices. This page teaches the user about the benefits of the notifications and provides options for controlling the delivery of notifications. It further teaches the user that the user “may need to modify settings specific to the user’s mobile device and tracker.” The help page further teaches how the notifications work. These instructions are provided for other Fitbit devices as well.</p>

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	<p>HOW DO I SET UP NOTIFICATIONS?</p> <p>Besides the Notifications options in the Fitbit app, you may need to modify settings specific to your phone and Fitbit device. To review all the requirements choose your phone below.</p> <hr/> <p>IPHONE ▼</p> <hr/> <p>ANDROID PHONE ▼</p> <hr/> <p>WINDOWS 10 PHONE ▼</p> <hr/> <p>HOW DO NOTIFICATIONS WORK?</p> <p>Choose your tracker model to learn what to expect and get tips on using notifications.</p> <hr/> <p>ALTA & ALTA HR BLAZE CHARGE 2 FLEX 2 IONIC SURGE</p> <p>Ionic vibrates when a notification is available and the information appears briefly.</p>  <p><i>Source:</i> Fitbit Inc., Fitbit Help, “How do I get notifications from my mobile devices?” available at http://help.fitbit.com/articles/en_US/Help_article/1979/?l=en_US&c=Topics%3AFAQs&p=ionic&fs=Search&pn=1#setup.</p>
a processor configured to:	<p>The Accused Product includes a processor.</p> <p>Based on public information and similarity to Fitbit Blaze and Fitbit Surge, as shown in the red highlighted box in the picture below, the Accused Product likely includes Silicon Labs 32-Bit ARM Cortex-M3 48 MHz Microcontroller or a processor substantially similar in the Fitbit Ionic.</p>


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	<div>  </div> <div> <p>Major Components:</p> <ul style="list-style-type: none"> - MCU, 32-Bit ARM Cortex-M3, 48MHz, 1024KB Flash, 128KB RAM, 8-Channel 12-Bit ADC, 93 GPIOs - MFG: SILICON LABORATORIES INC - MPN: EFM32GG385F1024-BGA120 - (Qty: 1) - Enclosure, Main, Top, Injection Molded Plastic, w/ 8 Pressed-In Threaded Brass Inserts, w/ Etched Copper Antenna, w/ 3 Epoxy Potted - (Qty: 1) - Display Window / Touchscreen Assembly, 1.26" Diagonal, Capacitive, GF2 Type, Painted, w/ Integral Flex PCB - MFG: ALPS ELECTRIC CO LTD - (Qty: 1) - Display Module, 1.26" Diagonal, Transflective Monochrome, 144 x 168 Pixels, 175 ppi, w/ Integral Flex PCB, w/ 1 LED Backlight - MFG: SHARP CORP - MPN: LS013B7DH01 - (Qty: 1) - Enclosure, Main, Bottom, Injection Molded Plastic, Clear Coated, w/ 8 Pressed-In Threaded Brass Inserts, w Injection Silicon Rubber - (Qty: 1) - Bluetooth USB Dongle, Bluetooth V4.0, Contains Texas Instruments CC2540 - (Qty: 1) - 8-Layer, FR4/RCF HDI, 3+2+3, Lead-Free - MFG: MULTEK HONG KONG LTD - (Qty: 1) - Accelerometer / Gyroscope / Magnetometer, 9-axis Motion Tracking, $\pm 2g/\pm 4g/\pm 8g/\pm 16g$ Accelerometer, $\pm 250dps/\pm 500dps/\pm 1000dps/\pm 2000dps$ Gyroscope, 3-Axis Magnetometer - MFG: INVENSENSE INC - MPN: MPU-9250 - (Qty: 1) - Amplifier, Op Amp, 1.8V, 7MHz, Low Offset, Rail-to-Rail - MFG: TEXAS INSTRUMENTS INC - MPN: OPA2363AIRSVR - (Qty: 2) - GPS Receiver, Single Chip, 66-Channel GPS, GNSS / QZSS / SBAS, ARM 7 CPU, w/ Built in LNA, w/ 16 GPIOs - MFG: MEDIATEK INC - MPN: MT3339 - (Qty: 1) </div> <p>Source: Electronics360, <i>Teardown: What Is Inside the FitBit Surge (FB501)</i> (2017), available at http://electronics360.globalspec.com/article/5623/teardown-what-is-inside-the-fitbit-surge-fb501 (The Fitbit Surge is substantially similar to the Fitbit Ionic in terms of hardware components and this specification is used as an example for the component of the Fitbit Ionic.) (emphasis added).</p> <p>As a further example, as highlighted in the red box in the <i>Teardown: What Is Inside the FitBit Surge, Deep Dive Teardown of the Fitbit Blaze FB502</i> picture below, the Accused Product provides a microcontroller (i.e. processor) configured to transmit and receive signals from other hardware components, such as different types of sensors (e.g. accelerometer, altimeter, optical heart rate tracker, light sensor or magnetometer).</p> <div>  </div> <div> <table border="1"> <tr> <td>Product Type</td><td>Smartwatch</td></tr> <tr> <td>Brand</td><td>Fitbit Inc</td></tr> <tr> <td>Device Name</td><td>Blaze</td></tr> <tr> <td>Device Model #</td><td>FB502</td></tr> <tr> <td>Official Release Date</td><td>03/01/2016</td></tr> <tr> <td>Target Market</td><td>Worldwide</td></tr> <tr> <td>Retail Price</td><td>\$199.95</td></tr> <tr> <td>Weight (grams)</td><td>43.0 (Measured)</td></tr> <tr> <td>Device Dimensions (mm)</td><td>254.5 x 42.2 x 11.2 (Measured at Longest/Widest/Thickest Points)</td></tr> <tr> <td colspan="2">Product Features</td></tr> <tr> <td>Operating System</td><td>Proprietary</td></tr> <tr> <td>Processor Spec</td><td>Silicon Labs 32-Bit ARM Cortex-M3 48 MHz Microcontroller</td></tr> </table> </div> <p>Source: TechInsights Inc., <i>Deep Dive Teardown of the Fitbit Blaze FB502 - Bluetooth Smartwatch</i> (2017), available at http://www.techinsights.com/reports-and-subscriptions/open-market-reports/Report-Profile/?ReportKey=11260 (The Fitbit Blaze is substantially similar to</p>	Product Type	Smartwatch	Brand	Fitbit Inc	Device Name	Blaze	Device Model #	FB502	Official Release Date	03/01/2016	Target Market	Worldwide	Retail Price	\$199.95	Weight (grams)	43.0 (Measured)	Device Dimensions (mm)	254.5 x 42.2 x 11.2 (Measured at Longest/Widest/Thickest Points)	Product Features		Operating System	Proprietary	Processor Spec	Silicon Labs 32-Bit ARM Cortex-M3 48 MHz Microcontroller
Product Type	Smartwatch																								
Brand	Fitbit Inc																								
Device Name	Blaze																								
Device Model #	FB502																								
Official Release Date	03/01/2016																								
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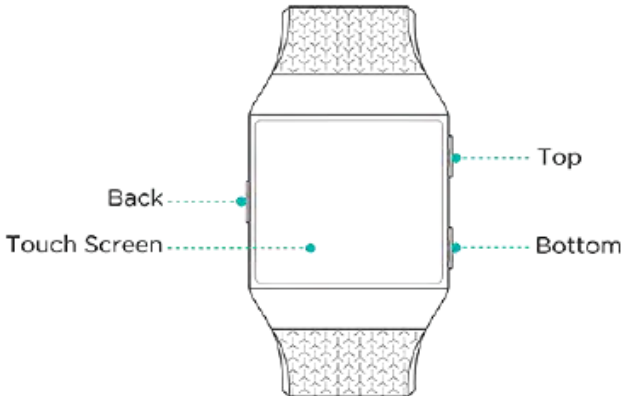
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	<p>the Fitbit Ionic in terms of hardware components and this specification is used as an example for the component of the Fitbit Ionic.) (emphasis added).</p> <p>As another example, as highlighted in a few red boxes in the picture below, the Accused Product provides a processor configured to perform a variety of software operations, applications, and programs or features.</p>  <p>Source: Fitbit, Inc., <i>Ionic Features</i>, (2017), available at https://www.fitbit.com/ionic. (emphasis added).</p>
<p>receive a first sensor signal from a first sensor, the first sensor configured to detect a movement of a first mobile device;</p>	<p>The Accused Product includes a processor configured to receive a first sensor signal from a first sensor, the first sensor configured to detect a movement of a first mobile device.</p> <p>For example, the Accused Product includes a processor configured to receive sensor signals from at least the MEMS 3-axis accelerometer sensor (i.e. first sensor). Further, this sensor is configured to detect and track a user's movement or a variety of statistics, including steps taken, on the Accused Product (i.e. first mobile device).</p> <p>The pictures from the <i>Ionic Specs</i> and the <i>Ionic Product Manual</i> below show the accelerometer sensor, which tracks a user motion patterns. The <i>Ionic Features</i> picture further illustrates that the Accused Product may detect (i.e. SmartTrack or the 3-axis accelerometer) movement from a user and it tracks the user's stats.</p>

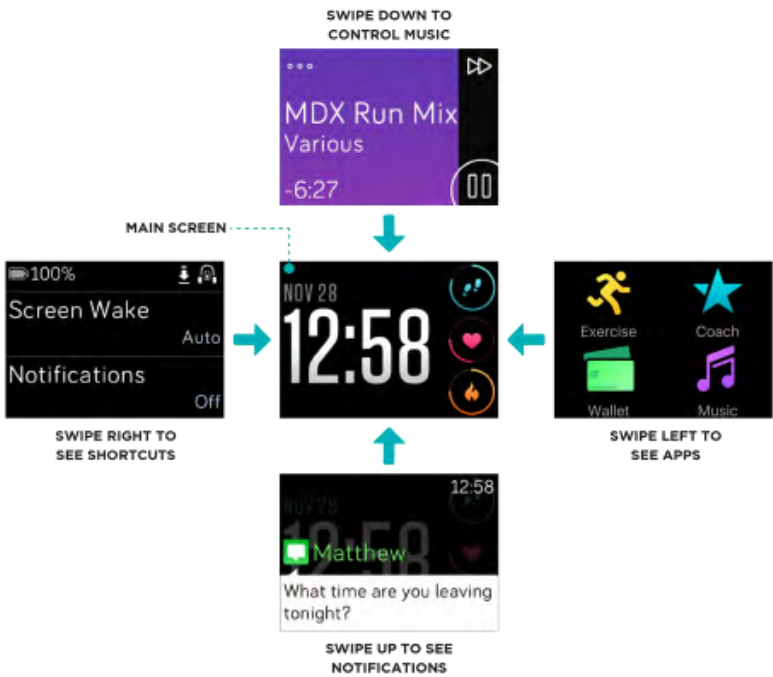
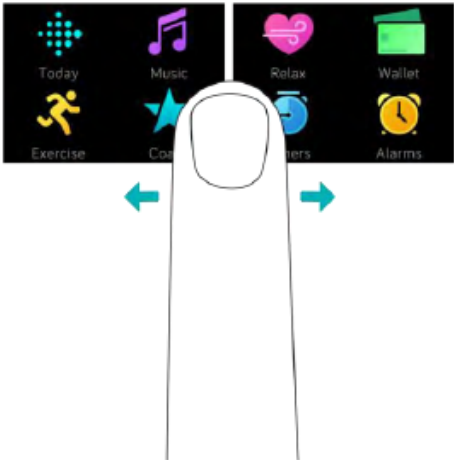
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	<div> <h2>Sensors</h2> </div> <div> <p>Fitbit Ionic contains the following sensors and motors:</p> </div> <div> <ul style="list-style-type: none"> • A MEMS 3-axis accelerometer, which tracks your motion patterns • An altimeter, which tracks altitude changes • A GPS receiver with GLONASS, which tracks your location during a worko • An optical heart-rate tracker • Ambient light sensor • Temperature sensor </div> <div> <p>Source: Fitbit, Inc. <i>Fitbit Ionic Product Manual</i> (2017), p. 67, available at https://staticcs.fitbit.com/content/assets/help/manuals/manual_ionic_en_US.pdf.</p> </div> <div> </div> <div> <p> PurePulse® Heart Rate Get continuous, automatic, wrist-based heart rate & simplified heart rate zones. Learn more.</p> </div> <div> <p> Multi-Sport Modes Track specific workouts in modes like Run, Bike or Weights to see real-time stats on screen & get post-workout summaries.</p> </div> <div> <p> Built-In GPS See pace, distance and other key stats on display, while recording elevation climbed, split times & a map of your route.</p> </div> <div> <p> SmartTrack™ Automatically record select exercises like running, biking and more & see them saved in the Fitbit app.</p> </div> <div> <p>Source: Fitbit, Inc., <i>Ionic Features</i>, (2017), available at https://www.fitbit.com/shop/ionic.</p> </div>



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	<p>Automatic Tracking</p> <p>Ionic continuously tracks a variety of stats whenever you wear it, including hourly activity and heart rate. Ionic also tracks your exercise and sleep automatically. The information is transferred to your dashboard every time you sync your watch.</p> <p>See your daily stats</p> <p>The Today app () on Ionic tracks these all-day stats:</p> <ul style="list-style-type: none"> • Steps taken • Steps this hour • Heart rate and resting heart rate • Distance covered • Calories burned • Floors climbed • Active minutes <div>  <table border="1"> <thead> <tr> <th>Metric</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Steps taken</td> <td>8,320</td> </tr> <tr> <td>Steps this hour</td> <td>138</td> </tr> <tr> <td>Heart rate and resting heart rate</td> <td>86 bpm (62 resting)</td> </tr> <tr> <td>Distance covered</td> <td>4.05 miles</td> </tr> <tr> <td>Calories burned</td> <td>1,827</td> </tr> <tr> <td>Floors climbed</td> <td>25</td> </tr> <tr> <td>Active minutes</td> <td>35</td> </tr> </tbody> </table> </div> <p>Today app</p> <p>Source: Fitbit, Inc. <i>Fitbit Ionic Product Manual</i> (2017), available at https://staticcs.fitbit.com/content/assets/help/manuals/manual_ionic_en_US.pdf.</p>	Metric	Value	Steps taken	8,320	Steps this hour	138	Heart rate and resting heart rate	86 bpm (62 resting)	Distance covered	4.05 miles	Calories burned	1,827	Floors climbed	25	Active minutes	35
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U.S. Patent No. 8,638,301	Fitbit, Inc. Accused Product ¹
	<h2>How does my Fitbit device count steps?</h2> <hr/> <p>Fitbit devices use a 3-axis accelerometer to understand your motions. An accelerometer is a device that turns movement (acceleration) into digital measurements (data) when attached to the body. By analyzing acceleration data, our devices provide detailed information about frequency, duration, intensity, and patterns of movement to determine your steps taken, distance traveled, calories burned, and sleep quality. The 3-axis implementation allows the accelerometer to measure your motion in any way that you move, making its activity measurements more precise than older, single-axis pedometers.</p> <p>Fitbit devices have a finely tuned algorithm for step counting. The algorithm is designed to look for motion patterns that are most indicative of people walking. The algorithm determines whether a motion's size is large enough by setting a threshold. If the motion and its subsequent acceleration measurement meet the threshold, the motion will be counted as a step. If the threshold is not met, the motion won't be counted as a step. Other factors can create enough acceleration to meet our threshold and cause some over counting of steps, such as riding on a bumpy road. Equally, it's possible for the algorithm to undercount (not meet the required acceleration threshold). Examples here include walking on a very soft surface such as a plush carpet.</p> <p><i>Source:</i> Fitbit, Inc., <i>Fitbit Help - How does my Fitbit device count steps?</i> (2017), available at http://help.fitbit.com/articles/en_US/Help_article/1143/?l=en_US&c=Topics%3AFAQs&fs=Search&pn=1.</p>
receive a second sensor signal from a second sensor, the second sensor configured to detect an interaction with the first mobile device;	<p>The Accused Product provides a processor that is configured to receive a second sensor signal from a second sensor, the second sensor configured to detect an interaction with the first mobile device.</p> <p>For example, the Accused Product receives another signal (i.e. second sensor signal) from the touch screen input device (i.e. second sensor). Further, the touch screen (i.e. second sensor) is configured to detect an interaction with the Accused Product (e.g. first mobile device).</p> <p>As shown in the pictures below, the Accused Product provides a touch screen, which is seen in the <i>Ionic Specs</i> and the <i>Ionic Product Manual</i>. In the following <i>Ionic Product Manual</i> picture, the picture describes the touch screen interaction with the Accused Product, which makes sure that the tracker can communicate with the user.</p>

U.S. Patent No. 8,638,301	Fitbit, Inc. Accused Product ¹
	<div>  </div> <div> <p>What's Included</p> <ul style="list-style-type: none"> • Fitbit Ionic watch • Classic wristbands (small and large) • Charging cable <p>Sensors & Components</p> <ul style="list-style-type: none"> • 3-axis accelerometer • 3-axis gyroscope • Optical heart rate monitor • Altimeter • Ambient light sensor • Vibration motor • WiFi antenna (802.11 b/g/n) • GPS • NFC <p>Display</p> <ul style="list-style-type: none"> • Touchscreen • Color LCD <p>Battery and Power</p> <p>Fitbit Ionic has a battery life of 4+ days with a GPS battery life always tracking.</p> <ul style="list-style-type: none"> • Battery type: Lithium-polymer • Charge time (0-100%): Two hours • Radio transceiver: Bluetooth 4.0 </div> <p>Source: Fitbit, Inc., <i>Ionic Specs</i>, (2017), available at https://www.fitbit.com/shop/ionic.</p> <p>Display</p> <p>Ionic has a color LCD display.</p> <p>Source: Fitbit, Inc. <i>Fitbit Ionic Product Manual</i> (2017), available at https://staticcs.fitbit.com/content/assets/help/manuals/manual_ionic_en_US.pdf.</p>


U.S. Patent No. 8,638,301	Fitbit, Inc. Accused Product ¹
	<p>Navigate Ionic</p> <p>Ionic has a touch screen with a colored LCD and three buttons: back, top, and bottom.</p> <div>  <p>The diagram shows a front view of the Fitbit Ionic smartwatch. It has a rectangular face with a large central touch screen. On the left side of the face, there is a small circular button labeled 'Back'. On the right side, there are two small circular buttons: the top one is labeled 'Top' and the bottom one is labeled 'Bottom'. A label 'Touch Screen' points to the central rectangular area. The watch has a textured, woven strap.</p> </div> <p>Navigate Ionic by swiping side to side and up and down or by pressing the buttons.</p> <p>Basic navigation</p> <p>The home screen is the clock. On the clock:</p> <ul style="list-style-type: none"> • Swipe up to see notifications. • Swipe down to control music. • Swipe right to see the shortcuts screen.


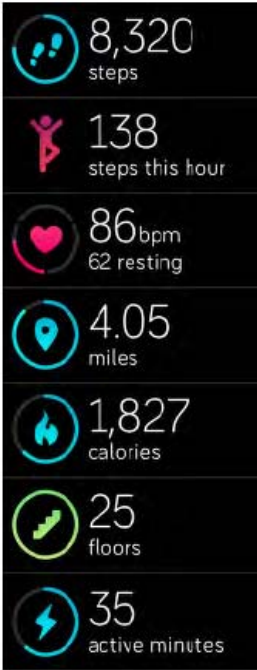





















U.S. Patent No. 8,638,301	Fitbit, Inc. Accused Product ¹
	<ul style="list-style-type: none"> Swipe left to scroll through the apps installed on your watch.  <p>Depending on the clock face you choose, you can also tap the clock screen to scroll through your daily stats which are explained in Automatic Tracking.</p> <p>To open an app, swipe to find the app and then tap it. For more information on how to manage apps, see help.fitbit.com.</p>  <p>Source: Fitbit, Inc. <i>Fitbit Ionic Product Manual</i> (2017), available at https://staticcs.fitbit.com/content/assets/help/manuals/manual_ionic_en_US.pdf.</p>

U.S. Patent No. 8,638,301	Fitbit, Inc. Accused Product ¹
<p>receive a first data signal from a network interface, the network interface configured to receive signals transmitted by a second mobile device;</p>	<p>The Accused Product provides a processor configured to receive a first data signal from a network interface, the network interface configured to receive signals transmitted by a second mobile device.</p> <p>For example, the Accused Product includes a processor configured to receive data signals (i.e. data signal) via a Bluetooth transceiver (i.e. network interface). The Bluetooth transceiver is configured to receive signals transmitted by a smartphone (i.e. second mobile device) (e.g., the Fitbit app is available for more than 200 mobile devices that support iOS, Android, and Windows 10 operating systems.) Specifically, for example, the processor in the Accused Product receives data via the Bluetooth transceiver when the user of the Fitbit application changes the daily step count goal from 10,000 steps per day to 20,000 steps per day.</p> <p>Collectively, the pictures below show and illustrate that the Accused Product contains a processor configured to receive data signals via Bluetooth transceiver, and the transceiver is configured to receive signals transmitted (i.e. synchronized) by another mobile device, such as a smartphone (i.e. iPhone or Android).</p> <div> </div> <div> <ul style="list-style-type: none">  Multi-Sport Modes Track specific workouts in modes like Run, Bike or Weights to see real-time stats on screen & get post-workout summaries.  Smartphone Notifications See call, text or calendar notifications on screen & get push notifications from your favorite apps. Available when your phone is nearby.  Syncs Wirelessly Sync stats wirelessly & automatically to computers and 200+ leading iOS, Android and Windows devices. </div> <p>Source: Fitbit, Inc., <i>Ionic Specs</i>, (2017), available at https://www.fitbit.com/shop/ionic.</p>

U.S. Patent No. 8,638,301	Fitbit, Inc. Accused Product ¹
	<div> </div> <div> <h3>Fitbit Ionic – Specs and sensors</h3> </div> <div> <p>While trackers such as the Charge 2 and Blaze require connected G paired smartphone for location, the Ionic offers a phone-free experience has GPS built in, much like the Surge. It offers one better in the form of GLONASS as well.</p> </div> <div> <p>It also features a new Relative SPO2 sensor, which can detect your blood oxygen levels. Fitbit hasn't announced an actual use for this just yet, but possible applications could be for medical conditions such as sleep apnea or improving sleep tracking to the next level.</p> </div> <div> <p>A fan of listening to music while you exercise? Then you'll be pleased to know the Ionic offers around 2.5GB for storing music, another reason to leave your phone at home. Bluetooth pairing for wireless headphones is available.</p> </div> <div> <p>Source: Time, Inc. Ltd. <i>Fitbit Ionic</i> (2017), available at http://www.trustedreviews.com/reviews/fitbit-ionic.</p> </div> <div> <h2>Wireless technology</h2> </div> <div> <p>Ionic contains a Bluetooth 4.0 radio transceiver and NFC chip.</p> </div> <div> <p>Source: Fitbit, Inc. <i>Fitbit Ionic Product Manual</i> (2017), available at https://staticcs.fitbit.com/content/assets/help/manuals/manual_ionic_en_US.pdf.</p> </div> <div> <h2>Sync data to your Fitbit account</h2> </div> <div> <p>Regularly sync Ionic with the Fitbit app to transfer data to your dashboard. The dashboard is where you'll track your progress, see your exercise history, track your sleep patterns, participate in challenges, and much more. We recommend syncing at least once a day.</p> </div> <div> <p>The Fitbit app uses Bluetooth Low Energy technology to sync data with Ionic and to update apps installed on your watch.</p> </div>

'301 Infringement Contentions

U.S. Patent No. 8,638,301	Fitbit, Inc. Accused Product ¹
	<p>Each time you open the Fitbit app, Ionic syncs automatically when it's nearby. Ionic also syncs with the app every 15 minutes if All-Day Sync is on. To turn on this feature:</p> <p>From the Fitbit app dashboard, tap or click the Account icon () > Ionic tile > All-Day Sync.</p> <p>You can also use the Sync Now option in the app at any time.</p> <p>Source: Fitbit, Inc. <i>Fitbit Ionic Product Manual</i> (2017), available at https://staticcs.fitbit.com/content/assets/help/manuals/manual_ionic_en_US.pdf.</p>





U.S. Patent No. 8,638,301	Fitbit, Inc. Accused Product ¹														
	<div>Automatic Tracking</div> <div> <p>Ionic continuously tracks a variety of stats whenever you wear it, including hourly activity and heart rate. Ionic also tracks your exercise and sleep automatically. The information is transferred to your dashboard every time you sync your watch.</p> </div> <div>See your daily stats</div> <div> <p>The Today app () on Ionic tracks these all-day stats:</p> </div> <div> <ul style="list-style-type: none"> • Steps taken • Steps this hour • Heart rate and resting heart rate • Distance covered • Calories burned • Floors climbed • Active minutes </div> <div>  <table border="1"> <tbody> <tr> <td></td> <td>8,320 steps</td> </tr> <tr> <td></td> <td>138 steps this hour</td> </tr> <tr> <td></td> <td>86 bpm 62 resting</td> </tr> <tr> <td></td> <td>4.05 miles</td> </tr> <tr> <td></td> <td>1,827 calories</td> </tr> <tr> <td></td> <td>25 floors</td> </tr> <tr> <td></td> <td>35 active minutes</td> </tr> </tbody> </table> </div> <div>Today app</div>		8,320 steps		138 steps this hour		86 bpm 62 resting		4.05 miles		1,827 calories		25 floors		35 active minutes
	8,320 steps														
	138 steps this hour														
	86 bpm 62 resting														
	4.05 miles														
	1,827 calories														
	25 floors														
	35 active minutes														

U.S. Patent No. 8,638,301	Fitbit, Inc. Accused Product ¹
	<p>To change the order of the daily stats tiles in the Today app, press and hold a tile until it's selected and then drag it to a new location.</p> <p>Find other information Ionic captures on your Fitbit dashboard such as:</p> <ul style="list-style-type: none">• Your sleep history, including hours slept and sleep stages• The hours of your day that you were stationary vs. active (walked at least 250 steps)• Your exercise history and progress towards a weekly exercise goal <hr/> <p>All Ionic stats except sleep reset at midnight to begin a new day.</p> <hr/> <p>Source: Fitbit, Inc. <i>Fitbit Ionic Product Manual</i> (2017), available at https://staticcs.fitbit.com/content/assets/help/manuals/manual_ionic_en_US.pdf.</p>









U.S. Patent No. 8,638,301	Fitbit, Inc. Accused Product ¹
	<p>Track a daily activity goal</p> <p>Ionic tracks your progress towards a daily activity goal of your choice. When you reach your goal, the watch vibrates and shows a celebration.</p> <p>Choose a goal</p> <p>By default, your goal is 10,000 steps per day, but you may have changed this goal during setup. You can change the goal to distance traveled, calories burned, or active minutes and select a corresponding value. For example, you may want to keep steps as your goal but change the target from 10,000 to 20,000 steps.</p> <p>For instructions on how to change your goal, see help.fitbit.com.</p> <p>See goal progress</p> <p>Some clock faces show a goal progress ring or bar to help keep you motivated. For example, on the Gauges clock face, the solid portion of the circle around the step count icon in the top right shows that you're close to hitting your goal.</p> <div> <p>The image shows a black rectangular clock face. At the top left, it says 'NOV 28'. In the center, the time '12:58' is displayed in large white digits. On the right side, there are three circular icons: a blue one with a person running, a pink one with a heart, and an orange one with a flame. Each icon is surrounded by a colored ring that is partially filled, indicating progress. The top ring (blue) is about 75% full, the middle ring (pink) is about 50% full, and the bottom ring (orange) is about 25% full.</p> </div> <p>Gauges clock face</p> <p>Source: Fitbit, Inc. <i>Fitbit Ionic Product Manual</i> (2017), available at https://staticcs.fitbit.com/content/assets/help/manuals/manual_ionic_en_US.pdf.</p> <p>As another example, the Accused Product includes a processor configured to receive data signals via a Bluetooth transceiver, a network interface. The Bluetooth transceiver is configured to receive signals transmitted by a smartphone (e.g., The Fitbit app is available for more than 200 mobile devices that support iOS, Android, and Windows 10 operating systems.), a second mobile device. Specifically, for example the microcontroller (i.e. processor) in the Accused Product receives data via the Bluetooth transceiver when the user of the Fitbit application (“app”) configures the Run Cues, which mark laps based on Fitbit app settings.</p>

U.S. Patent No. 8,638,301	Fitbit, Inc. Accused Product ¹
	<div> </div> <p><i>Source: Fitbit, Inc., Fitbit Ionic iPhone Application Setup (2017).</i></p> <p>The Fitbit app on the mobile device (e.g. Android or Apple smartphone) connects to the Fitbit Ionic via Bluetooth. Next, the Fitbit app transmits runs using the MobileRun app for the user as shown below.</p>


U.S. Patent No. 8,638,301	Fitbit, Inc. Accused Product ¹
	<div> <h3>MobileRun</h3> </div> <div> <p>MobileRun uses GPS to accurately track, log and compare runs, walks and hikes efficiently and easily.</p> </div> <div> <p>Through GPS, MobileRun allows you to track and elevate training/workouts with real-time updates and key stats from individual runs, walks and hikes, including exact route, pace per mile (splits), distance and time. Here's a breakdown of what you can get with MobileRun:</p> </div> <div> <ul style="list-style-type: none"> • Route history, spoken distance and mile markers while on a run, allowing you to monitor improvement or push further in the moment • Stats tracked integrate seamlessly with the main Fitbit dashboard, giving you credit for steps taken, calories burned and active minutes during routes • A new Exercise Frequency calendar keeps you on track toward workout goals – it automatically displays the days you have worked out by pulling in the frequency of MobileRun routes and logged exercises • You can conveniently play and switch songs from your iTunes playlists without leaving the Fitbit app, keeping the focus on your workout </div> <div> </div> <div> <p>Source: Fitbit, Inc., <i>Fitbit Ionic iPhone Application “MobileRun”</i> (2017), available at https://blog.fitbit.com/introducing-mobilerun-and-enhanced-food-logging-for-the-fitbit-app/.</p> </div> <div> <p>Further, the Fitbit App, for example, synchronizes (“syncs”) with the Fitbit Ionic. As shown below, the Fitbit App on the mobile device transfers data to the Fitbit Ionic, such as settings or configurations, via Bluetooth Low Energy (BLE) technology.</p> </div> <div> </div> <div> </div> <div> </div> <div> <p>Source: Fitbit, Inc., <i>Fitbit Blaze Android Application “Exercise”</i> (2017) (Based on public</p> </div>

U.S. Patent No. 8,638,301	Fitbit, Inc. Accused Product ¹
	<p>information, the Fitbit Ionic operates substantially similar to the Fitbit Blaze).</p> <p>Further, the Fitbit App, for example, synchronizes (“syncs”) with the Fitbit Blaze. As shown below, the Fitbit App on the mobile device transfers data to the Fitbit Blaze, such as settings or configurations, via Bluetooth Low Energy (BLE) technology.</p> <p>WHAT IS SYNCING?</p> <p><i>Syncing</i> is the process that transfers the data your tracker collects to your Fitbit dashboard. The dashboard is where you can track your progress, see how you slept, set goals, log food and water, challenge friends, and much more. Your tracker uses Bluetooth Low Energy (BLE) technology to sync with mobile devices and certain computers. The instructions in How do I set up my tracker? explain how to make sure your Fitbit tracker can sync with the mobile device or computer you prefer.</p> <p>WHEN DOES MY TRACKER SYNC?</p> <p>If your tracker is paired to the Fitbit app on a mobile device, it syncs every time you open the app. It can also sync periodically throughout the day if you have All-Day sync turned on. If you sync your tracker with a computer and Fitbit Connect, it syncs automatically every 15 to 30 minutes assuming the tracker and computer are in proximity, and the dongle is plugged in, if applicable.</p> <p>You can also initiate a sync whenever you like if your tracker is nearby. If you're using an iOS or Android mobile device, you can sync your tracker from the Fitbit app dashboard by touching your tracker image at the top of the screen and pulling down. Choose a section to see syncing instructions.</p> <hr/> <p>IOS DEVICES </p> <hr/> <p>ANDROID DEVICES </p> <hr/> <p>WINDOWS 10 MOBILE DEVICES AND COMPUTERS </p> <hr/> <p>MAC OR WINDOWS 8.1 COMPUTERS </p> <hr/> <p>Source: Fitbit, Inc., <i>How do Fitbit devices sync their data?</i> (2017), available at http://help.fitbit.com/articles/en_US/Help_article/1877?p=charge_2&c=Topics%3AAndroid&l=en_US&fs=Search&pn=1.</p>

U.S. Patent No. 8,638,301	Fitbit, Inc. Accused Product ¹									
	<table><tr><th>Exercise</th><th>Summary of stats (end of exercise)</th></tr><tr><td>Run</td><td><ul style="list-style-type: none">• Elapsed time</td></tr><tr><td>Hike</td><td><ul style="list-style-type: none">• Distance</td></tr><tr><td>Walk</td><td><ul style="list-style-type: none">• Pace (average)• Heart rate (average)• Heart rate (max)• Calories burned• Steps</td></tr></table>	Exercise	Summary of stats (end of exercise)	Run	<ul style="list-style-type: none">• Elapsed time	Hike	<ul style="list-style-type: none">• Distance	Walk	<ul style="list-style-type: none">• Pace (average)• Heart rate (average)• Heart rate (max)• Calories burned• Steps	
Exercise	Summary of stats (end of exercise)									
Run	<ul style="list-style-type: none">• Elapsed time									
Hike	<ul style="list-style-type: none">• Distance									
Walk	<ul style="list-style-type: none">• Pace (average)• Heart rate (average)• Heart rate (max)• Calories burned• Steps									
	<p>Source: Fitbit, Inc. <i>Fitbit Ionic Product Manual</i> (2017), available at https://staticcs.fitbit.com/content/assets/help/manuals/manual_ionic_en_US.pdf.</p>									
determine a change in a display signal based at least in part on the first data signal and the second sensor signal;	<p>The Accused Product includes a processor configured to determine a change in a display signal based at least in part on the first data signal and the second sensor signal.</p> <p>For example, the Accused Product tracks the progress towards a daily goal as the data. In particular, the Accused Product uses its processor that is configured to determine the changes in the screens (i.e. display signal) based the user’s steps and statistics on the route and GPS (i.e. first data signal) and the user’s interaction or navigation with the touch screen input device (i.e. second sensor signal) that sets up the a tracking exercise, steps taken, or Rue Cue.</p> <p>The pictures below show that the Accused Product allows for the user to interact with the touchscreen and tracks a variety of user’s stats. Further, the pictures provide how the user can navigate the exercise menu on the Accused Product, and as an example, the Accused Product may determine a change in the display screen based on the user’s daily activity goal.</p>									

U.S. Patent No. 8,638,301	<div>Fitbit, Inc. Accused Product¹</div> <div><div>Automatic Tracking</div><div><p>Ionic continuously tracks a variety of stats whenever you wear it, including hourly activity and heart rate. Ionic also tracks your exercise and sleep automatically. The information is transferred to your dashboard every time you sync your watch.</p><p>See your daily stats</p><p>The Today app () on Ionic tracks these all-day stats:</p><ul style="list-style-type: none">• Steps taken• Steps this hour• Heart rate and resting heart rate• Distance covered• Calories burned• Floors climbed• Active minutes<div><div><div><div><div></div><div>8,320</div><div>steps</div></div><div><div></div><div>138</div><div>steps this hour</div></div><div><div></div><div>86bpm</div><div>62 resting</div></div><div><div></div><div>4.05</div><div>miles</div></div><div><div></div><div>1,827</div><div>calories</div></div><div><div></div><div>25</div><div>floors</div></div><div><div></div><div>35</div><div>active minutes</div></div></div><div>Today app</div></div></div></div></div>
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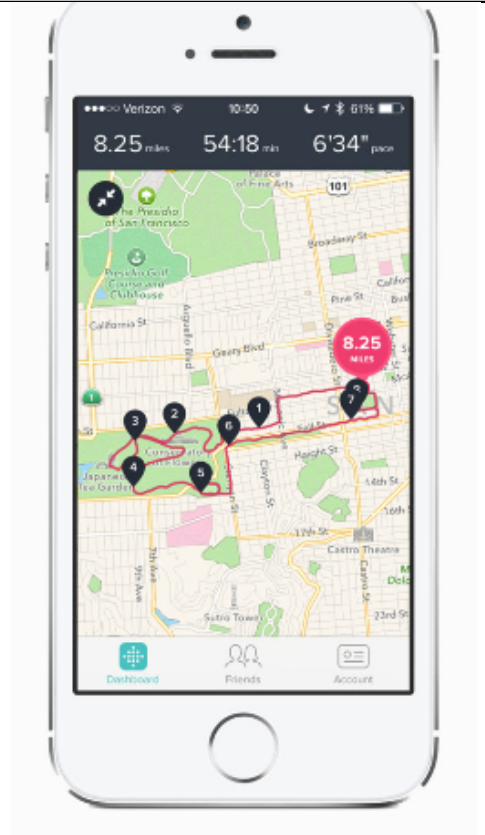
U.S. Patent No. 8,638,301	Fitbit, Inc. Accused Product ¹
	<p>To change the order of the daily stats tiles in the Today app, press and hold a tile until it's selected and then drag it to a new location.</p> <p>Find other information Ionic captures on your Fitbit dashboard such as:</p> <ul style="list-style-type: none"> • Your sleep history, including hours slept and sleep stages • The hours of your day that you were stationary vs. active (walked at least 250 steps) • Your exercise history and progress towards a weekly exercise goal <hr/> <p>All Ionic stats except sleep reset at midnight to begin a new day.</p> <hr/> <p>Source: Fitbit, Inc. <i>Fitbit Ionic Product Manual</i> (2017), available at https://staticcs.fitbit.com/content/assets/help/manuals/manual_ionic_en_US.pdf.</p> <h2>Track a daily activity goal</h2> <p>Ionic tracks your progress towards a daily activity goal of your choice. When you reach your goal, the watch vibrates and shows a celebration.</p> <h3>Choose a goal</h3> <p>By default, your goal is 10,000 steps per day, but you may have changed this goal during setup. You can change the goal to distance traveled, calories burned, or active minutes and select a corresponding value. For example, you may want to keep steps as your goal but change the target from 10,000 to 20,000 steps.</p> <p>For instructions on how to change your goal, see help.fitbit.com.</p> <h3>See goal progress</h3> <p>Some clock faces show a goal progress ring or bar to help keep you motivated. For example, on the Gauges clock face, the solid portion of the circle around the step count icon in the top right shows that you're close to hitting your goal.</p> <div> </div> <p>Gauges clock face</p>


U.S. Patent No. 8,638,301	Fitbit, Inc. Accused Product ¹
	<p>Source: Fitbit, Inc. <i>Fitbit Ionic Product Manual</i> (2017), available at https://staticcs.fitbit.com/content/assets/help/manuals/manual_ionic_en_US.pdf.</p> <p>Track your exercise automatically</p> <p>Ionic automatically detects several exercises and records them in your exercise history using the SmartTrack feature. For greater precision or to see real-time stats and a workout summary on your watch, manually start and stop an exercise using the Exercise app ().</p> <p>For more information on how to use the Exercise app, see Track and analyze your activity</p> <p>SmartTrack ensures you get credit for your most active moments of the day. When you sync your watch after a SmartTrack-detected exercise, you'll find several stats in your exercise history including duration, calories burned, impact on your day, and more.</p> <p>By default, SmartTrack detects continuous movement of at least 15 minutes in length. You can increase or decrease the minimum duration or disable SmartTrack for 1 or more exercise types.</p> <p>For more information about how to customize and use SmartTrack, see help.fitbit.com.</p> <p>Source: Fitbit, Inc. <i>Fitbit Ionic Product Manual</i> (2017), available at https://staticcs.fitbit.com/content/assets/help/manuals/manual_ionic_en_US.pdf.</p> <p>In another example, the Accused Product displays the running app and tracks the user's miles and time. When the user reaches a Run Cue, the display changes to indicate that the user has reached a mark lap (e.g. 1 mile) based on that Run Cue, as illustrated below.</p>

U.S. Patent No. 8,638,301	Fitbit, Inc. Accused Product ¹
	 <p>Source: Fitbit, Inc., <i>Ionic</i> (2017), available at https://www.fitbit.com/shop/ionic.</p>
<p>determine a haptic effect based at least in part on the first data signal; and</p>	<p>The Accused Product includes a processor configured to determine a haptic effect based at least in part on the first data signal.</p> <p>For example, the Accused Product provides a processor configured to determine a haptic feedback, e.g., vibration or tactile pulse pattern (i.e. haptic effect) based at least in part on the user's stats (i.e. first data signal).</p> <p>The following pictures below show that the Accused Product contains haptic feedback, via a "vibration motor." As an example, the pictures below show that the Accused Product may determine a haptic feedback based on the user's exercise statistics, such as the user meeting the 10,000 steps goal.</p> <p>Haptic feedback</p> <p>Ionic contains a vibration motor for alarms, goals, notifications, and reminders.</p> <p>Source: Fitbit, Inc. <i>Fitbit Ionic Product Manual</i> (2017), available at https://staticcs.fitbit.com/content/assets/help/manuals/manual_ionic_en_US.pdf.</p> <p>As another example, the Fitbit Ionic determines a vibration (i.e. haptic feedback) based on whether the user has ran, walk, or hiked communicated by the Fitbit App from the smartphone.</p>

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	<div> </div> <div> </div> <p><i>Source: Fitbit, Inc., Ionic, (2017), available at https://www.fitbit.com/shop/ionic.</i></p> <p>Further, a user can change the Running Cues to different miles or minutes. Indeed, Fitbit provides users with a forum to ask questions and provides instructions to change adjust or edit settings on users' Fitbit App and Fitbit trackers. For instance, a user asks how to adjust the settings for the MobileRun so that the Fitbit tracker will vibrate every .5 miles instead of just 1 mile, as illustrated below.</p>

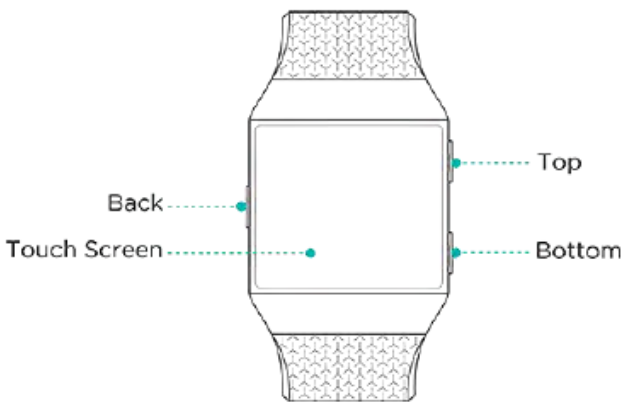
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	<p>MobileRun</p> <p>MobileRun uses GPS to accurately track, log and compare runs, walks and hikes efficiently and easily.</p> <p>Through GPS, MobileRun allows you to track and elevate training/workouts with real-time updates and key stats from individual runs, walks and hikes, including exact route, pace per mile (splits), distance and time. Here's a breakdown of what you can get with MobileRun:</p> <ul style="list-style-type: none"> • Route history, spoken distance and mile markers while on a run, allowing you to monitor improvement or push further in the moment • Stats tracked integrate seamlessly with the main Fitbit dashboard, giving you credit for steps taken, calories burned and active minutes during routes • A new Exercise Frequency calendar keeps you on track toward workout goals – it automatically displays the days you have worked out by pulling in the frequency of MobileRun routes and logged exercises • You can conveniently play and switch songs from your iTunes playlists without leaving the Fitbit app, keeping the focus on your workout <p>Source: Fitbit, Inc., <i>Fitbit Ionic iPhone Application "MobileRun"</i> (2017), available at https://blog.fitbit.com/introducing-mobilerun-and-enhanced-food-logging-for-the-fitbit-app/.</p>
outputting the haptic effect.	<p>The Accused Product includes a processor configured to output the haptic effect.</p> <p>For example, the Accused Product includes a processor configured to output the haptic feedback (i.e. haptic effect).</p> <p>The pictures below provide that the Accused Product is configured to output the haptic feedback (i.e. haptic effect). As an example, the Accused Product vibrates with alarms, goals, and notifications, such as the user meeting the 10,000 steps goal.</p>

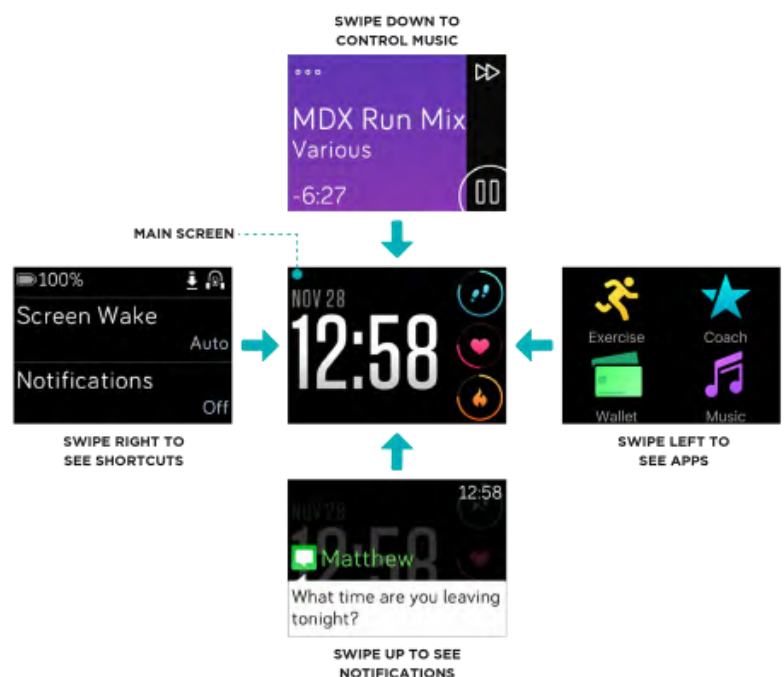
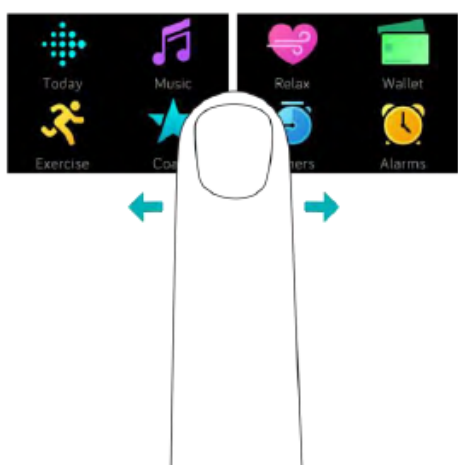


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	<p>Haptic feedback</p> <p>Ionic contains a vibration motor for alarms, goals, notifications, and reminders.</p> <p>Source: Fitbit, Inc. <i>Fitbit Ionic Product Manual</i> (2017), available at https://staticcs.fitbit.com/content/assets/help/manuals/manual_ionic_en_US.pdf.</p> <p>Further, as another example, the Accused Product has a processor that is configured to vibrate once the user reaches a certain Run Cue.</p> <div> <p>Running cues</p> <div> <div>  <p>ltri</p> <p>Jogger</p> <p>1 ✓ 0 🍌 0</p> <p>Flag Post</p> <p>Message 1 of 3</p> </div> <div> <p>08-16-2016 21:48</p> <p>Is there a way to set it to vibrate and let me know every .5 miles instead of just 1 mile? I do speed work and it would help if it would vibrate instead of having to check. Thank uou</p> <div> 👍 0 Votes Reply </div> </div> </div> </div>



Source: Fitbit, Inc., *Fitbit Community, Product Help Forums “Surge,” “Running Cues”* (2017), available at <https://community.fitbit.com/t5/Surge/Running-cues/td-p/1514934>.


Claim 28	Fitbit, Inc. Accused Product
<p>The system of claim 27, wherein the first sensor and the second sensor are each configured to detect one or more of: contact, pressure, acceleration, inclination, inertia, or location.</p>	<p>The Accused Product provides that the first sensor and the second sensor are each configured to detect one or more of: contact, pressure, acceleration, inclination, inertia, or location.</p> <p>For example, the Accused Product provides that the MEMS 3-axis accelerometer (i.e. first sensor) and the second sensor (i.e. touchscreen) are each configured to detect one or more of: contact, pressure, acceleration, inclination, inertia, or location.</p> <p>The pictures below show that the Accused Product contains a touch-screen (i.e. contact pressure), 3-axis accelerometer (i.e. acceleration), and an altimeter (i.e. inclination and inertia).</p> <p>Sensors</p> <p>Fitbit Ionic contains the following sensors and motors:</p> <ul style="list-style-type: none"> • A MEMS 3-axis accelerometer, which tracks your motion patterns • An altimeter, which tracks altitude changes • A GPS receiver with GLONASS, which tracks your location during a workout • An optical heart-rate tracker • Ambient light sensor • Temperature sensor <p>Source: Fitbit, Inc. <i>Fitbit Ionic Product Manual</i> (2017), available at https://staticcs.fitbit.com/content/assets/help/manuals/manual_ionic_en_US.pdf.</p>

Claim 29	Fitbit, Inc. Accused Product
<p>The system of claim 27, wherein the second sensor comprises a touch-screen.</p>	<p>The Accused Product provides the second sensor comprises a touch-screen.</p> <p>For example, the Accused Product provides the second sensor comprises a touchscreen (i.e. touchscreen).</p> <p>As shown below, the Accused Product contains a color touch screen (i.e. second sensor).</p> <p>Navigate Ionic</p> <p>Ionic has a touch screen with a colored LCD and three buttons: back, top, and bottom.</p>  <p>Navigate Ionic by swiping side to side and up and down or by pressing the buttons.</p> <p>Basic navigation</p> <p>The home screen is the clock. On the clock:</p> <ul style="list-style-type: none"> • Swipe up to see notifications. • Swipe down to control music. • Swipe right to see the shortcuts screen.

Claim 29	Fitbit, Inc. Accused Product
	<ul style="list-style-type: none"> Swipe left to scroll through the apps installed on your watch.  <p>Depending on the clock face you choose, you can also tap the clock screen to scroll through your daily stats which are explained in Automatic Tracking.</p> <p>To open an app, swipe to find the app and then tap it. For more information on how to manage apps, see help.fitbit.com.</p>  <p>Source: Fitbit, Inc. <i>Fitbit Ionic Product Manual</i> (2017), available at https://staticcs.fitbit.com/content/assets/help/manuals/manual_ionic_en_US.pdf.</p>

Claim 31	Fitbit, Inc. Accused Product
<p>The system of claim 27, wherein the processor is further configured to transmit a second data signal to the network interface, and the network interface is further configured to transmit the second data signal to the second mobile device.</p>	<p>The Accused Product provides the processor is further configured to transmit a second data signal to the network interface, and the network interface is further configured to transmit the second data signal to the second mobile device.</p> <p>For example, as the picture below shows in the red boxes, the Accused Product provides that the processor is further configured to transmit information corresponding to a summary of a user's tracked statistics and results, including daily activity goal results or Cue data results (i.e. second data signal) to the Bluetooth transceiver (i.e. network interface), and the Bluetooth transceiver (i.e. network interface) is further configured to transmit the information corresponding to a summary of a user's tracked statistics and results, including daily activity goal results or Cue data results to smartphone, such as an iPhone or Android smartphone (i.e. second mobile device). By way of example, as shown in the red boxes in the picture below, the Accused Product provides that the processor is further configured to transmit or sync the information corresponding to a summary of a user's tracked statistics and results, including daily activity goal results or Cue data results to the Bluetooth transceiver, and the Bluetooth transceiver is further configured to transmit the information corresponding to a summary of a user's tracked statistics and results, including daily activity goal results or Cue data results to the Fitbit dashboard on a user's smartphone, such as an iPhone or Android smartphone.</p>

Claim 31	Fitbit, Inc. Accused Product
	<div style="border: 2px solid red; padding: 10px;"> <h3 style="color: #00AEEF;">Automatic Tracking</h3> <p>Ionic continuously tracks a variety of stats whenever you wear it, including hourly activity and heart rate. Ionic also tracks your exercise and sleep automatically. The information is transferred to your dashboard every time you sync your watch.</p> </div> <div style="border: 2px solid red; padding: 10px; margin-top: 20px;"> <h3 style="color: #00AEEF;">See your daily stats</h3> <p>The Today app () on Ionic tracks these all-day stats:</p> <ul style="list-style-type: none"> Steps taken Steps this hour Heart rate and resting heart rate Distance covered Calories burned Floors climbed Active minutes <div style="text-align: center; margin-top: 20px;">  </div> <p style="text-align: center; font-size: small;">Today app</p> </div> <p style="margin-top: 20px;">Source: Fitbit, Inc. <i>Fitbit Ionic Product Manual</i> (2017), available at https://staticcs.fitbit.com/content/assets/help/manuals/manual_ionic_en_US.pdf.</p> <p>By way of another example, as the picture below shows in the red boxes, the Accused Product provides that the processor is further configured to transmit information corresponding to a summary of a user's tracked statistics and results, including daily activity goal results or Cue data results (i.e. second data signal) to the Bluetooth transceiver (i.e. network interface), and the Bluetooth transceiver (i.e. network interface) is further configured to transmit the information corresponding to a summary of a user's tracked statistics and results, including daily activity goal results or Cue data results to smartphone, such as an iPhone or Android smartphone (i.e.</p>

Claim 31	Fitbit, Inc. Accused Product
	<p>second mobile device). For instance, as shown in the red boxes in the picture below, the Accused Product provides that the processor is further configured to transmit or sync information corresponding to a summary of a user's tracked statistics and results, including daily activity goal results or Cue data results to the Bluetooth transceiver, and the Bluetooth transceiver is further configured to transmit the information corresponding to a summary of a user's tracked statistics and results, including daily activity goal results or Cue data results to the Fitbit dashboard on a user's smartphone, such as an iPhone or Android smartphone.</p> <ol style="list-style-type: none"> 2. Swipe through the list of exercises until you find the one you want to customize. 3. Tap the gear icon () in the top left and scroll through the list of settings. 4. Tap a setting to adjust it. 5. When you're done, press the back button to return to the exercise screen and then press the play icon to start the workout. <div style="border: 2px solid red; padding: 10px;"> <p>Check your workout summary</p> <p>After you complete a workout, Ionic shows a summary of your stats.</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>Nice Work!</p> <p>⌚ 1:24:00.54</p> <p>📍 2.05mi</p> <p>❤️ 134 bpm avg</p> <p>💓 151 bpm max</p> <p>⚡ 102 cal</p> <p>👣 5,348 steps</p> <p>⬆️ 232 feet</p> <p>Done</p> </div> <p>Run summary</p> <p>Sync your tracker to save the workout in your exercise history. There you can find additional stats and see your route and elevation climbed if you used GPS. The chart below shows the stats you see on your screen after you complete a specific exercise.</p> </div> <p>Source: Fitbit, Inc. <i>Fitbit Ionic Product Manual</i> (2017), available at https://staticcs.fitbit.com/content/assets/help/manuals/manual_ionic_en_US.pdf.</p> <p>By way of another example, as the picture below shows in the red boxes, the Accused Product provides that the processor is further configured to transmit information corresponding to a summary of a user's tracked statistics and results, including daily activity goal results or Cue data results (i.e. second data signal) to the Bluetooth transceiver (i.e. network interface), and the Bluetooth transceiver (i.e. network interface) is further configured to transmit the information corresponding to a summary of a user's tracked statistics and results, including daily activity goal results or Cue data results to smartphone, such as an iPhone or Android smartphone (i.e. second mobile device). Accordingly, the Accused Product provides that the processor is further</p>

Claim 31	Fitbit, Inc. Accused Product
	<p>configured to transmit information corresponding to a summary of a user's tracked statistics and results, including daily activity goal results or Cue data results (i.e. second data signal) to the Bluetooth transceiver (i.e. network interface), and the Bluetooth transceiver (i.e. network interface) is further configured to transmit the information corresponding to a summary of a user's tracked statistics and results, including daily activity goal results or Cue data results data to smartphone, such as an iPhone or Android smartphone, by syncing or transferring the information corresponding to a summary of a user's tracked statistics and results, including daily activity goal results or Cue data results data collected from the tracker to the Fitbit dashboard.</p> <div> <p>WHAT IS SYNCING?</p> <p><i>Syncing</i> is the process that transfers the data your tracker collects to your Fitbit dashboard. The dashboard is where you can track your progress, see how you slept, set goals, log food and water, challenge friends, and much more. Your tracker uses Bluetooth Low Energy (BLE) technology to sync with mobile devices and certain computers. The instructions in How do I set up my tracker? explain how to make sure your Fitbit tracker can sync with the mobile device or computer you prefer.</p> </div> <div> <p>WHEN DOES MY TRACKER SYNC?</p> <p>If your tracker is paired to the Fitbit app on a mobile device, it syncs every time you open the app. It can also sync periodically throughout the day if you have All-Day sync turned on. If you sync your tracker with a computer and Fitbit Connect, it syncs automatically every 15 to 30 minutes assuming the tracker and computer are in proximity, and the dongle is plugged in, if applicable.</p> <p>You can also initiate a sync whenever you like if your tracker is nearby. If you're using an iOS or Android mobile device, you can sync your tracker from the Fitbit app dashboard by touching your tracker image at the top of the screen and pulling down. Choose a section to see syncing instructions.</p> </div> <div> <ul style="list-style-type: none"> IOS DEVICES ✓ ANDROID DEVICES ✓ WINDOWS 10 MOBILE DEVICES AND COMPUTERS ✓ MAC OR WINDOWS 8.1 COMPUTERS ✓ </div> <p>Source: Fitbit, Inc., <i>How do Fitbit devices sync their data?</i> (2017), available at http://help.fitbit.com/articles/en_US/Help_article/1877?p=charge_2&c=Topics%3AAndroid&l=en_US&fs=Search&pn=1.</p>