

Garmin fenix 7 Series Specifications

| | fenix 7 | fenix 7 Solar | fenix 7 Sapphire Solar |
|---|--|--|--|
| General | | | |
| Lens Material | Corning® Gorilla® Glass DX | Power Glass™ | Power Sapphire™ |
| Bezel Material | stainless steel | stainless steel | titanium |
| Case material | fiber-reinforced polymer with metal rear cover | fiber-reinforced polymer with metal rear cover | fiber-reinforced polymer with metal rear cover |
| QuickFit™ watch band compatible | included (22 mm) | included (22 mm) | included (22 mm) |
| Strap material | silicone | silicone | silicone |
| Physical size | 47 x 47 x 14.5 mm | 47 x 47 x 14.5 mm | 47 x 47 x 14.5 mm |
| | Fits wrists with the following circumference: | Fits wrists with the following circumference: | Fits wrists with the following circumference: |
| | Silicone band: 125-208 mm | Silicone band: 125-208 mm | Silicone band: 125-208 mm |
| | Leather Band: 132-210 mm | Leather Band: 132-210 mm | Leather Band: 132-210 mm |
| | Fabric Band: 132-210 mm | Fabric Band: 132-210 mm | Fabric Band: 132-210 mm |
| | Metal Band: 132-215 mm | Metal Band: 132-215 mm | Metal Band: 132-215 mm |
| Touchscreen | ✓ | ✓ | ✓ |
| Color display | ✓ | ✓ | ✓ |
| Display Size | 1.3" (33.02 mm) diameter | 1.3" (33.02 mm) diameter | 1.3" (33.02 mm) diameter |
| Display Resolution | 260 x 260 pixels | 260 x 260 pixels | 260 x 260 pixels |
| Display Type | sunlight-visible, transfective memory-in-pixel (MIP) | sunlight-visible, transfective memory-in-pixel (MIP) | sunlight-visible, transfective memory-in-pixel (MIP) |
| Weight | 79 g (case only: 56 g) | 79 g (case only: 56 g) | 73 g (case only: 50 g) |
| Battery life | Smartwatch: Up to 18 days | Smartwatch: Up to 18 days/22 days with solar* | Smartwatch: Up to 18 days/22 days with solar* |
| | Battery Saver Watch Mode: Up to 57 days | Battery Saver Watch Mode: Up to 57 days/173 days with solar* | Battery Saver Watch Mode: Up to 57 days/173 days with solar* |
| | GPS Only: Up to 57 hours | GPS Only: Up to 57 hours/73 hours with solar** | GPS Only: Up to 57 hours/73 hours with solar** |
| | All Satellite Systems: Up to 40 hours | All Satellite Systems: Up to 40 hours with solar* | All Satellite Systems: Up to 40 hours/48 hours with solar* |
| | All Satellite Systems + Music: Up to 10 hours | All Satellite Systems and Music: Up to 10 hours | All Satellite Systems + Multi-band: Up to 23 hours/26 hours with solar** |
| | Max Battery GPS: Up to 136 hours | Max Battery GPS: Up to 136 hours with solar** | All Satellite Systems + Music: Up to 10 hours |
| | Expedition GPS: Up to 40 days | Expedition GPS: Up to 40 days/74 days with solar* | Max Battery GPS: Up to 136 hours/289 hours with solar** |
| | | *Solar charging, assuming all-day wear with 3 hours per day outside in 50,000 lux conditions | Expedition GPS: Up to 40 days/74 days with solar* |
| | | **Solar charging, assuming use in 50,000 lux conditions | *Solar charging, assuming all-day wear with 3 hours per day outside in 50,000 lux conditions |
| | | | **Solar charging, assuming use in 50,000 lux conditions |
| Water rating | 10 ATM | 10 ATM | 10 ATM |
| Memory/History | 16 GB | 16 GB | 32 GB |
| Clock Features | | | |
| Time/date | ✓ | ✓ | ✓ |
| GPS Time Sync | ✓ | ✓ | ✓ |
| Automatic daylight saving time | ✓ | ✓ | ✓ |
| Alarm clock | ✓ | ✓ | ✓ |
| Timer | ✓ | ✓ | ✓ |
| Stopwatch | ✓ | ✓ | ✓ |
| Sunrise/sunset times | ✓ | ✓ | ✓ |
| Health Monitoring | | | |
| Wrist-based Heart Rate (constant, every second) | ✓ | ✓ | ✓ |
| Daily Resting Heart Rate | ✓ | ✓ | ✓ |
| Abnormal Heart Rate Alerts | yes (high and low) | yes (high and low) | yes (high and low) |

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| Respiration rate (24x7) | ✓ | ✓ | ✓ |
| Pulse Ox Blood Oxygen Saturation | yes (spot-check, and optional all-day acclimation and in sleep) | yes (spot-check, and optional all-day acclimation and in sleep) | yes (spot-check, and optional all-day acclimation and in sleep) |
| Fitness Age | yes (in app) | yes (in app) | yes (in app) |
| Body Battery™ Energy Monitor | ✓ | ✓ | ✓ |
| All-day Stress | ✓ | ✓ | ✓ |
| Relaxation reminders | ✓ | ✓ | ✓ |
| Relaxation breathing timer | ✓ | ✓ | ✓ |
| Sleep | yes (advanced) | yes (advanced) | yes (advanced) |
| Sleep score and insights | ✓ | ✓ | ✓ |
| Hydration | yes (in Garmin Connect™ and optional Connect IQ™ widget) | yes (in Garmin Connect™ and optional Connect IQ™ widget) | yes (in Garmin Connect™ and optional Connect IQ™ widget) |
| Women's Health | yes (in Garmin Connect™ and optional Connect IQ™ widget) | yes (in Garmin Connect™ and optional Connect IQ™ widget) | yes (in Garmin Connect™ and optional Connect IQ™ widget) |
| Health snapshot | ✓ | ✓ | ✓ |
| Sensors | | | |
| GPS | ✓ | ✓ | ✓ |
| GLONASS | ✓ | ✓ | ✓ |
| Galileo | ✓ | ✓ | ✓ |
| Multi-frequency Positioning | ✓ | ✓ | ✓ |
| Garmin Elevate™ wrist heart rate monitor | ✓ | ✓ | ✓ |
| Barometric altimeter | ✓ | ✓ | ✓ |
| Compass | ✓ | ✓ | ✓ |
| Gyroscope | ✓ | ✓ | ✓ |
| Accelerometer | ✓ | ✓ | ✓ |
| Thermometer | ✓ | ✓ | ✓ |
| Pulse Ox Blood Oxygen Saturation Monitor | ✓ | ✓ | ✓ |
| Daily Smart Features | | | |
| Connectivity | Bluetooth®, ANT+®, Wi-Fi® | Bluetooth®, ANT+®, Wi-Fi® | Bluetooth®, ANT+®, Wi-Fi® |
| Connect IQ™ (downloadable watch faces, data fields, widgets and apps) | ✓ | ✓ | ✓ |
| On-device Connect IQ™ Store | ✓ | ✓ | ✓ |
| Smart Notifications | ✓ | ✓ | ✓ |
| Text response/reject phone call with text (Android™ only) | ✓ | ✓ | ✓ |
| Calendar | ✓ | ✓ | ✓ |
| Weather | ✓ | ✓ | ✓ |
| Realtime settings sync with Garmin Connect™ mobile | ✓ | ✓ | ✓ |
| Battery saver (customizable low power watch) | ✓ | ✓ | ✓ |
| Controls smartphone music | ✓ | ✓ | ✓ |
| Plays and controls watch music | ✓ | ✓ | ✓ |
| Music storage | up to 2,000 songs | up to 2,000 songs | up to 2,000 songs |
| Find My Phone | ✓ | ✓ | ✓ |
| Find My Watch | ✓ | ✓ | ✓ |
| VIRB® Remote | ✓ | ✓ | ✓ |
| Smartphone compatibility | iPhone®, Android™ | iPhone®, Android™ | iPhone®, Android™ |
| Pairs with Garmin Golf app | ✓ | ✓ | ✓ |
| Pairs with Garmin Connect™ Mobile | ✓ | ✓ | ✓ |
| Garmin Pay™ | ✓ | ✓ | ✓ |
| Safety and Tracking Features | | | |
| LiveTrack | ✓ | ✓ | ✓ |
| Group LiveTrack | ✓ | ✓ | ✓ |
| Live Event Sharing | ✓ | ✓ | ✓ |

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| Incident Detection during select activities | ✓ | ✓ | ✓ |
| Assistance | ✓ | ✓ | ✓ |
| Tactical Features | | | |
| Dual grid coordinates | ✓ | ✓ | ✓ |
| Activity Tracking Features | | | |
| Step counter | ✓ | ✓ | ✓ |
| Move bar (displays on device after a period of inactivity; walk for a couple of minutes to reset it) | ✓ | ✓ | ✓ |
| Auto goal (learns your activity level and assigns a daily step goal) | ✓ | ✓ | ✓ |
| Calories burned | ✓ | ✓ | ✓ |
| Floors climbed | ✓ | ✓ | ✓ |
| Distance traveled | ✓ | ✓ | ✓ |
| Intensity minutes | ✓ | ✓ | ✓ |
| TrueUp™ | ✓ | ✓ | ✓ |
| Move IQ™ | ✓ | ✓ | ✓ |
| Garmin Connect™ Challenges app | yes (optional Connect IQ app) | yes (optional Connect IQ app) | yes (optional Connect IQ app) |
| Gym & Fitness Equipment | | | |
| Available gym activity profiles | Strength, HIIT, Cardio and Elliptical Training, Stair Stepping, Floor Climbing, Indoor Rowing, Pilates and Yoga | Strength, HIIT, Cardio and Elliptical Training, Stair Stepping, Floor Climbing, Indoor Rowing, Pilates and Yoga | Strength, HIIT, Cardio and Elliptical Training, Stair Stepping, Floor Climbing, Indoor Rowing, Pilates and Yoga |
| Cardio workouts | ✓ | ✓ | ✓ |
| Strength workouts | ✓ | ✓ | ✓ |
| HIIT workouts | ✓ | ✓ | ✓ |
| Yoga workouts | ✓ | ✓ | ✓ |
| Pilates workouts | ✓ | ✓ | ✓ |
| On-screen workout animations | ✓ | ✓ | ✓ |
| Automatic rep counting | ✓ | ✓ | ✓ |
| Training, Planning and Analysis Features | | | |
| HR zones | ✓ | ✓ | ✓ |
| HR alerts | ✓ | ✓ | ✓ |
| HR calories | ✓ | ✓ | ✓ |
| % HR max | ✓ | ✓ | ✓ |
| % HRR | ✓ | ✓ | ✓ |
| Recovery time | ✓ | ✓ | ✓ |
| Auto max HR | ✓ | ✓ | ✓ |
| HRV stress test (measures your heart rate variability while standing still, for 3 minutes, to provide you with an estimated stress level; the scale of this is 1 to 100; low scores indicate lower stress levels) | yes (with compatible accessory) | yes (with compatible accessory) | yes (with compatible accessory) |
| HR Broadcast (broadcasts HR data over ANT+™ to paired devices) | ✓ | ✓ | ✓ |
| Respiration rate (during exercise) | yes (with compatible accessory) | yes (with compatible accessory) | yes (with compatible accessory) |
| GPS speed and distance | ✓ | ✓ | ✓ |
| Customizable data pages | ✓ | ✓ | ✓ |
| Customizable activity profiles | ✓ | ✓ | ✓ |
| Auto Pause® | ✓ | ✓ | ✓ |
| Interval training | ✓ | ✓ | ✓ |
| Advanced workouts | ✓ | ✓ | ✓ |
| Downloadable training plans | ✓ | ✓ | ✓ |

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| Power Modes - customizable in-activity battery settings | ✓ | ✓ | ✓ |
| Auto Lap® | ✓ | ✓ | ✓ |
| Manual lap | ✓ | ✓ | ✓ |
| Configurable lap alerts | ✓ | ✓ | ✓ |
| Heat and altitude acclimation | ✓ | ✓ | ✓ |
| VO2 Max (Run) | ✓ | ✓ | ✓ |
| VO2 Max (Trail Run) | ✓ | ✓ | ✓ |
| Realtime stamina | ✓ | ✓ | ✓ |
| Training Status (lets you see if you're training effectively by tracking your training history and fitness level trend.) | ✓ | ✓ | ✓ |
| Training Load (your total training load for the last 7 days calculated from estimated EPOC) | ✓ | ✓ | ✓ |
| Training load focus | ✓ | ✓ | ✓ |
| Training Effect | ✓ | ✓ | ✓ |
| Training Effect (anaerobic) | ✓ | ✓ | ✓ |
| Primary benefit (Training Effect labels) | ✓ | ✓ | ✓ |
| Improved recovery time | ✓ | ✓ | ✓ |
| Daily suggested workouts | ✓ | ✓ | ✓ |
| Custom alerts | ✓ | ✓ | ✓ |
| Audio prompts | ✓ | ✓ | ✓ |
| Finish time | ✓ | ✓ | ✓ |
| Virtual Partner | ✓ | ✓ | ✓ |
| Race an Activity | ✓ | ✓ | ✓ |
| Auto multisport activities | ✓ | ✓ | ✓ |
| Manual multisport activities | ✓ | ✓ | ✓ |
| Course guidance | ✓ | ✓ | ✓ |
| Garmin Live Segments | ✓ | ✓ | ✓ |
| Strava Live Segments | ✓ | ✓ | ✓ |
| Round-trip course creator (running/cycling) | ✓ | ✓ | ✓ |
| Trendline™ Popularity Routing | ✓ | ✓ | ✓ |
| Touch and/or button lock | ✓ | ✓ | ✓ |
| Hot keys | ✓ | ✓ | ✓ |
| Auto scroll | ✓ | ✓ | ✓ |
| Activity history on watch | ✓ | ✓ | ✓ |
| Physio TrueUp | ✓ | ✓ | ✓ |
| Running Features | | | |
| Available run profiles | Running, Track Running, Treadmill Running, Indoor Track Running, Trail Running, Virtual Running, Ultra Running | Running, Track Running, Treadmill Running, Indoor Track Running, Trail Running, Virtual Running, Ultra Running | Running, Track Running, Treadmill Running, Indoor Track Running, Trail Running, Virtual Running, Ultra Running |
| GPS-based distance, time and pace | ✓ | ✓ | ✓ |
| Running dynamics | yes (with compatible accessory) | yes (with compatible accessory) | yes (with compatible accessory) |
| Vertical oscillation and ratio (the degree of 'bounce' in your running motion and the cost-benefit ratio with stride length) | yes (with compatible accessory) | yes (with compatible accessory) | yes (with compatible accessory) |
| Ground contact time and balance (shows how much time, in the running motion, your foot is on the ground rather than in flight and lets you check your running symmetry) | yes (with compatible accessory) | yes (with compatible accessory) | yes (with compatible accessory) |
| Stride length (real time) | yes (with compatible accessory) | yes (with compatible accessory) | yes (with compatible accessory) |
| Cadence (provides real-time number of steps per minute) | ✓ | ✓ | ✓ |

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| Performance condition (after running 6–20 minutes, compares your real-time condition to your average fitness level) | ✓ | ✓ | ✓ |
| Lactate threshold (through analysis of your pace and heart rate, estimates the point where your muscles start to rapidly fatigue) | yes (with compatible accessory) | yes (with compatible accessory) | yes (with compatible accessory) |
| PacePro™ Pacing Strategies | ✓ | ✓ | ✓ |
| Run workouts | ✓ | ✓ | ✓ |
| Race predictor | ✓ | ✓ | ✓ |
| Foot pod capable | ✓ | ✓ | ✓ |
| Golfing Features | | | |
| Preloaded with 42,000 courses worldwide | ✓ | ✓ | ✓ |
| Yardage to F/M/B (distance to front, middle and back of green) | ✓ | ✓ | ✓ |
| Yardage to layups/doglegs | ✓ | ✓ | ✓ |
| Measures shot distance (calculates exact yardage for shots from anywhere on course) | Automatic | Automatic | Automatic |
| Digital scorecard | ✓ | ✓ | ✓ |
| Custom targets | ✓ | ✓ | ✓ |
| Stat tracking (strokes, putts per round, greens and fairways hit) | ✓ | ✓ | ✓ |
| Garmin AutoShot™ | ✓ | ✓ | ✓ |
| Full vector map | ✓ | ✓ | ✓ |
| Auto CourseView updates | ✓ | ✓ | ✓ |
| Green View with manual pin position | ✓ | ✓ | ✓ |
| Hazards and course targets | ✓ | ✓ | ✓ |
| PinPointer | ✓ | ✓ | ✓ |
| PlaysLike distance | ✓ | ✓ | ✓ |
| Touch-targeting (touch target on display to see the distance to any point) | ✓ | ✓ | ✓ |
| Handicap scoring | ✓ | ✓ | ✓ |
| TruSwing™ compatible | ✓ | ✓ | ✓ |
| Round timer/odometer | ✓ | ✓ | ✓ |
| Automatic club tracking compatible (requires accessory) | ✓ | ✓ | ✓ |
| Tournament legal | ✓ | ✓ | ✓ |
| Outdoor Recreation | | | |
| Available outdoor recreation profiles | Hiking, Indoor Climbing, Bouldering, Climbing, Mountain Biking, Skiing, Snowboarding, XC Skiing, Stand Up Paddleboarding, Rowing, Kayaking, Surfing, Hunting, Jumpmaster, Tactical, Kiteboard, Windsurf, Snowshoe | Hiking, Indoor Climbing, Bouldering, Climbing, Mountain Biking, Skiing, Snowboarding, XC Skiing, Stand Up Paddleboarding, Rowing, Kayaking, Surfing, Hunting, Jumpmaster, Tactical, Kiteboard, Windsurf, Snowshoe | Hiking, Indoor Climbing, Bouldering, Climbing, Mountain Biking, Skiing, Snowboarding, XC Skiing, Stand Up Paddleboarding, Rowing, Kayaking, Surfing, Hunting, Jumpmaster, Tactical, Kiteboard, Windsurf, Snowshoe |
| Point-to-point navigation | ✓ | ✓ | ✓ |
| Bread crumb trail in real time | ✓ | ✓ | ✓ |
| Back to start | ✓ | ✓ | ✓ |
| TracBack® | ✓ | ✓ | ✓ |
| UltraTrac mode | ✓ | ✓ | ✓ |
| Around Me mode | ✓ | ✓ | ✓ |
| Up Ahead | ✓ | ✓ | ✓ |
| Elevation profile | ✓ | ✓ | ✓ |
| Distance to destination | ✓ | ✓ | ✓ |
| Barometric trend indicator with Storm Alert | ✓ | ✓ | ✓ |

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| ClimbPro™ Ascent Planner | ✓ | ✓ | ✓ |
| Trail run auto climb | ✓ | ✓ | ✓ |
| Vertical speed | ✓ | ✓ | ✓ |
| Total ascent/descent | ✓ | ✓ | ✓ |
| Future elevation plot | ✓ | ✓ | ✓ |
| Preloaded topographical maps | x | x | ✓ |
| Preloaded road and trail maps | x | x | ✓ |
| Preloaded ski resort maps | ✓ | ✓ | ✓ |
| Downloadable cartography support | ✓ | ✓ | ✓ |
| Compatible with BaseCamp™ | ✓ | ✓ | ✓ |
| GPS coordinates | ✓ | ✓ | ✓ |
| Sight 'N Go | ✓ | ✓ | ✓ |
| Area calculation | yes (via Connect IQ™) | yes (via Connect IQ™) | yes (via Connect IQ™) |
| Hunt/fish calendar | yes (via Connect IQ™) | yes (via Connect IQ™) | yes (via Connect IQ™) |
| Projected waypoint | ✓ | ✓ | ✓ |
| Sun and moon information | yes (via Connect IQ™) | yes (via Connect IQ™) | yes (via Connect IQ™) |
| XERO™ Locations | ✓ | ✓ | ✓ |
| Expedition GPS Activity | ✓ | ✓ | ✓ |
| Tides | yes (via Connect IQ™) | yes (via Connect IQ™) | yes (via Connect IQ™) |
| Cycling Features | | | |
| Available cycling profiles | Biking, Indoor Biking, Mountain Biking, Triathlon | Biking, Indoor Biking, Mountain Biking, Triathlon | Biking, Indoor Biking, Mountain Biking, Triathlon |
| Alerts (triggers alarm when you reach goals including time, distance, heart rate or calories) | ✓ | ✓ | ✓ |
| Courses | ✓ | ✓ | ✓ |
| Cycle Map (routable cycling-specific street map) | ✓ | ✓ | ✓ |
| MTB Grit & Flow | ✓ | ✓ | ✓ |
| Bike lap and lap maximum power (with power sensor) | ✓ | ✓ | ✓ |
| Race an activity | ✓ | ✓ | ✓ |
| FTP (Functional Threshold Power) | yes (with compatible accessory) | yes (with compatible accessory) | yes (with compatible accessory) |
| Compatible with Vector™ (power meter) | ✓ | ✓ | ✓ |
| Power meter compatible | ✓ | ✓ | ✓ |
| Advanced Vector support | ✓ | ✓ | ✓ |
| Compatible with Varia Vision™ (head-mounted display) | ✓ | ✓ | ✓ |
| Compatible with Varia™ radar (rear-facing radar) | ✓ | ✓ | ✓ |
| Compatible with Varia™ lights | ✓ | ✓ | ✓ |
| Speed and cadence sensor support (w/sensor) | ✓ | ✓ | ✓ |
| Swimming Features | | | |
| Available swim profiles | Pool Swimming, Open Water Swimming, Swimming/Running | Pool Swimming, Open Water Swimming, Swimming/Running | Pool Swimming, Open Water Swimming, Swimming/Running |
| Open-water swim metrics (distance, pace, stroke count/rate, stroke distance, swim efficiency (SWOLF), calories) | ✓ | ✓ | ✓ |
| Pool swim metrics (lengths, distance, pace, stroke count, swim efficiency (SWOLF), calories) | ✓ | ✓ | ✓ |
| Stroke type detection (freestyle, backstroke, breaststroke, butterfly) (pool swim only) | ✓ | ✓ | ✓ |
| Drill logging (pool swim only) | ✓ | ✓ | ✓ |
| Basic rest timer (up from 0) (pool swim only) | ✓ | ✓ | ✓ |

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| "Repeat on" rest timer (pool swim only) | ✓ | ✓ | ✓ |
| Auto rest (pool swim only) | ✓ | ✓ | ✓ |
| Time and distance alerts | ✓ | ✓ | ✓ |
| Pacing alerts (pool swim only) | ✓ | ✓ | ✓ |
| Countdown start (pool swim only) | ✓ | ✓ | ✓ |
| Pool swim workouts | ✓ | ✓ | ✓ |
| Critical swim speed | ✓ | ✓ | ✓ |
| Underwater wrist-based heart rate | ✓ | ✓ | ✓ |
| Heart rate from external HRM (real-time during rests, interval and session stats during rests, and automatic heart rate download post-swim) | yes (with HRM-Tri™, HRM-Swim™ and HRM-Pro™) | yes (with HRM-Tri™, HRM-Swim™ and HRM-Pro™) | yes (with HRM-Tri™, HRM-Swim™ and HRM-Pro™) |
| Kid Activity Tracking Features | | | |
| Toe-to-Toe™ Challenges app | yes (optional Connect IQ Toe-to-Toe™ Challenges app) | yes (optional Connect IQ Toe-to-Toe™ Challenges app) | yes (optional Connect IQ Toe-to-Toe™ Challenges app) |
| Connectivity | | | |
| Smart trainer control | ✓ | ✓ | ✓ |