Garmin Instinct 2 & 2S - Surf Edition Specifications

	Instinct 2 - Surf	Instinct 2s - Surf
General		
Lens Material	Power Glass™	Power Glass™
Bezel Material	fiber-reinforced polymer	fiber-reinforced polymer
Case material	fiber-reinforced polymer	fiber-reinforced polymer
QuickFit™ watch band compatible	yes (22 mm)	yes (20 mm)
Strap material	silicone	silicone
Physical size	45 x 45 x 14.2 mm	40 x 40 x 13.3 mm
	Fits wrists with a circumference of 135-230 mm	Fits wrists with a circumference of 112-180 mm
Display Size	custom, two-window design; 0.9" x 0.9" (23 x 23 mm)	custom, two-window design; 0.79" x 0.79" (20 x 20 mm)
Display Resolution	176 x 176 pixels	156 x 156 pixels (active area)
Display Type	monochrome, sunlight-visible, transflective memory-in-pixel (MIP)	monochrome, sunlight-visible, transflective memory-in-pixel (MIP)
Weight	52 g	42 g
Battery life	Smartwatch: Up to 28 days	Smartwatch: Up to 21 days
	Battery Saver Watch Mode: Up to 65 days	Battery Saver Watch Mode: Up to 50 days
	GPS: Up to 30 hours	GPS: Up to 22 hours
	Max Battery GPS Mode: Up to 70 hours	Max Battery GPS Mode: Up to 54 hours
	Expedition GPS Activity: Up to 32 days	Expedition GPS Activity: Up to 25 days
[**Water rating**](#)	10 ATM	10 ATM
Memory/History	32 MB	32 MB
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)
Respiration rate (24x7)	✓	✓
Pulse Ox Blood Oxygen Saturation	yes (spot-check, during sleep, all day)	yes (spot-check, during sleep, all day)
Fitness Age	✓	✓
Body Battery™ Energy Monitor	✓	✓
All-day Stress	✓	✓
Relaxation breathing timer	✓	✓
Sleep	✓	✓
Sleep score and insights	✓	✓
Hydration	yes (in Garmin Connect™)	yes (in Garmin Connect™)
Women's Health	yes (in Garmin Connect™)	yes (in Garmin Connect™)
Health snapshot	✓	✓
Sensors		
GPS	✓	✓
GLONASS	✓	✓

Galileo	✓	✓
Garmin Elevate™ wrist heart rate monitor	✓	✓
Barometric altimeter	✓	✓
Compass	✓	✓
Accelerometer	✓	✓
Thermometer	✓	✓
Pulse Ox Blood Oxygen Saturation Monitor	✓	✓

Daily Smart Features

Connectivity	Bluetooth®, ANT+®	Bluetooth®, ANT+®
Connect IQ™ (downloadable watch faces, data fields, widgets and apps)	✓	✓
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	✓	✓
Find My Phone	✓	✓
Find My Watch	✓	✓
VIRB® Remote	✓	✓
Smartphone compatibility	iPhone®, Android™	iPhone®, Android™
Pairs with Garmin Golf app	✓	✓
Pairs with Garmin Connect™ Mobile	✓	✓

Safety and Tracking Features

LiveTrack	✓	✓
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)

Gym & Fitness Equipment

Available gym activity profiles	Strength, Cardio and Elliptical Training, HIIT, Stair Stepping, Floor Climbing, Indoor Rowing, and Yoga	Strength, Cardio and Elliptical Training, HIIT, Stair Stepping, Floor Climbing, Indoor Rowing, and Yoga
Cardio workouts	✓	✓
Strength workouts	✓	✓

HIIT workouts	✓	✓
Automatic rep counting	✓	✓

Training, Planning and Analysis Features

HR zones	✓	✓
HR alerts	✓	✓
HR calories	✓	✓
% HR max	✓	✓
% HRR	✓	✓
Recovery time	✓	✓
Auto max HR	✓	✓
HR Broadcast (broadcasts HR data over ANT+™ to paired devices)	yes (using ANT+)	yes (using ANT+)
Respiration rate (during exercise)	✓	✓
GPS speed and distance	✓	✓
Customizable data pages	✓	✓
Customizable activity profiles	✓	✓
Auto Pause®	✓	✓
Interval training	✓	✓
Advanced workouts	✓	✓
Downloadable training plans	✓	✓
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)	✓	✓
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 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	✓	✓
Touch and/or button lock	✓	✓
Hot keys	✓	✓
Auto scroll	✓	✓
Activity history on watch	✓	✓
Physio TrueUp	✓	✓

Running Features

Available run profiles	Running, Treadmill Running, Indoor Track Running, Trail Running	Running, Treadmill Running, Indoor Track Running, Trail Running
GPS-based distance, time and pace	✓	✓

Running dynamics	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)
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)
Stride length (real time)	yes (with compatible accessory)	yes (with compatible accessory)
Cadence (provides real-time number of steps per minute)	✓	✓
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)
Run workouts	✓	✓
Race predictor	✓	✓
Foot pod capable	✓	✓

Golfing Features

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)	manual	manual
Digital scorecard	✓	✓
Stat tracking (strokes, putts per round, greens and fairways hit)	✓	✓
Auto CourseView updates	✓	✓
Green View with manual pin position	✓	✓
Hazards and course targets	✓	✓
PinPointer	✓	✓
Round timer/odometer	✓	✓
Automatic club tracking compatible (requires accessory)	✓	✓
Tournament legal	✓	✓

Outdoor Recreation

Available outdoor recreation profiles	Surfing, Windsurfing, Kiteboarding, Hiking, Climbing, Indoor Climbing, Bouldering, Skiing, Snowboarding, XC Skiing, Stand Up Paddleboarding, Rowing, Kayaking, Fishing, Hunting, Tactical	Surfing, Windsurfing, Kiteboarding, Hiking, Climbing, Indoor Climbing, Bouldering, Skiing, Snowboarding, XC Skiing, Stand Up Paddleboarding, Rowing, Kayaking, Fishing, Hunting, Tactical
Point-to-point navigation	✓	✓
Bread crumb trail in real time	✓	✓
Back to start	✓	✓
TracBack®	✓	✓
UltraTrac mode	✓	✓
Elevation profile	✓	✓
Distance to destination	✓	✓
Barometric trend indicator with Storm Alert	✓	✓
Trail run auto climb	✓	✓
Vertical speed	✓	✓
Total ascent/descent	✓	✓
Future elevation plot	✓	✓

Compatible with BaseCamp™	✓	✓
GPS coordinates	✓	✓
Sight 'N Go	✓	✓
Area calculation	✓	✓
Projected waypoint	✓	✓
Sun and moon information	✓	✓
XERO™ Locations	✓	✓
Expedition GPS Activity	✓	✓

Cycling Features

Available cycling profiles	Biking, Road Biking, Mountain Biking, Gravel Biking, Cyclocross, Bike Commuting, Bike Touring, eBiking, eMountain Biking, Indoor Biking	Biking, Road Biking, Mountain Biking, Gravel Biking, Cyclocross, Bike Commuting, Bike Touring, eBiking, eMountain Biking, Indoor Biking
Alerts (triggers alarm when you reach goals including time, distance, heart rate or calories)	✓	✓
Courses	✓	✓
MTB Grit & Flow	✓	✓
Bike lap and lap maximum power (with power sensor)	✓	✓
Race an activity	✓	✓
FTP (Functional Threshold Power)	✓	✓
Compatible with Vector™ (power meter)	✓	✓
Power meter compatible	✓	✓
Speed and cadence sensor support (w/sensor)	✓	✓

Swimming Features

Available swim profiles	Pool Swimming, Open Water Swimming	Pool Swimming, Open Water Swimming
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)	✓	✓
"Repeat on" rest timer (pool swim only)	✓	✓
Auto rest (pool swim only)	✓	✓
Time and distance alerts	✓	✓
Countdown start (pool swim only)	✓	✓
Pool swim workouts	✓	✓
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)	✓	✓

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)

Connectivity

[Smart trainer control](#)	✓	✓