

RealWear Navigator 520

The rugged device that runs all shift.



The RealWear Navigator 520 is a rugged, voice-controlled assisted reality headset built for frontline workers in demanding environments. Worn around the head or attached to a hard hat, it is designed to handle extreme conditions. With hot-swappable batteries for all-day power, an optional FLIR thermal camera, and support for a wide range of accessories, the RealWear Navigator 520 adapts to virtually any industrial task or environment.



Product Highlights

Industrial Durability

IP66-rated and MIL-STD-810H certified, the RealWear Navigator 520 withstands dust, water, drops, and temperatures from -20°C/-4°F up to 45°C/113°F.

Modular Camera System

The 50 MP tiltable camera can be removed and replaced with an optional FLIR thermal camera module, giving workers the flexibility to switch between standard and thermal imaging.

Hot-Swappable Batteries

Hot-swappable, rechargeable batteries can be replaced in the field without powering down the device, keeping workers productive across long shifts.

Clear Stereo Audio

Two internal speakers and four noise-cancelling microphones (up to 100 dB) maintain reliable voice control and clear calls in loud workplaces.

RealWear Navigator 520 Specifications

General	
Chipset	Qualcomm® Snapdragon™ 662
Memory	64GB / 4GB RAM / micro SD card slot (max 512GB)
Material	LEXAN™ EXL9330
Ports	USB Type-C, 3.5mm (1/8-inch) audio jack
Weight	270 g (9.5 oz)
Dimensions	Folded: 192 × 200 × 55 mm (7.56 × 7.87 × 2.17 in) Unfolded: 317 × 200 × 29 mm (12.48 × 7.87 × 1.14 in)
Operating Temperature, Humidity	−20°C to 45°C (−4°F to 113°F) / 10% to 80% (non-condensing)
Ruggedization	IP66, MIL-STD-810H
Display	
Technology	Liquid Crystal on Silicon (Full-Color RGB)
Resolution	1280 x 720 (HD)
Field of View	24°
See-through Display	No
Supported Eye	Both eyes supported
Adjustable Display	6-way adjustable boom arm that easily adapts to any head size
Connectivity & Sensors	
Wi-Fi	802.11 a/b/g/n/ac (2.4 GHz and 5 GHz)
Bluetooth	Bluetooth 5.1 (BLE + standard)
GPS and Location	GPS, GLONASS, NavIC, BeiDou, Galileo, QZSS, SBAS, Dual-Frequency GNSS, Qualcomm® Sensor-Assisted Positioning
Sensors	3-Axis Gyroscope, 3-Axis Accelerometer, Barometer, 3-Axis Magnetometer, Ambient Light Sensor, Fingerprint Sensor
Power & Charging	
Battery	Hot-swappable lithium-polymer battery (2600mAh / 3.8V)
Charging Options	USB Type-C charging or external battery charger

RealWear Navigator 520 Specifications

Camera	
Main Camera	50 MP, 82° FOV (Sony LYT-600)
Video Resolution	1080p at 60 fps
Supported Codecs	H.264, HEVC, MPEG-4, VP8/9, VC1, H.263, MPEG-2
Flash	Yes
Audio	
Microphones	4 digital microphones with active noise cancellation (up to 100 dBA)
Speaker	Internal 94dBA loudspeaker on both sides
Software & Security	
Operating System	Ari OS (Android 13)
Sign-In Options	Companion App, Voice Keyboard (Secure Mode), Everykey
Security	Qualcomm® Trusted Execution Environment, Secure Boot, Crypto Engine
Cloud	Ari Cloud (Centralized Deployment and Management)
Supported Languages	Chinese Cantonese (中文粵語), Chinese Simplified (中文简体), Chinese Traditional (中文繁體), Czech (Čeština), Danish (Dansk), Dutch (Nederlands), English (Australia), English (India), English (United Kingdom), English (United States), French (Français), German (Deutsch), Indonesian (Bahasa Indonesia), Italian (Italiano), Japanese (日本語), Korean (한국어), Norwegian Bokmål (Norsk bokmål), Polish (Polski), Portuguese (Português), Russian (Русский), Spanish (Español), Thai (ไทย), Turkish (Türkçe)
Other	
Compatible With	Helmets, eyewear (safety/prescription), hearing protection, and external headphones (wired/wireless)
In The Box	RealWear Navigator 520 (with Battery Pack), Workband 2, USB Type-A Cable, Quick Start Guide