



The ultimate guide to

Understanding Ultra-Rugged

Explore what it takes for a phone to be “ultra-rugged” and how Sonim devices meet the industry’s highest standards.

Discover the
potential of
ultra-rugged
devices.



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FAQ 1

RPS
Guide

What does it mean for a phone to be “ultra-rugged”?

To be truly ultra-rugged, a device must be **designed, built, and tested against rugged performance standards.**

Sonim Rugged Performance Standards.

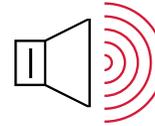
Designing the ultimate rugged phone.

When we set out to build Sonim phones, we didn't want to just meet the limited standards of the industry, like MIL-STD-810G and Ingress Protection (IP) ratings.

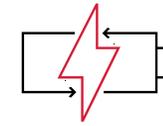
So, we pushed beyond them and created a more comprehensive set of standards. Based on over ten years of feedback from customer usage in the world's most extreme environments, Sonim Rugged Performance Standards (RPS) consist of 12 benchmarks of endurance and durability.

And then we designed, built, and tested Sonim devices to exceed industry standards.

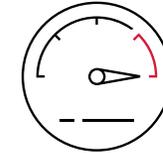
RPS criteria



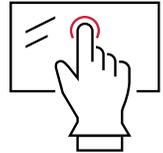
Extra-Loud
Audio



Multi-Shift
Battery Life



Operational
in Extreme
Temperatures



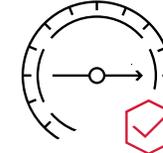
Glove Friendly



Water-proof
IPX8



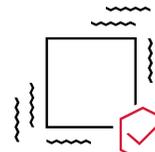
Dust-proof
IP6X



Pressure
Resistant



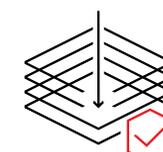
Puncture
Resistant



Shock
Resistant



Chemical
Resistant



Drop/Impact
Resistant



3 YEAR
COMPREHENSIVE
WARRANTY

FAQ 2

RPS
Guide

How is an ultra-rugged phone different from putting a case on a consumer phone?

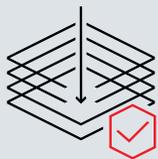
It's more than just putting "bumpers" on a mobile device.

Sonim ultra-rugged phones are purpose-built to survive hazardous environments without a case.

Ultra-rugged phones are designed to absorb energy.

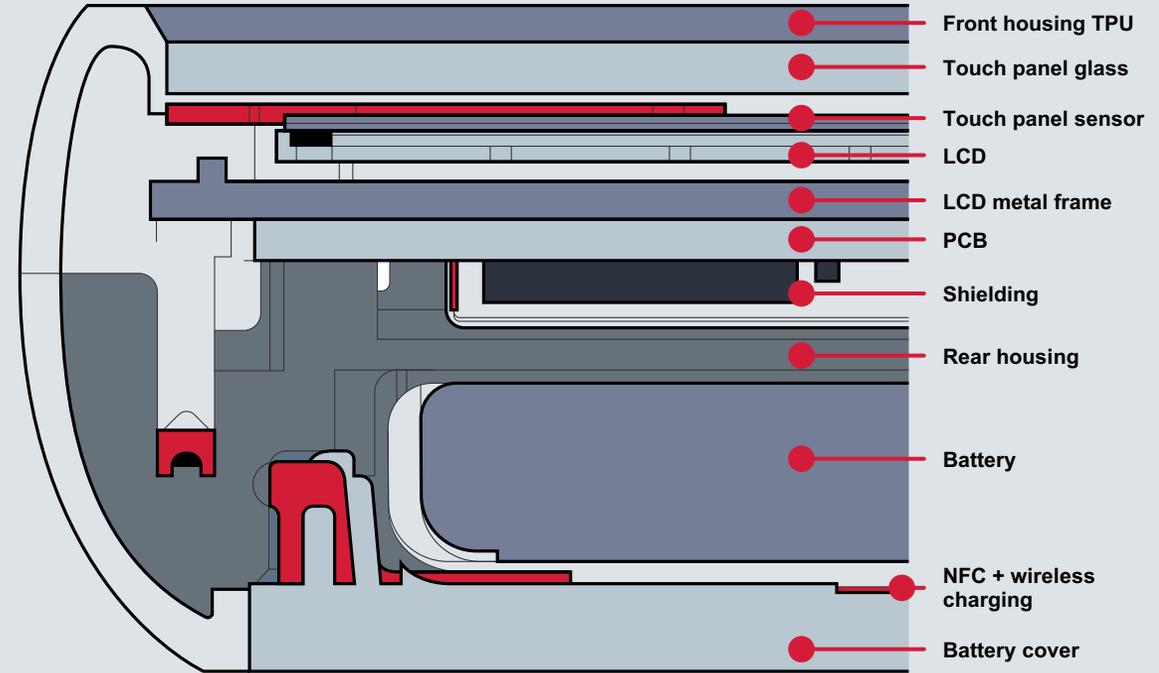
Sonim ultra-rugged phones are impact-tested at every angle.

Unlike consumer devices which are designed to be as light and thin as possible, and therefore fragile, ultra-rugged devices are specifically engineered to withstand the rigors of extreme environments.



Sonim testers drop the device from a minimum height of 4 feet on each of its 6 faces, 12 edges and 8 corners, for a total of 26 drops. This test ensures that all possible points of impact are tested.

Thickness View



Built with industry-leading materials.

Sonim ensures glass durability by leveraging extremely shock-resistant and chemically-strengthening Gorilla Glass on devices.



Hardened rubber molded housing can withstand up to 4J of impact energy protecting the edges of the Gorilla Glass screens.



Durability Test



Watch Test

No case necessary.

Sonim devices are built tough on their own so you don't need a case.

In some instances, with consumer devices, a case can increase the temperature and/or trap moisture/humidity causing performance issues.



Waterproof and operational in extreme temperatures, Sonim devices are less likely to fail due to case-related moisture and temperature issues.

Damp Heat Test



140° F / 93.1% Humidity

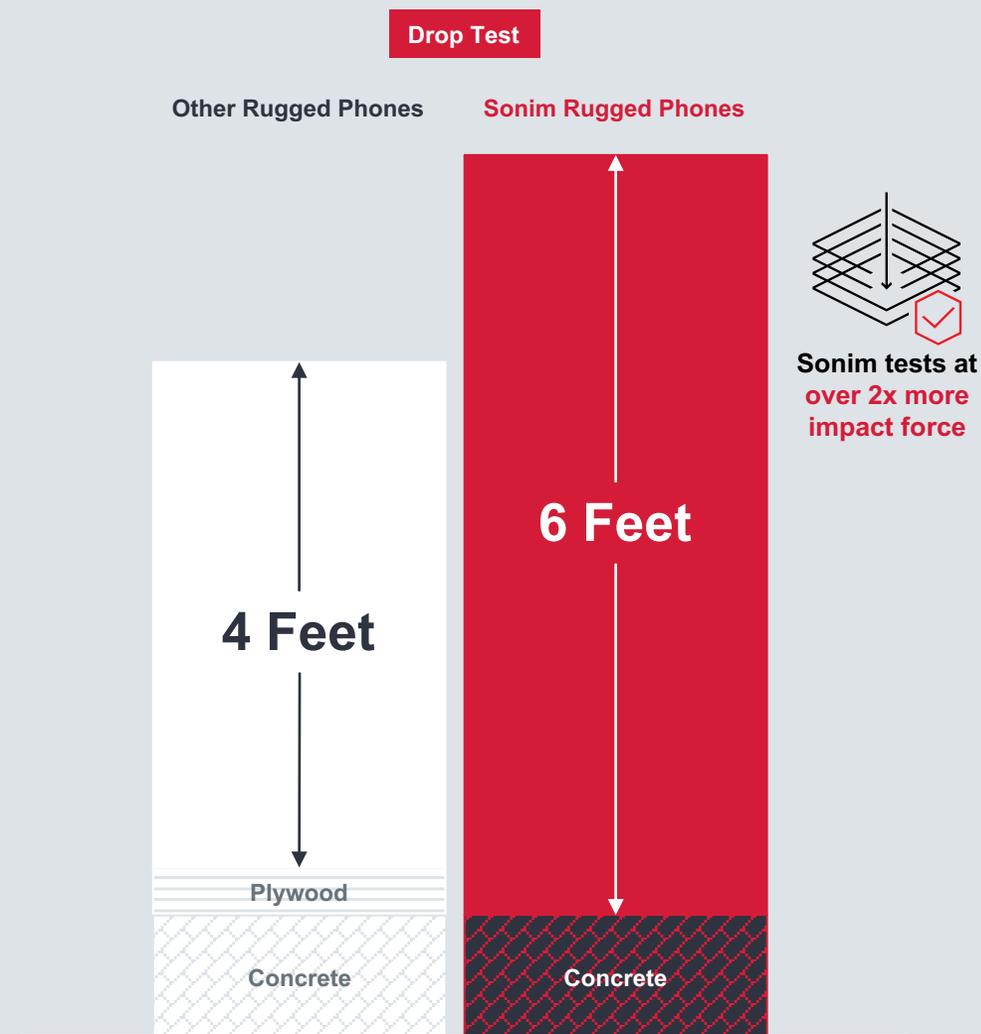
Watch Test

Tested beyond average durability demands.

While most rugged-phone providers drop test at 4 foot to plywood over concrete, Sonim tests at 6 feet directly to concrete, which is more than twice the impact force.



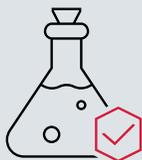
There is no outside auditor for MIL-STD-810G testing. Vendors are left to self-test their own products and have leeway in doing so, so MIL-STD-810G claims should be followed up with questions to ensure devices were rigorously tested.



[Watch Test](#)

Designed to withstand **chemical disinfection and immersion.**

Sonim ultra-rugged smartphones can be rigorously cleaned and disinfected with harsh chemical cleaning agents.



Safely scrub, wipe-down, spray, or even submerge devices with aerosols, bleaches and other abrasive cleaners as needed.



Aggressively scrub and wipe-down



Safely submerge in chemical cleaning agents up to 30 minutes



Use aerosol sprays, bleaches and other abrasive cleaners as needed



Safe to spray directly on device



Ultra-Rugged Smartphone

Consumer Smartphone

Aggressively lab-tested for chemical resistance.

Chemicals used in Sonim testing:

- Isopropyl Alcohol
- Bleach
- Detergent
- Benzalkonium
- Glass Cleaner
- Gasoline
- Acetone

....and more

Process



One

A layer of the tested chemical is applied to the device.

The chemical can dry on the device over 24 hours.



Two

The device is placed in an oven at **50°C for two hours.**



Three

Device is inspected for any improper operation or faded/cracked parts.

Put to test by customers in the real-world.

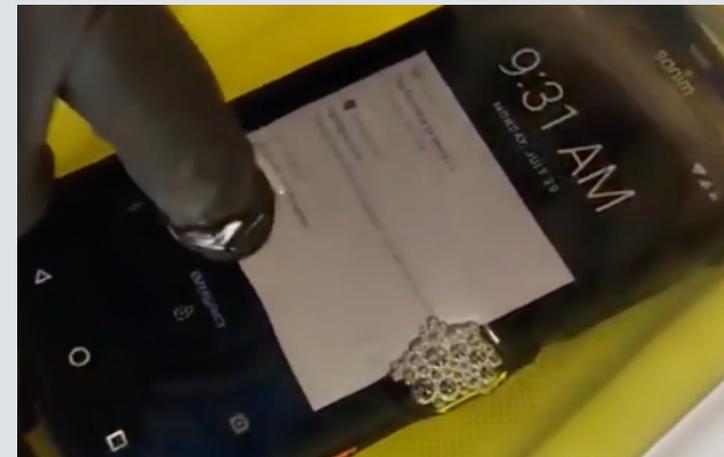
1 Hour Full Hydrogen Peroxide Immersion



Sprayed with Hydrogen Peroxide with no effect

Soaked for 15, 30 and 60 mins with no impact on device operation

5 Day Jet Fuel Immersion



Sonim devices continued to operate for 5 days while fully immersed in jet fuel.

Only stopped working because the battery finally ran out of charge

Competitive "rugged" products only lasted a few hours

FAQ 3

RPS
Guide

Do I really need an ultra-rugged device? Can I use two consumer devices for work instead?

Unlike consumer devices, Sonim devices are purpose-built to deliver rugged, reliable communication in extreme conditions. No amount of consumer devices could match the ruggedness of Sonim.

Ultra-rugged features for ultra-rugged industries.

At Sonim, we serve the people who serve us.

This includes the ~47 million-strong community of task and public sector workers in the U.S. and Canada.

* Source: Bureau of Labor Statistics, Defense Manpower Data Center (DoD), IBISWorld statistics, Government of Canada statistics, Canadian Association of Fire Chiefs, Public Safety Canada.

U.S. and Canada Industrial Enterprise and Federal Government data are as of 2018; U.S. and Canada Public Safety data are as of 2017, with the exception of Canada Security Guard data which is as of 2016.

Industrial Enterprise

~38 Million*



Transportation & Logistics



Construction



Manufacturing



Facilities Management



Energy & Utility

Public Sector

~9 Million*



Public Safety



Federal Government

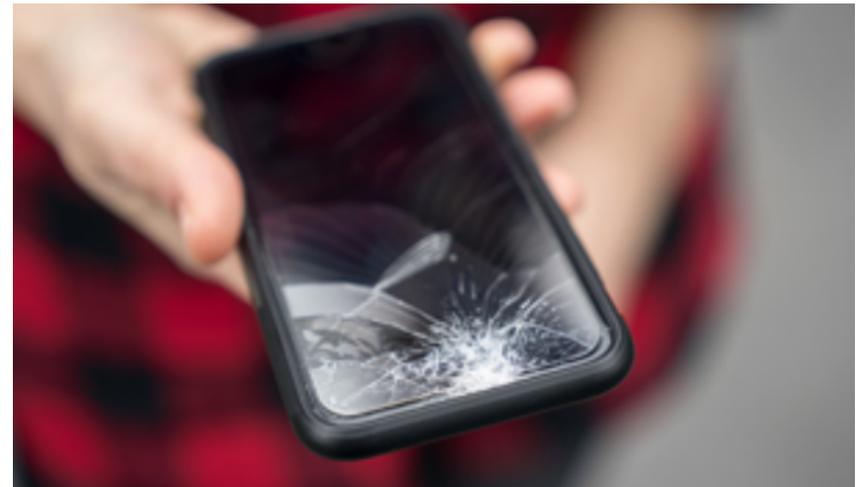
Demanding **workflows** demand an ultra-rugged solution.

Key causes of failure for consumer devices include:

- Exposure to water
- Dropping or impact
- Temperature exposure

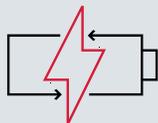


Unique operating conditions are a common source of failure for consumer devices used in work applications.



Batteries that won't quit, just like you.

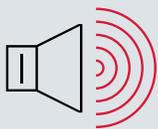
Most consumer smartphones have built-in batteries. When the battery decays, the whole phone must be replaced.



All Sonim Ultra-Rugged devices have **multi-shift batteries** for power that lasts all day. Plus, they are **removable and replaceable** so your device's lifespan isn't limited by its batteries.

Loud and clear audio to rise above the noise.

Sonim ultra-rugged devices feature **noise-cancelling** technology and front facing speakers **with >100dB output** – much higher than consumer devices.



Even the loudest consumer devices only reach ~80 dB voice and ringing output*. Furthermore, most consumer smartphones have speakers that point down, hampering volume.

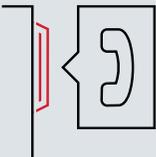
Wind Tunnel Audio Performance Test



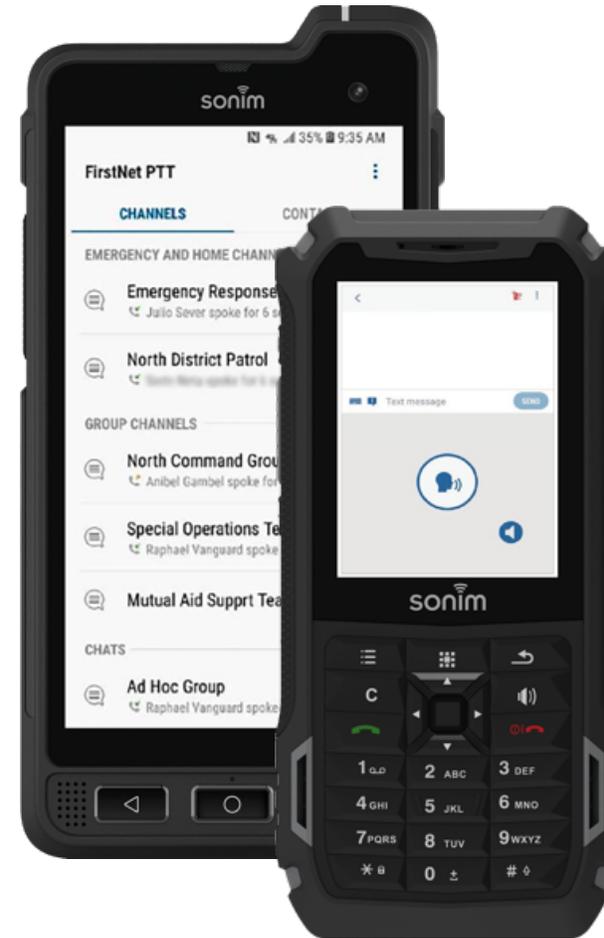
“Source: Loudest Smartphone Speakers: RAZ Mobility Assistive Technology Blog.” RAZ Mobility >> Next Generation Assistive Technology, 6 Dec. 2019, www.razmobility.com/assistive-technology-blog/which-loudspeakers-are-loudest/.

Integrated Push-to-Talk for reliable, instant communication.

Push-to-Talk is one of the fastest growing mobile applications, and a valuable utility on mobile devices.



Sonim works closely with leading PTT providers to provide integrated OneTouch PTT. Unlike consumer devices where users must wake their device and open a virtual PTT app.



Support leading PTT applications

- Over-the-top (OTT)
- Carrier-integrated
- Mission-Critical (MCPTT)

Software tightly integrated with hardware

- OneTouch PTT activates call even if app is running in background or device is in sleep mode
- Accessories that fully support PTT functionality including channel selection and volume control
- LMR interoperability

Rugged- accessories work how you work.

At Sonim, accessories are far from an afterthought.

Our rugged accessories support your work preferences and requirements without sacrificing durability.



XPand
Accessories



In-vehicle Pro-install
& Passive kits



Wired & Wireless
PTT Headsets & RSMs



Multi-bay Handset &
Battery Charging



Dispatch



Carrying
Solutions



Bluetooth RSM &
Smart Button



Chargers, Cables
& Adapters

A comprehensive warranty that has you covered.

Sonim provides a comprehensive three-year warranty on all handheld devices.

That's full coverage on everything but the battery for three years. And unlike consumer devices, Sonim's warranty is included with the price of the device.



Critical criteria for your mission- critical work.

Hidden costs and high failure rate of consumer devices can lead to poor ROI.

Consider the features and support you need in your rugged mobility solution.

Critical Criteria

	Ultra-Rugged Smartphone	Consumer Smartphone
Durability		
Battery-life/replacement		
Accessories		
Security		
Manageability		
Lifecycle		
Extended Warranty		
Service & Support		

FAQ 4

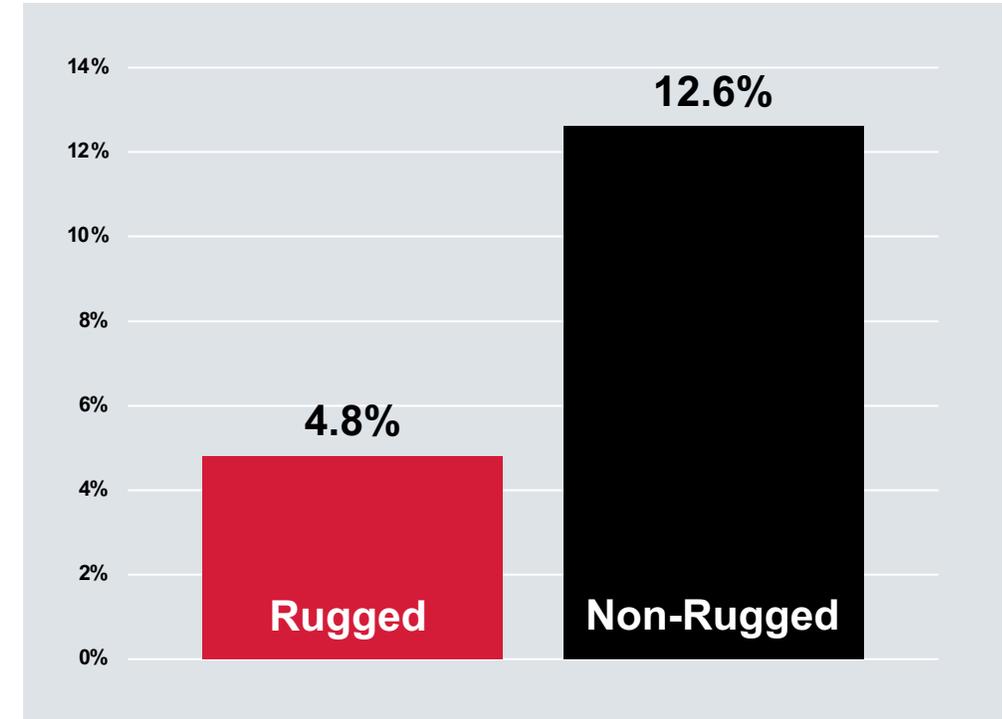
RPS
Guide

What are the hidden costs of using a non-rugged device for work?

From shipping to warranty, support to device failure, know the potential cost of your work devices. The ROI on a rugged device is driving continued growth and adoption.

Device failure is a major issue impacting enterprise operations and increasing overall **Total Cost of Ownership.**

Average Annual Failure Rate for Handhelds/Smartphones



Failure rates of non-rugged mobile devices were approximately **2.9 times higher** than the failure rates of rugged mobile devices.

This represents failure rates of mobile devices supporting line of business applications – such as field service automation, warehouse management or mobile point of sale.

© Copyright 2018 VDC Research Group, Inc. **Source:** 2018 Total Cost of Ownership Models for Line of Business Mobile Solutions

Rugged smartphones deliver a TCO less than half of non-rugged.

While device acquisition costs for rugged are higher than consumer, rugged-devices typically last 3.8 years vs 2.8 for non-rugged.

Stop buying breakable phones: The new rugged phones are tough and hot

Phones that are rugged and waterproof -- even without a case -- should be the new normal.

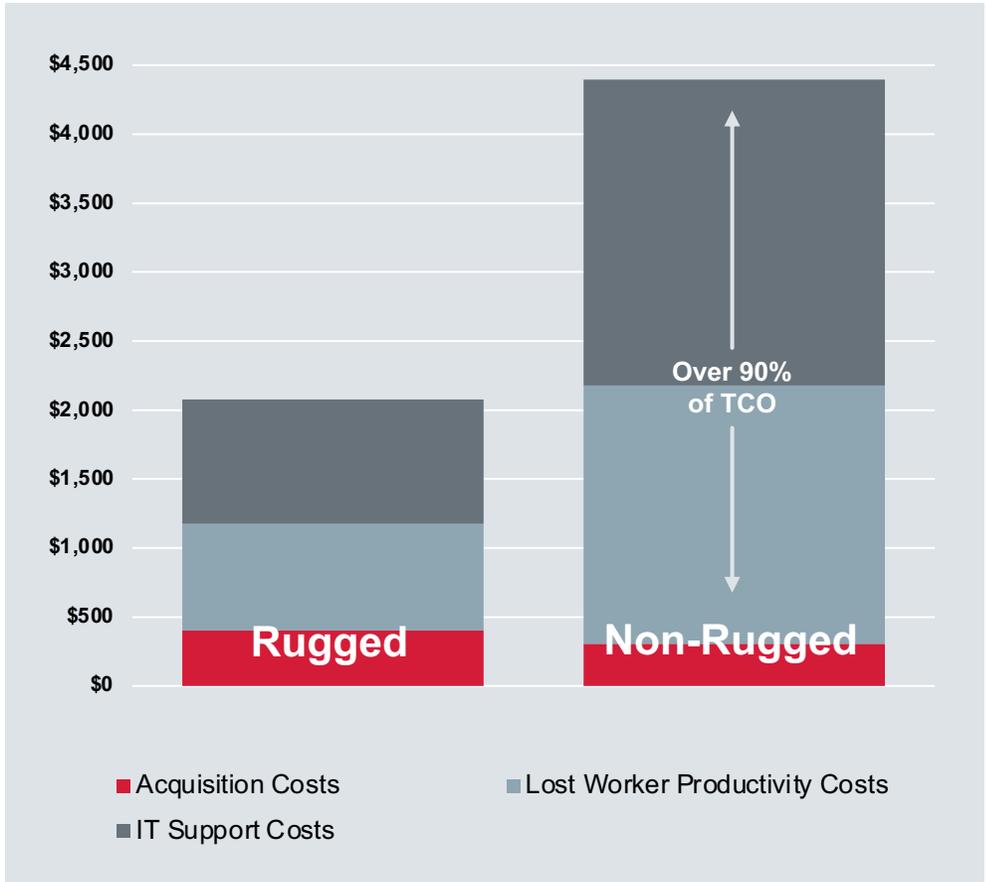


Brian Cooley · Aug 9, 2020 1:30 a.m. PT

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Average One-Year TCO for Handhelds/Smartphones



© Copyright 2018 VDC Research Group, Inc. Source: 2018 Total Cost of Ownership Models for Line of Business Mobile Solutions



Device Warranty: make sure you know what's covered and not covered.

Consider these questions
when reviewing your consumer
device warranty:

- How long am I covered?
- Is it a limited or comprehensive warranty?
- No-fault?
- Are there limited repairs (e.g. glass replacement)?

Based on customer feedback, Sonim's comprehensive 3-year warranty on all handheld devices provides savings when it comes to device replacement.



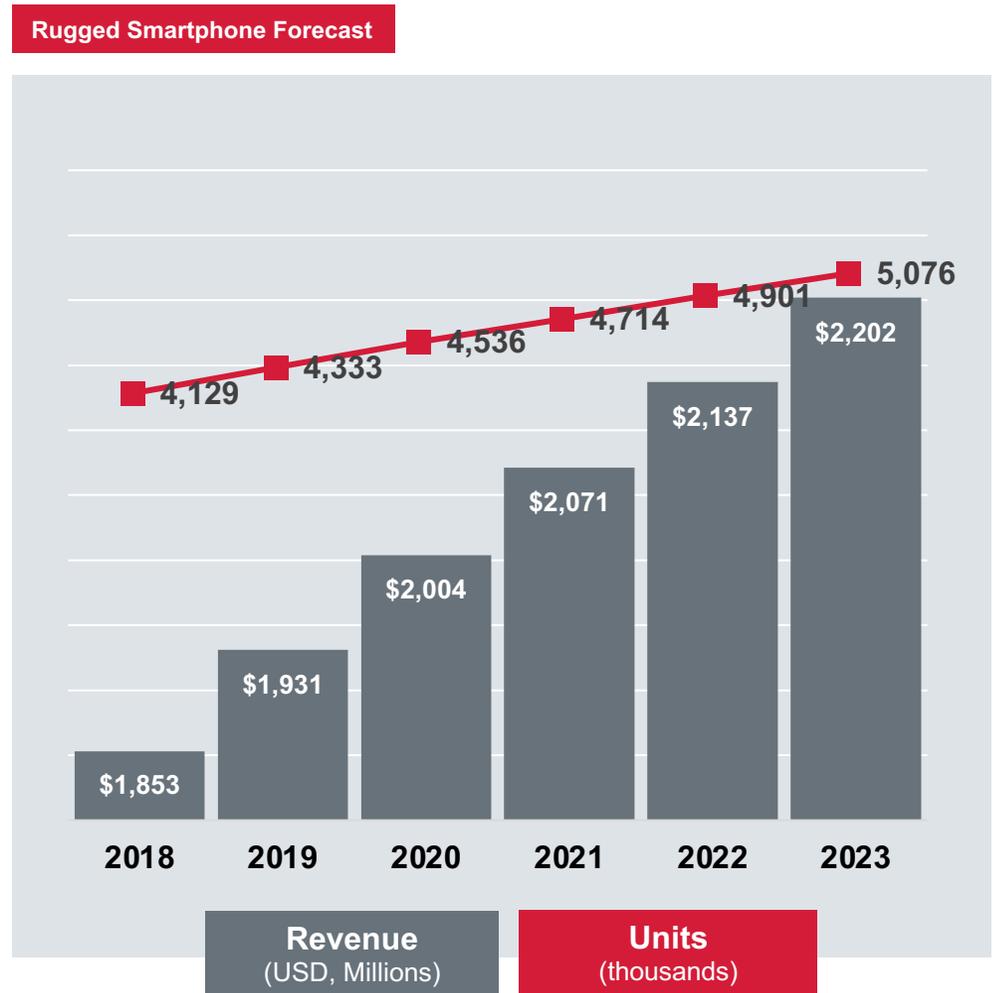
Covers everything but the battery for 3 years*
(1 year warranty on the battery)

* Warranty only valid if purchased through authorized channels

Worldwide shipment forecasts for rugged smartphones.

The ROI on a rugged device is driving continued growth and adoption.

Source: 2019 Rugged Handheld Computers & Smartphones. Data presented relate to estimates of broader market trends and projections and are solely presented to indicated potential market opportunity. There are no assurances that the Company's growth rates, rates of product adoption, revenues or other results of operations will follow similar trajectories or trends or will correlate to such trajectories or trends.



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FAQ 5

RPS
Guide

What do ultra-rugged phone users have to say about the ultra-rugged difference?

Sonim ultra-rugged devices are purpose-built to the most punishing, demanding and exacting rugged performance standards, supported by leading management solutions and customer service, and backed by a 3-year comprehensive warranty.

But we think our customers say it best...

Sonim is built to serve. Take it from our customers.

“We are very, very pleased with our Sonim experience thus far.

The removable batteries, available repair components, and warranty are really crucial. We consistently try to gear up our crews with tools that help them excel and Sonim has just quietly become part of that culture.”

Director of Innovative Practice and EMS

“We recently had a tourist fish out a Sonim device lost on a JetSki patrol in mid 2019. We dried the device off and turned it on to find it **fully functioning after a year of being underwater.**”

Director of Beach Safety and EMS

“If you have the need for a purpose-built device like this, it is **a much better option** then trying to take a device not designed for austere environments and putting a case on it.”

Director of Innovative Practice and EMS

“Obviously, the quality and durability of the Sonim XP8 is important, but in reality, the support that the Sonim team has provided to us makes it easy for me to recommend your company and our solution to other law enforcement agencies.

That’s the true game changer.”

Director of Firearms, Tactics, and Agent Safety

Additional Resources.

For more information on Sonim ultra-rugged devices and software, see these resources or contact Sonim at sonimtech.com/contactus.

Additional Resources

[Video: Sonim vs Other Devices](#)

[Sonim XP8 Infographic](#)

[Video: Sonim Rugged Performance Standards](#)

[SonimWare Infographic](#)

[Sonim Devices](#)

[Video: Why You Should Disinfect Your Phone](#)

**Thank
you.**

sonim[®]