Ruggedized Nokia Industrial user equipment

Powering Nokia private wireless solutions for mines
Industry 4.0 devices for seamless communication in tough conditions

Your user equipment should add value to your business. They should be reliable in harsh environments, perform consistently and remain connected. Enable your workforce with a seamless communication solution that ensures voice, video and data traffic along with applications to suit your needs.

Our Nokia portfolio of industrial-grade, plug and play devices, running on a private wireless connectivity solution can provide significant value to your workplace. We offer ruggedized design with high IP ratings, push-to-X capabilities and proprietary applications; our devices span several form factors including handhelds with embedded barcode scanners, smartphones, field routers, dongles and more. There’s no better way to ensure reliable and secure voice, video and data transmission when, where and how you need it: at the heights of a shipping container and in the depths of a mine; in wet and dusty environments and near explosive atmospheres and flammable substances.

All Nokia Industrial user equipment comes fully integrated with smart management tools and communication applications for our two industrial-grade Private Wireless solutions: Nokia Digital Automation Cloud (DAC) and Modular Private Wireless (MPW). This uniquely integrated approach simplifies, speeds and enhances how people and machines share information, helping you deliver bottom line productivity gains.

Handhelds, smartphones, workpads, field routers, dongles, hotspots and more

Choose from a selection of compact handhelds, smartphones, workpads, field routers, dongles, hotspots, video cameras, and accessories – all verified and integrated with your 4.9G/LTE or 5G private wireless network for guaranteed high performance, right from the get-go:

- **Form factors to address all needs** from machines, sensors and worker connectivity. Suitable for indoor/outdoor and vehicle use
- **Designed for heavy use in demanding industries** like mining, oil and gas, manufacturing, ports and warehousing
- **Engineered with hardened enclosures** using industrial grade components to deliver high IP ratings (IP67 or IP68) and protection for safe use in hazardous environments
- **Certified to address different markets** and frequency bands, supporting private wireless frequency bands around the world, for 4.9G/LTE, 5G, CBRS or MulteFire
- **Fully integrated with PTX applications and with comprehensive feature sets** enabling efficient traffic for industrial protocols such as PROFINET, EtherCAT, OPC-UA and Modbus
- **All tested, validated and pre-integrated** by Nokia experts
Simple integration and management for optimal results

Because our ruggedized devices come integrated with your networks, they’re fit for purpose, easy to manage and come with an extra layer of security. You can subscribe to Nokia Industrial device management to support zero-touch onboarding and plug and play of all Nokia Industrial user equipment, scalable to thousands of devices. Because device management resides within the same edge as the rest of your network functions and applications, there’s no need to access the public internet which increases security and availability, too.

**Manage and monitor user equipment with Nokia Industrial device management**

- Zero-touch on-boarding and remote management of both IoT and smart devices.
- Simply change device parameters as your use cases change
- Manage your entire device fleet via single pane of glass
- Implement easily mass actions with the help of advanced filtering and device grouping
- Apply tight control and security through geo-fencing
- Manage applications, handle device inventory and more
The right kit for the right environment

We’ve got you covered - whatever your use case, region and choice of connectivity

**Handhelds and smartphones**
Communicate efficiently with ruggedized handheld devices that work brilliantly in adverse outdoor conditions, optimized for push-to-X and other business critical applications.

**Workpads**
Workpads provide a larger interface to manage operations, run applications, and can also be mounted in vehicles.

**Field routers**
Field routers bring connectivity to complex systems and support industrial protocols like PROFINET, OPC-UA, EtherCAT and Modbus.
And, if your private wireless network operates in unlicensed spectrum, then our MulteFire routers are the ideal solution.

**Dongles**
Choose dongles when you’re seeking small form factor variants for vehicles, automated mobile robots and PC based solutions.

**Hotspots**
Our hotspots are a popular option for connecting Wi-Fi equipment to private networks.

**CPEs**
CPEs are used for fixed wireless access connectivity.

**Accessories**
Take your pick from a range of Nokia Industrial portable device accessories designed to enhance the user experience.
“On the enterprise side, Nokia shows a deep and comprehensive portfolio, well aligned with the current and coming needs of enterprise customers. The presence of devices in its portfolio is remarkable, with many certified industrial devices as well as a device management capability that demonstrates clear understanding of its enterprise customers”

-IDC, Nokia’s 2021 Global Analyst Forum, #EUR148588821, Dec 2021
Add value beyond connectivity with integrated applications

Maintaining ubiquitous internet connectivity is a common challenge in industrial environments. Lost connectivity or communication delays can be damaging, or even dangerous, if vital data or apps become unavailable.

Our Private Wireless network platforms are designed to keep data secure and available for computing and mission-critical apps, ensuring end-to-end communication between people and things, including rugged end-user devices, using Private 4.9G/LTE or 5G connectivity to run applications locally.

You’re never out of reach with the right communication solution

**Nokia Team Comms:** Ideal for small and mid-sized teams that need reliable communications for critical scenarios. It supports one-to-one and one-to-many push-to-talk and push-to-video. Great for production and adverse indoor and outdoor environments.

**Nokia Group Communications:** A mature solution with capabilities for Push-to-X communication, emergency calls, alert messaging and communication archiving. Designed for mission- and business-critical use and ideal for public safety, defence and enterprise use cases.

Easy-to-implement solutions that deliver the right information
State-of-the-art handhelds for reliable push-to-X communication

All Nokia industrial handhelds are ruggedized with IP68 protection against water and dust proof, delivering reliable and effortless connectivity across difficult logistical and operational environments.

In a challenging environment like a mine, you must be able to reach your workforce at any point in time to keep them safe and healthy. That’s why communication devices need to be ultra-reliable and easy to use. A single button-push or a fast emergency call could make the difference between life and death.

Using Nokia Industrial ruggedized smartphones and handhelds with our mission-critical PTT/PTV application, you can easily set up a group call or share a video.

The handhelds support licensed, unlicensed or shared spectrum band.

If you’re connecting on a Nokia private wireless solution, you’ll benefit from the integrated Nokia Industrial device management, which gives you effortless scalability with the power to manage thousands of handhelds from one central dashboard.
Workpads with buttons increase usability

Nokia Industrial workpads provide a larger interface and physical buttons to easily manage operations, run applications, and can also be mounted in vehicles with more flexibility. They support a wide range of bands and feature highly rugged, anti-vibration designs that make them ideal workmates in tough industrial environments, supported by IP67 protection level.

You can use our Nokia Industrial device management for effortless scalability with the power to manage thousands of workpads from one single pane of glass.

For reliable Push-to-X communication and instant messaging, choose from our selection of click & deploy communications applications such as Nokia Team Comms and Nokia Group Communications.
Generate value from legacy tech with dongles, field routers and hotspots

Nokia offers a range of IoT devices: dongles, field routers, hotspots and CPEs which seamlessly integrate with your Nokia private wireless solutions to keep your existing IT systems, machines, infrastructure and operations brilliantly connected.

Comprehensive feature sets enable efficient traffic for industrial communication protocols such as PROFINET, EtherCAT, OPC-UA and Modbus. They also support a wide range of bands in both 4G, 5G and MulteFire and come with highly ruggedized and anti-vibration designs that allows use in tough environments. They can be deployed in vehicles traversing difficult terrain giving you the peace of mind that comes with IP67 protection level.

You can also take advantage of the seamless onboarding of devices using Nokia Industrial device management, allowing you to start small and scale according to your needs.

With our 4G and 5G hotspots, your teams enjoy on-demand mobile device access to your private 4G and 5G networks, giving them consistent, high performance connectivity: anywhere. Each hotspot can support tens of Wi-Fi users and connectivity across large indoor spaces.*

Choose from a range of standard dongles, indoor and outdoor field routers with Fixed Wireless Access, ruggedized field routers, and hotspots.

* The Nokia Industrial 4G hotspot HSxx401a supports 32 Wi-Fi users and a 10-meter transmission.
Perfect fit for Mining 4.0

The need to constantly reinvent operations to optimize safety, sustainability, productivity and efficiency is driving digitalization and automation in the mining industry.

Advances in the Industrial Internet of Things, Artificial Intelligence, Machine Learning and Augmented and Virtual reality make it possible to improve decision making, drive autonomous trucks, track assets and monitor operations to ensure safe conditions in harsh and remote environments.

Having ultra-reliable and high-performing wireless connectivity across open pit and underground mining areas, stockpiles and processing facilities is essential for mission-critical communications and the digital applications they enable.

Thanks to Nokia Private Wireless networks and Nokia Industrial devices, mining companies can accelerate their Industry 4.0 journey. And future mining operations are set to enjoy a steep decrease in injuries and fatalities while employing just-in-time productivity to deliver tonnage on demand and revolutionize efficiency.

Yes, let’s get started
Watch videos and learn more, get in contact with us on: nokia.ly/mining
Nokia Industrial meeting your needs

Mining companies are pursuing a strategy of extreme autonomy. All manually operated equipment will eventually be replaced with their autonomous counterparts. Remote operations will further supplement automation, allowing personnel to monitor automated processes and operate machinery at a distance using virtual telepresence.

Connect your drills, trucks, and underground vehicles over Nokia Industrial field routers to enable autonomous and tele-remote operation. Or retrofit existing machinery with dongles.

Many industry verticals are turning to private wireless for reliable coverage and effective in-building penetration. Energy utilities, for example, are adopting the 450-470 MHz spectrum (bands 31, 72) and emerging 410-430 MHz spectrum (as B87, B88) to provide cost-effective wireless network coverage of wide areas for mission critical broadband.
Work smarter and safer, every day

With Nokia ruggedized industrial devices you get a rich portfolio of user equipment – handhelds, smartphones, workpads, field routers, dongles, hotspots and CPEs — all verified and optimized to operate on your secure private network. Device management gives you visibility into the performance of user equipment across your network. You can monitor, configure and manage that device fleet with one dashboard and have applications running on those devices fully integrated into your network too. It’s a perfectly unified approach that delivers one point of visibility and control, across your entire device, application and network universe.

Yes, let’s get started

Watch videos and learn more, get in contact with us on: dac.nokia.com/user-equipment
About Nokia

We create technology that helps the world act together.

As a trusted partner for critical networks, we are committed to innovation and technology leadership across mobile, fixed and cloud networks. We create value with intellectual property and long-term research, led by the award-winning Nokia Bell Labs.

Adhering to the highest standards of integrity and security, we help build the capabilities needed for a more productive, sustainable and inclusive world.

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