

Intermec Devices for Hazardous Locations Selection Guide





How to determine which device is right for you.

When you're specifying mobile solutions for workers in hazardous environments, safety is paramount. That much is clear. The choices can seem complex, however. Here are some steps to get you started.

Identify the hazard

Begin by defining the kind of hazards present in your environment. Are there flammable gases, vapors or liquids? How about combustible dusts or ignitable fibers? Are these hazards present all of the time, during normal operating conditions, or only occasionally? These distinctions—the kind of hazard, and how prevalent it is—will determine the safety ratings required for your mobile equipment. Consult with your company's safety engineer to identify the specific hazards that are present in your operation.

Consider your operating locations

Are you specifying a mobile device for one location, or twenty? Are those locations in one country, or several? While safety requirements are becoming more uniform across the globe, there are still significant variations. There are four common standards organizations that define the safety requirements for device manufacturers.

- Underwriters Laboratory (UL) – United States, Canada, Mexico – www.ul.com
- National Electric Code (NEC) – United States
- European Atmospheres Explosibles Directives (ATEX) – European Union, and many others
- International Electrotechnical Commission (IECEX) – Australia, Brazil, China, Singapore, Saudi Arabia, Thailand and many others – www.iec.ch

Your company's safety engineer can help ensure you are evaluating products that can meet all your needs, on a global basis.

Determine the appropriate device category

The certification agencies classify hazardous locations according to how potentially explosive the atmosphere is, and define them according to a detailed scheme of Classes, Divisions, Groups and Zones. Equipment certified for operation in these environments is rigorously tested and rated according to the kind of protection it provides.

Handheld devices that will be used in environments in which ignitable concentrations of flammable gases, combustible dusts or ignitable fibers are likely to exist some or all of the time under normal operating conditions must be rated **Intrinsically Safe**. This is highest level of protection possible, making it the safest device choice.

A **Non-Incendive** device is designed for use in environments where the specified hazard may be present, but is not likely to exist under normal operating conditions.

Your company's safety engineer can specify which category and associated certifications are appropriate for your application. For more information on hazardous environment definitions, [visit the UL website](http://www.ul.com).

Define your technology needs

Consider the needs of your workforce, both today and in the future, so that you can specify a solution that will grow with your business. Do your users need to be able to send and receive data from both inside your operations, and out in the field? Are your maintenance or warehouse personnel using the device to perform scan-intensive operations? Do your applications require terminal emulation? The right device will meet both your safety and your business requirements.

The big picture

If your mobile needs extend beyond the hazardous environments in your enterprise, look for a supplier that can provide a range of integrated devices, ideally built on a single architecture. With a single supplier and a family of solutions, you can reduce training and support costs and be assured of seamless integration. Consider also the supplier's longevity in the industry and dedication to building products specifically for hazardous environments.

Intermec Mobile Computers for Hazardous Locations

A full range of solutions to meet your needs.

CK3X NI Handheld Computer Non-Incendive (UL)



A broad range of data collection and communication features form the foundation for the Intermec CK3X mobile computer, enabling it to adapt to a variety of in-premise applications. With a Division 2, Class I–III non-incendive (UL) certification, the CK3X supports businesses in their pursuit to improve their operational performance metrics, simplify IT support and control operating costs.

Specifications

Operating System: Windows Embedded Handheld 6.5

Memory: 256MB RAM; 1G Flash ROM

Environmental: 1.5m (5 ft) to concrete across operating temperature range per MIL-STD 810G, 1,000 (1m) tumbles per IEC 60068-2-32 specification, -10° C to +50° C operating temperature

Certifications:

UL Listing (United States and Canada):

Division 2, Class I - Groups A, B, C, D

Division 2, Class II - Groups F, G

Division 2, Class III - T6

Communications: USB, RS232, Ethernet

Radio: 802.11 a/b/g/n, Bluetooth 2.1+EDR

Integrated Scanning Options: 2D area imager, 2D near-far, auto-focusing area imager

UHF RFID Option: IP30 NI via Bluetooth

CK70 NI Handheld Computer Non-Incendive (UL)



The Intermec CK70 NI is the next-generation, ultra-rugged mobile computing solution with purpose-built design optimized for demanding field service environments, enabling increased user efficiency for improved customer service and service-level-agreement compliance. With WWAN and 802.11 a/b/g/n real-time data collection capabilities in a variety of form factors, nearly indestructible keypad designs, unbeatable battery life, and onboard device health monitoring sealed in an IP67 enclosure for use in Division 2, Class I – III, non-incendive hazardous environments.

Specifications

Operating System: Windows Embedded Handheld 6.5

Memory: 512MB RAM; 1GB Flash ROM

Environmental: IP67, 2.4 m (8ft.) to concrete per MILSTD 810G, 1.8m (6 ft) to concrete across operating temperature range per MIL-STD 810G, 2,000 (1m) tumbles per IEC 60068-2-32 specification, -20° C to +60° C Operating Temperature (Max Ambient: 50° C T6)

Certifications:

UL Listing (United States and Canada):

Division 2, Class I, Groups A, B, C, D; T6

Division 2, Class II, Groups F; G T6

Division 2, Class III; T6

Communications: USB 2.0, RS232, Ethernet

Radio: 802.11 a/b/g/n; Bluetooth 2.1+EDR;

WWAN with GPS: CDMA/EVDO Rev A, UMTS/HSPA or Flexible Network (may be replaced with UHF RFID)

Integrated Scanning Options: 2D area imager

UHF RFID Options: Integrated (CK70 RFID NI), or IP30 NI via Bluetooth

CK71 NI Handheld Computer Non-Incendive (UL)



The Intermec CK71 NI is the no-compromise, next-generation ultra-rugged mobile computer that achieves true functional agility with the perfect balance of ruggedness, duty cycle, and ergonomics for the most demanding distribution center, warehouse and manufacturing environments. With 802.11 a/b/g/n real-time data collection capabilities in a variety of form factors, nearly indestructible keypad designs, unbeatable battery life, and onboard device health monitoring sealed in an IP67 enclosure for use in Division 2, Class I – III, non-incendive hazardous environments.

Specifications

Operating System: Windows Embedded Handheld 6.5

Memory: 512MB RAM; 1GB Flash ROM

Environmental: IP67, 2.4 m (8ft.) to concrete per MILSTD 810G, 1.8m (6 ft) to concrete across operating temperature range per MIL-STD 810G, 2,000 (1m) tumbles per IEC 60068-2-32 specification, -20°C to +60°C Operating Temperature (Max Ambient: 50°C T6)

Certifications:

UL Listing (United States and Canada):

Division 2, Class I, Groups A, B, C, D; T6

Division 2, Class II, Groups F; G T6

Division 2, Class III; T6

Communications: USB 2.0, RS232, Ethernet

Radio: 802.11 a/b/g/n, Bluetooth 2.1+EDR

Integrated Scanning Options: 2D area imager or Near/Far Area Imager

UHF RFID Option: IP30 NI via Bluetooth

CN3 and CN3e NI Handheld Computer Non-Incendive (UL)



This fully rugged device offers a scanner and up to four wireless communications options, including WWAN, making it the ideal choice for companies that need to dynamically deploy the right resources to the right location, and enable real-time access for their remote mobile workers to tap into the information they need to work most effectively, even in harsh environments. Classified as a Division 2, Class I – III, non-incendive (UL) device, the CN3 NI doesn't know the meaning of downtime. A lightweight, PDA-like form factor—with options for larger keys to support gloved usage—completes this rugged field mobile device product offering.

Specifications

Operating System: Windows Mobile 5.0® or Windows Mobile 6.1

Memory: 128MB RAM; 256MB Flash ROM

Environmental: IP54 and IP64, 6 foot drop spec, -10°C to +50°C Operating Temperature

Certifications:

UL Listing (United States and Canada):

Division 2, Class I, Groups A, B, C, D; T4

Division 2, Class II, Groups F; G T4

Division 2, Class III; T4

Communications: USB 1.1, RS232, Ethernet

Radio: 802.11 b/g, Bluetooth, CDMA Rev 0 or GSM/EDGE, GPS

Integrated Scanning Options: 2D area imager for scanning or image capture

UHF RFID Option: IP30 NI via Bluetooth

CN4 and CN4e NI Handheld Computer Non-Incendive (UL)



An extension of the CN4 and CN4e product line, this rugged, hazardous certified device includes support of the 3G wireless WWAN technologies—UMTS/HSPA or CDMA Rev A.—to support simultaneous voice and data applications in potentially hazardous environments. Fully optimized for field mobile applications maximizing today's real time communications capabilities, this device is sealed to prevent dust from entering and classified for use in harsh environments requiring Division 2, Class I – III ratings.

Specifications

Operating System: Windows Mobile 6.1

Memory: 128MB RAM; 256MB Flash ROM

Environmental: IP64, 6 foot drop spec, -20°C to +60°C Operating Temperature

Certifications:

UL Listing (United States and Canada):

Division 2, Class I, Groups A, B, C, D; T6

Division 2, Class II, Groups F; G T6

Division 2, Class III; T6

Communications: USB 1.1, RS232, Ethernet

Radio: 802.11 b/g, Bluetooth, CDMA Rev A or UMTS/HSPA, GPS

Integrated Scanning Options: 2D area imager for scanning or image capture

UHF RFID Option: IP30 NI via Bluetooth or USB

CN70 and CN70e
NI Handheld Computer
 Non-Incendive (UL)



The Intermec CN70 and CN70e are ideal for field-mobility applications that demand a compact form factor with no compromise on ruggedness. Next-generation architecture, combined with market-leading wireless communications and data capture capabilities, delivers optimal worker productivity. With WWAN and 802.11 a/b/g/n real-time data collection capabilities in a variety of form factors, nearly indestructible keypad designs, unbeatable battery life, and onboard device health monitoring sealed in an IP67 enclosure for use in Division 2, Class I - III, non-incendive hazardous environments.

Specifications

Operating System: Windows Embedded Handheld 6.5

Memory: 512MB RAM; 1GB Flash ROM

Environmental: IP67, 2.4 m (8ft.) to concrete per MILSTD 810G, 1.8m (6 ft) to concrete across operating temperature range per MIL-STD 810G, 2,000 (1m) tumbles per IEC 60068-2-32 specification, -20°C to +60°C Operating Temperature (Max Ambient: 50°C T6)

Certifications:

UL Listing (United States and Canada):

Division 2, Class I, Groups A, B, C, D; T6
 Division 2, Class II, Groups F; G T6
 Division 2, Class III; T6

Communications: USB 2.0, RS232, Ethernet

Radio: 802.11 a/b/g/n; Bluetooth 2.1+EDR; WWAN with GPS: CDMA/EVDO Rev A, UMTS/HSPA or Flexible Network (may be replaced with UHF RFID)

Integrated Scanning Options: 2D area imager

UHF RFID Options: Integrated (CN70 and CN70e RFID NI), or IP30 NI via Bluetooth

Ci70 Mobile Computer
 Intrinsically Safe (NEC)
 Intrinsically Safe (ATEX)
 Intrinsically Safe (IECEX)



Featuring the highest number of global approvals for hazardous environments, the Ci70 is the best choice for workers in the chemical, oil and gas, and pharmaceutical industries. It meets or exceeds stringent requirements for gases, vapors and liquids, dusts, and fibers. The Ci70 includes many breakthrough advances now available in an intrinsically safe mobile computer for the first time. Complete wireless networking capabilities—from WWAN to WLAN and Bluetooth 2.1—ensure rapid data exchange, even where reception conditions prove challenging. Advanced near/far imaging technology now allows operators in hazardous environments to scan bar codes from near contact to over 50 feet away. Even radio frequency detection (RFID) capability can be added via a head module. Because Ci70 is built on the 70 Series architecture, it is fully compatible with software applications developed for 70 Series devices and even includes many of the same design elements. The Ci70 is also compatible with FlexDock, Intermec's modular charging system, by means of a field-replaceable cup.

Specifications

Operating System: Windows Embedded Handheld 6.5.3

Memory: 512 MB RAM; 1 GB flash ROM; customer-accessible microSD slot for removable memory cards up to 32 GB

Environmental: IP65; 1.2 m (4 ft) drop spec; -20°C to +50°C operating temperature

Certifications:

NEC:

Gases, Dusts, Fibers:

Class 1, Division 1, Groups A, B, C, D, T4
 Class II, Division 1, Groups E, F, G, T4
 Class III, Division 1

ATEX:

Gases, Liquids, Vapors:

Zone 1, T4, Group IIC

Dusts & Fibers: Zone 21, Group IIIC, IP 64

IECEX:

Gases, Liquids, Vapors:

Zone 1, T4, Group IIC

Dusts & Fibers: Zone 21, Group IIIC, IP 64

Communications: Bluetooth, USB, IrDA

Radio: Optional Wireless WAN (UMTS, CDMA); 802.11 a/b/g/n; Cisco CCXv4

Modular Scanning/Reading: Near/Far Range 2D Area Imager, Linear Imager, RFID Reader (LF, HF, UHF)



mobile experts

The i.roc® Ci70 -Ex is manufactured and serviced exclusively by ecom instruments. This product is available for purchase only from ecom authorized distributors and partners.

Intermec Handheld Scanners for Hazardous Locations

SR61B Handheld Scanner Non-Incendive (UL)



Built for rugged applications in warehouse, distribution and industrial manufacturing, the SR61B handheld scanner features a high impact housing that is virtually impenetrable. It exceeds industrial and military standards and can be counted on to perform well in harsh environments where dust, moisture or extreme temperatures are constants and operational uptime is critical. A special non-incendive configuration allows for wedge-based scanning in hazardous environments commonly found in chemical, plastics and pharmaceutical production.

Specifications

Connectivity: Bluetooth 2.1+EDR

Wireless Range: 100 m (325 ft) in open space

Interfaces: SPP, HID Keyboard

Environmental: IP54; 1.98 m (6.5 ft) drop spec; -20°C to +50°C operating temperature

Certifications:

UL Listing (United States and Canada):

Division 2, Class I, Groups A, B, C, D; T6

Communication Interfaces: SPP, HID Keyboard

Radio: Bluetooth 2.1+EDR

Integrated Scanning Options: Near/Far Range 2D Area Imager (EX25), High Performance 2D Area Imager (EA30)



Built to meet the most stringent standards: yours.

Intermec Solutions for Hazardous Locations

Intermec has 40 years of experience building supply chain solutions for demanding environments and we are committed to meeting the hazardous location device needs of our customers on a global scale.

Rugged, Safe & Secure

Our mobile computers and handheld scanners are built to stand up to the rigors of even the toughest applications. Drop specifications are based on industrial standards: units are drop-tested 26 times on all sides and corners. Plus, rugged features such as internal magnesium frames, laser-etched hard keycaps, and polycarbonate enclosures ensure safety and reliability without compromising productivity due to breakage.

We build the safest possible solutions for our customers. Our design engineers follow the changing global certification requirements closely, so that safety-enhancing features can be quickly incorporated into our products.

Intermec partners with Cisco Systems to deliver best-in-class wireless network infrastructure along with the Intermec complete line of ruggedized Cisco Compatible mobile devices and services. Working together ensures interoperability and superior end-to-end performance and security.

Easy to Deploy, Use & Support

Intermec mobile computers for hazardous locations combine superior design and ruggedness, the latest Microsoft Windows operating system and Intermec SmartSystems™ device management software—making them easy to deploy, use and support. SmartSystems Foundation lets you manage all devices in your operations—Intermec computers, printers, RFID components, software applications, and other peripherals—on-site or remotely, from a single, centralized console. Administrators can change device settings, send OS upgrades, update software applications, and execute other changes directly from the console.

Aligned with Technology Leaders

Intermec helps you achieve the most return from your mobile computing and all your automated data capture investments. We do more than design and build the industry's most complete lineup of rugged, reliable and versatile equipment. We also work with you to understand your unique situation and then leverage our strong relationships with industry-leading partners including Cisco, SAP and Microsoft to help you create a total solution that works in harmony with your networks, platforms and processes.

Globally Supported

An international network of certified service and support partners in 70 locations worldwide provide peace of mind that your mission-critical operations will stay up and running when you need it most. In addition to localized support, Intermec offers a host of Medallion Service options, and access to manuals, downloads and 24-hour help from our online Knowledge Central database.

Intermec products for hazardous locations are complemented by a complete line of solutions and services for your supply chain

- Mobile computing solutions
- Mobile and fixed RFID systems
- Scanning technology
- Printers and media
- Professional services
- Wireless networks
- Support services
- Software tools and utilities

For more information, please visit www.intermec.com.



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In a continuing effort to improve our products, Intermec Technologies Corporation reserves the right to change specifications and features without prior notice.