

# SCORPION Buyers Guide

*Everything you need to know before buying our  
rugged tablets and industrial handhelds*





# Checklist

## Your checklist before buying a rugged tablet or handhelds

- Application Field:** Will the mobile device be used indoors or outdoors?
- 1D/2D Barcode Reader:** Which codes can our scan modules read?
- Certifications:** Which type of protection should you choose?
- Comparison Table:** All SCORPION models in direct comparison



Before purchasing a SCORPION rugged tablet or industrial handheld, we provide you with **an essential checklist** you can go through step by step in this buyers guide. Experience has shown that not only the most important technical questions can be clarified in advance, but also problems and misunderstandings after an order can be avoided. In this buyers guide, we inform you about the features you should look for in the hardware. The first and foremost requirement is the application for which you want to use the rugged tablet or handheld. In general, our SCORPION devices are suitable for almost any industrial application fields, but it is important to clarify, if the mobile terminal will be used primarily for **indoor or outdoor applications** (or both).

Furthermore, we explain which scan modules are installed in the individual SCORPION models and which codes can be read by each. Our **1D/2D scanners** are only

available as optional accessories on most of our rugged tablets and can be omitted if not needed.

Additionally, we'll be getting into details about the **hardware certifications** in this buying guide. All SCORPION models have a standardized MIL-STD-810G and at least IP65 certification, but the meaning of these cryptic abbreviations, will be cleared up as well.

Last but not least, we give you a significant spec sheet of all our SCORPION rugged tablets and handhelds in direct comparison. **In a tabular view**, you will find all important specifications as well as suitable accessories at a glance. More detailed information on the individual devices as well as data sheets, quick-start guides and drivers can be found online

# Application Field

## Will the mobile device be used **indoors or outdoors?**

As a user, you basically have to be clear about whether you prefer to use a rugged tablet or handheld indoors or outdoors. For indoor use in industrial facilities, using a MIL-SPEC certification and IP65 certification is usually sufficient. Our entire SCORPION portfolio is well equipped for this application field. But the working conditions in outdoor areas require an entirely different approach.

### **Do you often or occasionally have to work outside in direct sunlight?**

It is important to clarify this question, because although all SCORPION's are outdoor capable, not all screens are readable in direct sunlight by default. Only with a display brightness of **at least 800 cd/m<sup>2</sup> (nits)** a device can be considered sunlight-readable. We have so-called high-brightness models in our portfolio specifically for this use case, namely the SCORPION 10X series.

The SCORPION's are suited for:

- Warehouses and stores
- Craftsmen and workshops
- Industrial production lines
- Transportation and logistics
- Police and fire vehicles
- Forklift terminals
- Agriculture or construction sites
- Drone / multicopter control
- Military field operations

For displays to remain readable in sunlight, a min. of 800 nits is required



# 1D/2D Barcode Reader

Which codes can our scan modules read?



## 1D Codes

1D codes have long been established in the industries or retail and denote a series of arranged bars forming a so-called one-dimensional code. Each of our SCORPION devices offers the possibility to read 1D barcodes, these include for example Code 39, Code 128, EAN, UPC and Code 2/5 interleaved.



## 2D Codes

All SCORPION barcode readers are capable of recognizing two-dimensional codes, allowing more data to be read on the same space. This includes stacked 2D codes such as PDF417 and Codablock A as well as 2D matrices. In addition, the built-in camera also recognizes classic QR codes.

## Which scan modules are integrated into the SCORPIONS?

1D/2D scan module	Available for SCORPION model
Honeywell N3680	SCORPION 12", SCORPION 10" PLUS, SCORPION 10X Windows and SCORPION 6" (scanner included)
Motorola Zebra SE2707	SCORPION 8" PLUS
Newland LV3096	SCORPION 10X Android (scanner included)

# Certifications

Which type of protection should you choose?

## What does MIL-STD-810G mean?

MIL-STD-810 certifications designate a set of standardized testing methods for the U.S. military, defining, among others, the compatibility of equipment in dealing with high temperature fluctuations, atmospheric pressure, humidity, vibration or solar radiation.

All SCORPION rugged tablets and handhelds are already offered with a MIL-STD-810G certification as a standard, which among others grants them a drop resistance of

**up to 1.5 meters.**

Testing method	Content
501.5	High temperature
502.5	Low temperature
503.5	Temperature shock
504.1	Contamination by liquids
507.5	Humidity
510.5	Sand and dust
514.6	Vibrations

## What does the IP rating mean?

**IP XX**



All-round protection  
no extra-  
protective  
cover needed

1. Digit	Protection against contact and dirt	2. Digit	Water protection
0	Not protected	0	Not protected
1	Protected against large-surface contact and solid foreign bodies ( $\geq 50\text{mm}$ )	1	Protected from vertically falling dripping water
2	Protected against contact with fingers and solid foreign bodies ( $\geq 12.5\text{mm}$ )	2	Protected against falling dripping water, with housing inclination up to 15°
3	Protected against contact with tools and solid foreign bodies ( $\geq 2.5\text{mm}$ )	3	Protected against falling spray water up to 60° from the vertical
4	Protected against contact with wires and solid foreign bodies ( $\geq 1.0\text{mm}$ )	4	Protected from splashing water on all sides
5	Complete protection against any direct contact as well as against dust in harmful quantities	5	Protected against water jets from any angle
6	Complete protection against contact and dust	6	Protected against strong jets of water
		7	Protected against temporary submersion in water
		8	Protected against continuous submersion in water up to 1 meter depth (unless otherwise specified)
		9	Protected from water during high-pressure and steam cleaning

All SCORPION models have at least an **IP65 rating**, which can reach **up to IP67** for some devices.



# Comparison Table

All SCORPION models in direct comparison

Models	SCORPION 12"	SCORPION 10X Windows	SCORPION 10X Android
			
<b>Display Size</b>	12.2 inches (30.98cm)	10.1 inches (25.65cm)	10.1 inches (25.65cm)
<b>Resolution</b>	1920 x 1080	1280 x 800	1280 x 800
<b>Touchscreen</b>	10-point capacitive	10-point capacitive	Capacitive multi-touch screen, supports gloves and rain mode
<b>Brightness</b>	280 nits	1,000 nits (sunlight-readable)	1,000 nits (sunlight-readable)
<b>CPU</b>	Intel® Skylake Core™ m3-6Y30	Intel® Atom™ Cherry Trail x5-Z8350	Qualcomm Cortex-A53 64-bit Octa-Core processor, 1.8GHz
<b>RAM</b>	4GB LPDDR3 (up to 8GB on projects)	4GB LPDDR3	4GB LPDDR3
<b>Storage</b>	128GB to 512GB M.2 SSD	64GB	64GB
<b>Operating System</b>	Windows 10 IoT	Windows 10 IoT	Android 9.0
<b>Communication</b>	Wi-Fi, Bluetooth, GPS, LTE/3G, NFC	Wi-Fi, Bluetooth, GPS, LTE/3G, NFC	Wi-Fi, Bluetooth, GPS, LTE/3G, NFC
<b>Interface</b>	1x RJ-45 LAN 2x USB 2.0, 1x USB 3.0, 1x USB Type C 1x HDMI 1.4a Type C 1x RS-232 (COM1), 1x RS-2485 (COM2) 1x micro-SIM slot 1x microSD slot 2x speaker + 3.5mm audio-out	1x USB 3.0 + 1x USB Type C 1x HDMI 1.4a Type C 1x micro-SIM slot 1x SDHC/SDXC slot 1x speaker + 3.5mm audio-out	1x USB Type C Compatible with USB 3.0 (for data transmission; supports OTG) 1x micro-SIM slot 1x microSD slot (max. 128GB) 1x speaker + 3.5mm audio-out
<b>Barcode Reader</b>	1D / 2D (optional)	1D / 2D (optional)	1D / 2D (included)
<b>Camera</b>	2MP (front) / 5MP (rear)	2MP (front) / 5MP (rear)	5MP (front) / 16MP (rear)
<b>Battery</b>	6,300 mAh, 7.4 Volt, (hot swap) + 1,000 mAh, 7.4 Volt (internal)	10,000 mAh, 3.7 Volt, removable	8,000mAh, 3.7V, removable (warm swap)
<b>Power Adapter</b>	AC adapter: Input 100 ~ 240V – 50/60Hz / Output 12V, 4A	AC Adapter: Input 100 ~ 240V - 50/60Hz / Output 5V, 3A	DC 8 ~ 36V (ISO 7637-II-compliant)
<b>Operating Temp.</b>	-10° ~ 50°C	-10° ~ 50°C	-10° ~ 65°C
<b>Certifications</b>	IP65 + MIL-STD-810G	IP65 + MIL-STD-810G	IP67 + MIL-STD-810G
<b>Accessories (optional)</b>	Docking keyboard, spare battery, 1D/2D scanner, power adapter and cable, office docking, active vehicle mount, vehicle charging cable, shoulder strap, backstrap	Spare battery, 1D/2D scanner, power adapter and cable, office docking, active vehicle mount, vehicle charging cable, touch pen, shoulder strap, backstrap	Included in the package: 1D/2D scanner, active vehicle mount, mounting arm, handstrap, power adapter

**SCORPION 10" PLUS**

**SCORPION 8" PLUS**

**SCORPION 6"**



10.1 inches (25.65cm)	8.0 inches (20.32cm)	6.0 inches (15.24cm)	<b>Display Size</b>
1280 x 800	1280 x 800	1280 x 720	<b>Resolution</b>
10-point capacitive (Windows) 5-point capacitive (Android)	10-point capacitive (Windows) 5-point capacitive (Android)	5-point capacitive	<b>Touchscreen</b>
280 nits (Windows), 400 nits (Android)	320 nits (Windows), 450 nits (Android)	430 nits	<b>Brightness</b>
Intel® Atom™ Cherry Trail Z8350 (Win.) or MSM8953, 2.0 GHz (Android)	Intel® Atom™ Cherry Trail Z8350 (Win.) or MSM8953, 2.0 GHz (Android)	Intel® Atom™ Cherry Trail Z8350 (Win.) or Qualcomm MT8735B Quad-Core Cortex A53, 1.45GHz (Android)	<b>CPU</b>
4GB LPDDR3	4GB	4GB (Windows) or 2GB (Android)	<b>RAM</b>
64GB	64GB	64GB (Windows) or 32GB (Android)	<b>Storage</b>
Windows 10 IoT or Android 9.0	Windows 10 IoT or Android 10.0	Windows 10 LTSC 2019 or Android 8.1	<b>Operating System</b>
Wi-Fi, Bluetooth, GPS, LTE/3G, NFC	Wi-Fi, Bluetooth, GPS, LTE/3G, NFC	Wi-Fi, Bluetooth, GPS, LTE/3G, NFC	<b>Communication</b>
1x USB 2.0 + 1x microUSB OTG (Win.) 1x USB 2.0 + 1x USB Type C (Android) 1x HDMI 1.4a Type C 1x RJ-45 LAN + 1x RS-232 1x micro-SIM slot 1x microSD slot 1x speaker + 3.5mm audio-out	1x USB 2.0 + 1x microUSB OTG (Win.) 1x USB 2.0 + 1x USB Type C (Android) 1x HDMI 1.4a Type C 1x SIM slot 1x microSD slot (max. 128GB) 1x speaker + 3.5mm audio-out	1x microUSB OTG 1x micro-SIM slot 1x microSD slot 1x speaker + 3.5mm audio-out	<b>Interface</b>
1D / 2D (optional)	1D / 2D (optional)	1D / 2D (included)	<b>Barcode Reader</b>
2MP (front) / 5MP (rear) - (Windows) 2MP (front) / 13MP (rear) - (Android)	2MP (front) / 5MP (rear) - (Windows) 2MP (front) / 13MP (rear) - (Android)	2MP (front) / 5MP (rear) - (Windows) 2MP (front) / 8MP (rear) - (Android)	<b>Camera</b>
10,000 mAh, 3.7 Volt, removable (Win.) 8,500 mAh, 3.7 Volt, removable (And.)	8,500 mAh (with LTE: 7,800 mAh), 3.7 Volt, internal (Windows) 8,500 mAh, 3.7 Volt, internal (Android)	5,000 mAh, 3.7 Volt, removable (Win.), 5,000 mAh, 3.7 Volt (Android)	<b>Battery</b>
AC Adapter: Input 100 ~ 240V – 50/60Hz / Output 5V, 3A	AC Adapter: Input 100 ~ 240V – 50/60Hz / Output 12V, 4A	AC Adapter: Input 100 ~ 240V – 50/60Hz / Output 5V, 2.5A	<b>Power Adapter</b>
-10° ~ 50°C	-10° ~ 50°C	-10° ~ 50°C	<b>Operating Temp.</b>
IP65 + MIL-STD-810G	IP65 + MIL-STD-810G	IP67 + MIL-STD-810G	<b>Certifications</b>
Spare battery, 1D/2D scanner, power adapter and cable, office docking, active vehicle mount, vehicle charging cable, touch pen, shoulder strap, backstrap	1D/2D scanner, power adapter and cable, office docking, active vehicle mount, vehicle charging cable, touch pen	Spare battery, power adapter and cable, office docking, multi-docking cradle, pistol grip, Active mount, Active mount for pistol grip, vehicle power adapter, touch pen, shoulder/ fanny bag, 1D/2D scanner (included)	<b>Accessories (optional)</b>

**SCORPION**   
RUGGED TABLET & HANDHELD SOLUTIONS

