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 at:

www.scorpion-rugged.de/en

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 700 cd/m² (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.
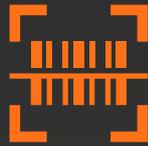
The SCORPION's are suited for:

- ☐ 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 700 nits** is required
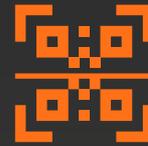
www.scorpion-rugged.de/en

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 10X V2, SCORPION 6″ (scanner included)
Honeywell N4680	SCORPION 10X PRO
Newland NLS-EM3296V4	SCORPION 10″ Windows
Honeywell N6603	SCORPION 10″ SLIM Android
Motorola Zebra SE2707	SCORPION 8″ Windows, SCORPION 8″ Android

Certifications

Which type of protection should you choose?

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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
0	Not protected
1	Protected against large-surface contact and solid foreign bodies (≥ 50mm)
2	Protected against contact with fingers and solid foreign bodies (≥ 12.5mm)
3	Protected against contact with tools and solid foreign bodies (≥ 2.5mm)
4	Protected against contact with wires and solid foreign bodies (≥ 1.0mm)
5	Complete protection against any direct contact as well as against dust in harmful quantities
6	Complete protection against contact and dust

2. Digit	Water protection
0	Not protected
1	Protected from vertically falling dripping water
2	Protected against falling dripping water, with housing inclination up to 15°
3	Protected against falling spray water up to 60° from the vertical
4	Protected from splashing water on all sides
5	Protected against water jets from any angle
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

Model	SCORPION 12″	SCORPION 10X PRO	SCORPION 10X V2
Display Size	12.2 inches (30.98cm)	10.1 inches (25.65cm)	10.1 inches (25.65cm)
Resolution	1,920 x 1,200	1,920 x 1,200	1,920 x 1,200 (Windows) / 1,280 x 800 (Android)
Touchscreen	10-point capacitive	10-point capacitive	10-point capacitive
Brightness	280 nits	800 nits (sunlight readable)	700 nits (sunlight readable)
Processor	Intel® Celeron® N5100 Quad-Core (Windows) / Qualcomm MSM8953 (Android)	Intel® Celeron® Tiger Lake UP3 6305E or Core™ i5-1135G7 / i3-1115G4	Intel® Celeron® N5100 Quad Core (Windows) / MTK MT6789 CPU (Android)
Memory	4GB LPDDR4 (8GB for Windows)	4GB DDR4 (Celeron®) or 8GB (Core™)	4GB LPDDR4
Storage Capacity	64GB eMMC (Android) / 128GB eMMC (Windows)	128GB M.2 SSD (Celeron® 6305E) or 256GB M.2 SSD (Core™ i5)	64GB
Operating System	Windows 11 or Android 11	Windows 10 IoT	Windows 11 or Android 12
I/O	1x RJ-45 LAN 1x USB 2.0, 2x USB 3.0, 1x USB Type C 1x HDMI 1.4a Type C 1x RS-232 (COM1), 1x RS-485 (COM2) 1x micro SIM slot 1x microSD slot 2x speakers + Audio-out	1x USB 3.1 1x HDMI 1x COM or 1x USB 3.0 or 1x LAN via optional modules 1x Nano SIM slot 1x 2W speakers + Audio-out	1x COM or 1x USB 2.0 or 1x LAN via optional modules 1x USB 3.0 Type A, 1x USB Type C 1x HDMI 1.4a Type C 1x SD slot up to 128GB 1x SIM slot 1x Audio-out
Barcode Reader	1D / 2D (optional)	1D / 2D (optional)	1D / 2D (optional)
Camera	5MP (front) / 8MP (rear) - (Windows) 5MP (front) / 13MP (rear) - (Android)	2MP (front) IR camera supporting Windows Hello / 8MP (rear) with LED flash light	5MP (front) / 8MP (rear) - (Windows) 5MP (front) / 13MP (rear) - (Android)
Battery	Windows: 6,300 mAh, 7.4 Volt, (hot swap) + 1,000 mAh, 7.4 Volt (internal) / Android: 12,600 MAh, 3.7 Volt, (removable)	Removable battery pack: 11.4V / 4,630mAh 52W Li-polymer (3S1P) Hot swap battery pack: 3.7V 1,100mAh	5,000 mAh, 7.6 Volt, removable (Windows) 5,000mAh, 3.8V removable (Android)
Operating Temp.	-20° ~ 60°C	-29° ~ 60°C (DC); -10° ~ 50°C (battery)	-20° ~ 60°C
Resistances	IP65 + MIL-STD-810G	IP65 + MIL-STD-810H + MIL-STD-461G	IP65 + MIL-STD-810G
Accessories (optional)	Dockable keyboard, spare battery, 1D/2D scanner, power adapter and cable, office docking, active vehicle mounting, vehicle charging cable, shoulder belt, backstrap	Battery charging station, 1D/2D scanner, office docking, hand strap, stylus, vehicle mounting	Office docking, 1D/2D scanner, vehicle mount, power adapter, shoulder strap, spare battery

SCORPION 10″ Windows	SCORPION 10″ SLIM Android	SCORPION 8″	SCORPION 6″
10.1 inches (25.65cm)	10.1 inches (25.65cm)	8.0 inches (20.32cm)	6.0 inches (15.24cm)
1,280 x 800	1,920 x 1,200	1,280 x 800	1,280 x 720
10-point capacitive	10-point capacitive	10-point capacitive (Windows) 5-point capacitive (Android)	5-point capacitive
300 nits	400 nits (min.)	320 nits (Windows), 450 nits (Android)	430 nits
Intel® Celeron N3350 Dual Core or Intel® Pentium N4200 Quad Core (optional)	MT8788 Octa-Core (Quad-Core Cortex A73 2.0GHz / Quad-Core Cortex A53 2.0GHz)	Intel® Atom™ Cherry Trail Z8350 (Windows) or MSM8953, 2.0 GHz (Android)	Intel® Atom™ Cherry Trail Z8350 (Windows) or Qualcomm MT8735B Quad-Core Cortex A53, 1.45GHz (Android)
4GB LPDDR4 (up to max. 8GB)	4GB LPDDR 4X	4GB LPDDR3 (2GB optional)	4GB
128GB M.2 SSD (up to 1TB)	64GB / 128GB	64GB (up to 128GB)	64GB
Windows 10 IoT	Android 11	Windows 10 or Android 10	Windows 10 LTSC 2019 or Android 10
2x USB 3.0 Type A 1x HDMI 1x microSD slot 1x speaker (internal) + Audio-out	1x USB Type A, 1x USB Type C 1x Micro HDMI Mode 1: 2x Nano SIM, Mode 2: 1x Nano SIM + microSD 1x speaker + 2x microphones 1x microSD slot	1x USB 2.0 + 1x microUSB OTG (Windows) 1x USB 2.0 + 1x USB Type C (Android) 1x HDMI 1.4a Type C 1x SIM slot 1x microSD slot 1x speaker + Audio-out	1x USB-C 1x micro-SIM slot 1x microSD slot 1x speaker + Audio-out
1D / 2D (optional)	1D / 2D (included)	1D / 2D (optional)	1D / 2D (included)
2MP (front) / 8MP (rear) with auto focus	8MP (front) / 13MP (rear) or 21MP (optional) with flash light	2MP (front) / 5MP (rear) - (Windows) 2MP (front) / 13MP (rear) - (Android)	2MP (front) / 5MP (rear) - (Windows) 2MP (front) / 8MP (rear) - (Android)
3,950 mAh, 8.4 Volt, removable	10,000 mAh, 3.8 Volt, hot swap, 1,000 mAh, internal	8,500 mAh (for LTE: 7,800 mAh), 3.7 Volt, internal	5,000 mAh, 3.7 Volt, removable (Windows), 5,000 mAh, 3.7 Volt (Android)
0° ~ 40°C	-10° ~ 50°C	-10° ~ 50°C	-10° ~ 50°C
IP65 + MIL-STD-810G	IP65	IP65	IP67 + MIL-STD-810G
1D/2D scanner, cradle, docking station, battery charger, spare battery, power adapter, shoulder strap	Multi I/O docking, office docking, hand strap	1D/2D scanner, power adapter and cable, office docking, active vehicle mount, vehicle charging cable, stylus	Spare battery, power adapter and cable, office docking, multi-docking cradle, pistol grip, active mount, active pistol grip mount, vehicle power adapter, stylus, shoulder/belt pouch, 1D/2D Scanner (incl.)

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