SCORPION
Buyers Guide

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

The SCORPION series

We are your reliable expert when it comes to mobile computers such as rugged tablets or industrial handhelds. The mobile devices have been specifically developed for use in harsh environments, such as warehouse and transportation logistics, industrial automation or for field applications.

Various display sizes available:
6.0-, 8.0-, 10.1- and 12.2-inch

Minimum IP65 rating and MIL-STD-810G certification (hard rubber coating)

Pistol grip available with trigger for the 1D / 2D scanner

SCORPION 10X PRO

SCORPION 6″ (Windows / Android)

SCORPION 12″ (Windows / Android)
Industrial rugged tablet with hot swap battery

› Display size: 12.2″ (30.98cm)
› Resolution: 1,920 x 1,200
› CPU: Intel® Core™ N5100 or Qualcomm MSM8953
› Touchscreen: 10-point PCAP multi touch
› IP rating + certification: Full IP65 + MIL-STD-810G
› Operating temperature: -20° to 60°C

6,300 / 12,600mAh hot swap battery for uninterupted operations

SCORPION 10X V2 (Windows / Android)
Rugged tablet with high brightness display

› Display size: 10.1″ (25.65cm)
› Resolution: 1.280 x 800
› CPU: Intel® Celeron® N5100 or MTK MT 6789
› Touchscreen: 10-point PCAP multi touch
› IP rating + certification: Full IP65 + MIL-STD-810G
› Operating temperature: -20° to 60°C

High brightness display (700 nits) for ideal readability under direct sunlight

SCORPION 8X V2 (Windows / Android)
Compact rugged tablet for field applications

› Display size: 8.0″ (20.32cm)
› High brightness display: 700 nits
› CPU: Intel® Celeron® N5100 Quad-Core
› IP rating + certification: Full IP65 + MIL-STD-810G
› Operating temperature: -20° to 60°C

Accessories for tablets and handhelds

Office docking charging stations

Spare batteries

RAM Mounts mounting arms

Vehicle mounting kits for cars and forklifts

Touch pens

Docking keyboards

Shoulder / bag belts

Checklist

Application Field

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

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

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

For displays to remain readable in sunlight, a
min. of 700 nits
is required

1D/2D Barcode Reader

Which codes can our scan modules read?

SCORPION
RUGGED TABLET & HANDHELD SOLUTIONS

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.

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

Drop protection up to 1.5 meters due to MIL-STD-810G certification

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 (Ø ≥ 50mm)	1	Protected from vertically falling dripping water
2	Protected against contact with fingers and solid foreign bodies (Ø ≥ 12.5mm)	2	Protected against falling dripping water, with housing inclination up to 15°
3	Protected against contact with tools and solid foreign bodies (Ø ≥ 2.5mm)	3	Protected against falling spray water up to 60° from the vertical
4	Protected against contact with wires and solid foreign bodies (Ø ≥ 1.0mm)	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	Protected against strong jets of water
6	Complete protection against contact and dust	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

IP65 to IP67 rating

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.

www.scorpion-rugged.de/en

Comparison Table

All SCORPION models in direct comparison.

Model	SCORPION 12 PRO	SCORPION 12"	SCORPION 10X PRO	SCORPION 10X V2
Display Size	12.2 Inches (30,98 cm) IPS TFT LCD	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	1,920 x 1,200 (Windows) / 1,280 x 800 (Android)
Touchscreen	10-Point Projected Capacitive	10-point capacitive	10-point capacitive	10-point capacitive
Brightness	400 nits	280 nits	800 nits (sunlight readable)	700 nits (sunlight readable)
Processor	Intel® Core™ i5-1235U Deca Core	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	16GB LPDDR4	8GB LPDDR4 (8GB for Windows)	4GB DDR4 (Celeron®) or 8GB (Core™)	8GB LPDDR4
Storage Capacity	256GB	128GB eMMC	128GB M.2 SSD (Celeron® 6305E) or 256GB M.2 SSD (Core™ i5)	128GB eMMC
Operating System	Windows 11	Windows 11 or Android 11	Windows 10 IoT	Windows 11 or Android 12
I/O	1x USB 3.0 Type A 1x USB 3.0 Type C 1x HDMI 1.4a Type C 1x 3.5mm standard earphone jack 1x TF slot (max. 128GB) for SDHC/SDXC 1x SIM-Slot 1x 12pin POGO pin	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	1D / 2D	1D / 2D (optional)	1D / 2D
Camera	Front Camera : 2.0 MP Rear Camera : 8.0 MP	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	1x 700mAh / 7.4V (Built-in) 1x 6,300mAh / 7.4V (Removable)	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°C ~ 60°C	-20° ~ 60°C	-29° ~ 60°C (DC); -10° ~ 50°C (battery)	-20° ~ 60°C
Resistances	IP65 + MIL-STD-810G	IP65 + MIL-STD-810G	IP65 + MIL-STD-810H + MIL-STD-461G	IP65 + MIL-STD-810G
Accessories (optional)	1x Hand strap 1x Power Cable optional: Removable battery, mounting holder, docking station, power adapter	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

Comparison Table

All SCORPION models in direct comparison

Model	SCORPION 10" SLIM Android	SCORPION 8X V2	SCORPION 6"
Display Size	10.1 inches (25.65cm)	8.0 inches (20.32cm)	6.0 inches (15.24cm)
Resolution	1,920 x 1,200	1,280 x 800 (Windows), 1,920 x 1.200 (Android)	1,280 x 720
Touchscreen	10-point capacitive	5-point capacitive (Windows), 5-point PCAP touch, G+G (Android)	5-point capacitive
Brightness	400 nits (min.)	700 nits (Windows), 550 nits (Android)	430 nits
Processor	MT8788 Octa-Core (Quad-Core Cortex A73 2.0GHz / Quad-Core Cortex A53 2.0GHz)	Intel® Celeron® N5100 Quad Core (Windows), MediaTek MT6789 (Android)	Intel® Atom™ Cherry Trail Z8350 (Windows) or Qualcomm MT8735B Quad-Core Cortex A53, 1.45GHz (Android)
Memory	4GB LPDDR 4X	8GB LPDDR4	4GB
Storage Capacity	64GB / 128GB	128 GB eMMC (Windows), 128 GB (Android)	64GB
Operating System	Android 11	Windows 10, Android 12	Windows 10 LTSC 2019 or Android 10
I/O	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	Windows: 1x USB 3.0 Type A, 1x USB Type C 1x HDMI 1.4a Type C 1x TF slot max. 128GB for SDHC/SDXC 1x SIM slot 1x 12-pin POGO connector 1x 3.5mm standard headphone jack Android: 1x USB 2.0 Type A, 1x USB Type C 1x TF slot max. 512GB 2x SIM slots 1x 12-pin POGO connector 1x 3.5mm standard headphone jack	1x USB-C 1x micro-SIM slot 1x microSD slot 1x speaker + Audio-out
Barcode Reader	1D / 2D (included)	1D / 2D (optional)	1D / 2D (included)
Camera	8MP (front) / 13MP (rear) or 21MP (optional) with flash light	Front Camera: 5.0 MP Rear Camera: 8.0 MP (Windows), 13.0 MP (Android)	2MP (front) / 5MP (rear) - (Windows) 2MP (front) / 8MP (rear) - (Android)
Battery	10,000 mAh, 3.8 Volt, hot swap, 1,000 mAh, internal	Windows: 5,000 mAh/7.6 V (Removable) Android: 10,000 mAh/3.8 V (Removable)	5,000 mAh, 3.7 Volt, removable (Windows), 5,000 mAh, 3.7 Volt (Android)
Operating Temp.	-10° ~ 50℃	-20° ~ 60℃	-10° ~ 50℃
Resistances	IP65	IP65	IP67 + MIL-STD-810G
Accessories (optional)	Multi I/O docking, office docking, hand strap	Removable Battery, Mounting Holder, Docking Station, Power Adapter, Vehicle Charger	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.)
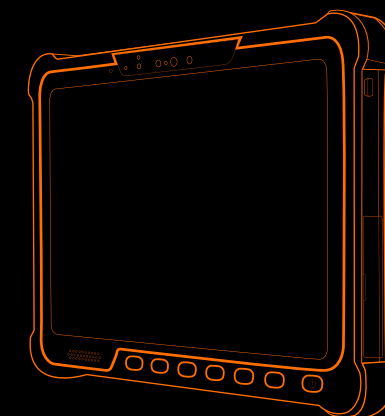
Is your desired configuration not listed?

We offer completely customized systems for projects and blanket orders!

SCORPION ●
RUGGED TABLET & HANDHELD SOLUTIONS

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