

# H-21

## 1D laser or 2D CMOS Imager

The H-21 is a rugged mobile computer and offers a sleek and rugged design that is ideal for today's mobile workers in field sales and service, inventory control, asset management, security and inspections and merchandising.



## Highlights

- Rugged and reliable smartphone with fully integrated 1D laser or 2D imager barcode scanner
- Windows Mobile 6.5 for familiar and convenient navigation
- Qualcomm® MSM7225 528 MHz CPU
- 2.8" brilliant color transfective TFT touchscreen display, 480 x 640 pixels with adjustable backlight
- Communications: Bluetooth 2.1, Wi-Fi (802.11 b/g), WWAN (3G/3.5G), AGPS, USB and Infrared
- Rear facing 3.2 MP auto-focus digital color camera, LED flash
- Memory: 256 MB NAND Flash, 256 MB RAM and user accessible microSD
- IP64 rating against dust and moisture, survives multiple 1.5 m drops to concrete
- Compact form factor - 67 x 135 x 22 mm (W x H x D) and 235 grams (including battery)
- High capacity 3.7 3060mAh Lithium-Ion battery
- Two year warranty

# H-21

## Product Specifications

### Operation

**CPU:** Qualcomm MSM7225 528 Mhz  
**O/S:** Microsoft Windows Mobile 6.5  
**O/S:** Supports year, month, day, hour, minute, second (leap year support)

### Memory

**Nand Flash:** 256 MB  
**SDRAM:** 256 MB  
**Expansion:** User accessible MicroSDHC

### Display

**Type:** Graphic Transflective TFT LCD with touch panel, 16-bit color with adjustable backlight  
**Size:** 2.8", 480 x 640 pixels

### Operating indicators

**Visual:** 2 LEDs (red/orange/green/blue)  
**Non-visual:** Vibrate, Buzzer

### Operating keys

**Entry options:** 12 (alpha)numeric or QWERTY keyboard, navigation key (scroll + select), function keys, control keys, 1 power key, 2 hot keys, 2 phone keys, 1 camera key, reset key, volume key, 2 scan keys

### Communication

**USB:** OTG, client and host  
**IRDA:** Ver 1.3, 2400 bps - 115.2 kbps (SIR), 576 kbps - 1.152 Mbps (MIR)  
**Bluetooth:** 2.1 + EDR, class 2  
**W-LAN:** Wi-Fi, IEEE.802.11 b/g  
**Telecom:** GPRS/EDGE (quad-band 850/900/1800/1900), 3G UMTS (WCDMA band, I,II,VI,VIII), 3.5G UMTS (HSDPA 7.2m / HSUPA 5.76 M)  
**GPS:** Integrated AGPS  
**Audio:** Speaker/microphone (mono), 3.5mm headset connector (stereo)  
**Extension:** User accessible microSD i/o

### Power

**Rechargeable battery:** Lithium-Ion 3.7V 3060 mAh  
**Backup Battery:** 6mAh, hotswap  
**Charging method:** Enclosed power supply, separate car charging adapter, separate cradle

### Camera

**Color camera:** 3.2 megapixels, auto-focus, LED flash

### Barcode Scanner Optics

**Light source:** 650 nm visible laser diode  
**Scan rate:** 100 scans/seconds  
**Reading pitch angle:**  $\pm 35^\circ$   
**Reading skew angle:** -50 to -8°, +8 to +50°  
**Reading tilt angle:**  $\pm 20^\circ$   
**Curvature:** R>15 mm (EAN8), R>20 mm (EAN13)  
**Min. pcs value:** 0.45  
**Depth of field at code 39:** 65-645mm (1.00mm) / 2.56-25.39in (39mil), 45-415mm (0.5mm) / 1.77-16.34in (20mil), 45-255mm (0.25mm) / 1.77-10.04in (10mil), 45-145mm (0.15mm) / 1.77-5.71in (6mil), 55-115mm (0.127mm) / 2.17-4.53in (5mil)

### 2D Imager Optics

**Light source:** Aiming laser diode, illumination LEDs  
**Scan method:** CMOS area sensor, 900 x 512 pixels, gray scale  
**Scan rate:** Up to 80 fps, after auto-focus activation (100 ms after triggering)  
**Image format:** Bitmap, JPEG, TIFF  
**Reading pitch angle:**  $\pm 50^\circ$   
**Reading skew angle:**  $\pm 50^\circ$   
**Reading tilt angle:** 360°  
**Min. pcs value:** 0.45  
**Field of view:** Horizontal 40°, Vertical 23°  
**Depth of field at code 39:** 45-110mm (0.127mm) / 1.77-4.33in (5mil), 50-260mm (0.254mm) / 1.97-10.24in (10mil), 120-1000 mm (1.0mm) / 4.72-39.37in (39mil)  
**Depth of field at QR code:** 45-65mm (0.127mm) / 1.77-2.56in (5mil), 45-230mm (0.381mm) / 1.77-9.06 in (15mil)

### Supported symbologies

**Barcode (1D):** JAN/UPC/EAN incl. add on, Codabar/NW-7, Code 39, Code 93, Code 128, GS1-128 (EAN-128), GS1 Databar (RSS), IATA, Industrial 2of5, interleaved 2of5, ISBN-ISMN-ISSN, Matrix 2of5, MSI/Plessey, S-Code, Telepen, Tri-Optic, UK/Plessey  
**Postal Code:** Chinese Post, Korean Postal Authority code

**2D code:** Aztec code, Aztec runes, Codablock F, Composite Codes, Data Matrix (ECC200/ECO-140), Maxi Code (mode 2-5), Micro QR code, MicroPDF417, PDF417, QR code

### Durability

**Temperature in operation:** -10 to 50 °C / 14 to 122 °F  
**Temperature in storage:** -40 to 60 °C / -40 to 140 °F  
**Humidity in operation:** Up to 90% (non-condensing)  
**Humidity in storage:** Up to 90% (non-condensing)  
**Drop test:** 1.5 m / 5 ft drop onto concrete surface  
**Protection rate:** IP64

### Physical

**Dimensions (WxHxD):** 67 x 135 x 22 mm / 2.64 x 5.31 x 0.87 in  
**Weight body:** Ca. 235 g / 8.3 oz (incl. battery)  
**Case:** Black

### Regulatory & Safety

**Product compliance:** CE, FCC, VCCI, PTCRB, GCF, RoHS, JIS-C-6802 Class 2, IEC60825-1 Class 2, FDA CDRH Class II

### Items

**Enclosed:** USB AC Adapter, Standard battery Lithium-Ion 3060 mAh, USB cable, Leather case, wrist strap, Ear microphone, Screen protector, Getting started disk, Stylus + cord  
**Sold Separately:** CRD-21 cradle (USB OTG, Active sync, charging), Car holder kit, Battery