

# H-22

## 1D laser or 2D CMOS Imager

The H-22 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 6.5.3 for familiar and convenient navigation
- Marvell® PXA320 806MHz CPU
- 3.7" 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: 512 MB ROM, 256 MB RAM and user accessible microSD
- IP65 rating against dust and moisture, survives multiple 1.5 m drops to concrete
- Compact form factor - 151 x 75 x 25 (W x H x D) and 340 grams (including battery)
- High capacity 3.7 3060mAh Lithium-Ion battery
- Two year warranty

# H-22

## Product Specifications

### Operation

**CPU:** Marvell PXA320 806MHz  
**O/S:** Microsoft Windows Mobile 6.5.3  
**Software:** Wordpad, Internet Explorer, Active Sync, Opticon scanner application, Upgradeable via integrated microSD card slot  
**RTC:** Supports year, month, day, hour, minute, second (leap year support)

### Memory

**Nand Flash:** 512 MB  
**SDRAM:** 256 MB  
**Expansion:** User accessible MicroSDHC

### Display

**Type:** Blanview TFT LCD, 262k color display with touch screen  
**Size:** 3.7", 480 x 640 pixels

### Operating indicators

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

### Operating keys

**Entry options:** (alpha) Numeric keyboard or QWERTY keyboard, navigation key (scroll + select), function keys, 10 enabled by color key, control keys, 1 power key, Windows Mobile key, OK 2 phone keys, reset key, volume key, 4 scan keys, reconfigurable

### Communication

**USB:** OTG, client and host  
**IRDA:** Ver 1.4, 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/n  
**Telecom:** GPRS/EDGE (quad-band 850/900/1800/1900), 3G UMTS (WCDMA band, I,II,V,VI,VIII), 3.5G UMTS (HSDPA 7.2m / HSUPA 5.76 M)  
**GPS:** Integrated AGPS  
**Audio:** Speaker/microphone (mono), headset connector (stereo)  
**Extension:** User accessible microSD i/o  
**RFID**

### Power

**Rechargeable battery:** Lithium-Ion 3.7V 3060 mAh

**Backup Battery:** 18mAh for main battery 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  $-8^\circ$ ,  $+8$  to  $+50^\circ$   
**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 - 645 mm (1.00 mm) / 2.56 - 25.39 in (39 mil), 45 - 415 mm (0.5 mm) / 1.77 - 16.34 in (20 mil), 45 - 255 mm (0.25 mm) / 1.77 - 10.04 in (10 mil), 45 - 145 mm (0.15 mm) / 1.77 - 5.71 in (6 mil), 55 - 115 mm (0.127 mm) / 2.17 - 4.53 in (5 mil)

### 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:**  $360^\circ$   
**Min. pcs value:** 0.45  
**Field of view:** Horizontal  $40^\circ$ , Vertical  $23^\circ$   
**Depth of field at code 39:** 45-1000mm (0.127mm) / 1.77-39.37in (5mil), 45-110mm (0.127mm) / 1.77-4.33in (5mil), 50-260mm (0.254mm) / 1.97-10.24in (10mil), 120-1000mm (1.0 mm) / 4.72-39.37in (39mil)  
**Depth of field at QR code:** 45-65mm (0.127mm) / 1.77-2.56in (5mil), 45-250mm (0.381mm) / 1.77-9.84in (15mil)  
**Supported standards:** ISO 14443A/B, Mifare Classic 1k, Mifare Classic 4k, Mifare Ultralight, Mifare DESfire 2k, 4k and 8k, ISO 15693, I-code, Felica

**Frequency:** 13.56 MHz

**Reading distance:** Up to 70 mm (depending on card/tag type)

### Supported symbologies

**Barcode (1D):** AN/UPC/EAN incl. add on, Codabar/NW-7, Code 11, Code 39, Code 93, Code 128, GS1-128 (EAN-128), GS1 Databar (RSS), IATA, ISBN, Industrial 2of5, interleaved 2of5, Matrix 2of5, MSI/Plessey, Telepen  
**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  $50^\circ\text{C}$  /  $14$  to  $122^\circ\text{F}$   
**Temperature in storage:**  $-30$  to  $80^\circ\text{C}$  /  $-22$  to  $176^\circ\text{F}$  (main battery storage:  $-20$  to  $60^\circ\text{C}$  /  $-4$  to  $140^\circ\text{F}$ )  
**Humidity in operation:** Up to 95% (non-condensing)  
**Humidity in storage:** Up to 95% (non-condensing)  
**Drop test:** 1.5 m / 5 ft drop onto concrete surface  
**Protection rate:** IP65

### Physical

**Dimensions (WxHxD):** 151 x 75 x 25 mm / 5.94 x 2.95 x 0.98 in  
**Weight body:** Ca. 340 g / 12 oz (inc. battery)  
**Case:** Black

### Regulatory & Safety

**Product compliance:** CE, FCC, PTCRB, GCF, RoHS, CTIA/IEEE1725, IEC60825-1 Class 2

### Items

**Enclosed:** USB AC Adapter, USB cable, Wriststrap, Ear microphone, Stylus + cord  
**Sold Separately:** CRD-22 cradle (USB OTG, Active sync, charging), Pistol grip, car holder kit, standard battery Lithium-ion 3060 mAh