

# H-31 & H-33

## 2D CMOS Imager

Built with a durable and intelligent design, the H-31/H-33 is ideal for today's mobile workforce. Implementing a variety of applications that make it an optimal tool to be used in areas such as: field sales, inventory management, and logistics.



## Highlights

- Rugged mobile computer with a fully integrated, Opticon high speed 2D imager barcode scanner
- Two models available; H-31 has Wi-Fi and the H-33 has 4G with GPS
- Android 9 for familiar and convenient navigation
- Qualcomm SDM450 A53 1.8 GHz Octa-core
- 5" brilliant color touchscreen display with Gorilla® Glass
- Communications: Bluetooth 4.2 LE, WLAN, Wi-Fi, NFC, USB, GPS (H-33)
- Rear facing 16 MP auto-focus digital camera, LED flash with torch
- IP67 rating against dust and moisture, survives multiple 1.8 m drops to concrete, MIL-STD 810G with bumper
- Memory: 64GB EMMC, 4GB LPDDR3 RAM and MicroSD
- Compact form factor: 79 x 158 x 20.9 mm (W x H x D) and 319 grams
- User/field-replaceable battery packs, 4,000mAh, no special tool needed, supports hot-swap mode, extended battery packs available
- Supports Qualcomm Quick-Charge 3.0
- Two year warranty and OptiCare comprehensive warranty option

# H-31 & H-33

## Product Specifications

### Operation

**CPU:** Qualcomm SDM450 A53 1.8Ghz  
Octa-core  
**O/S:** Android 9

### Memory

**EMMC:** 64GB  
**RAM:** LPDDR3 4GB  
**Expansion:** MicroSD

### Display

**Type:** FHD, capacitive multi touch panel, color screen, Gorilla Glass  
**Size:** 5"  
**Brightness:** 520 cd/m2 (nits) typical

### Operating indicators

**Visual:** 3 LEDs  
**Non-visual:** Vibrate, dual speakers (max 90dB)

### Operating keys

**Entry options:** 1 power key, 2 volume keys, 2 (programmable) scan keys, 2 function keys, 3 OS keys

### Communication

**Bluetooth:** 4.2 LE  
**W-LAN:** Wi-Fi, IEEE 802.11 a/b/g/n/ac  
**WAN (H-33):** WCDMA, GSM, LTE  
**NFC:** ISO14443 (type A, B, Mifare, Felica), ISO15693  
**GPS:** GPS/GLONASS/Beidou/QZSS (H-33 only)

### Sensors

Accelerometer, Light sensor, Gyroscope, E-compass, Proximity

### Power

**Main battery:** Lithium-Ion 3.7V 4000mAh (standard), Lithium-Ion 3.7V 5720mAh (optional)  
**Backup battery:** Rechargeable RTC battery, battery swap  
**Charging technology:** Qualcomm Quickcharge 3.0 (USB 2.0)

### Camera

**Rear facing camera:** 16 MP, auto-focus, LED flash with torch

### 2D Imager optics

**Light source:** Aiming green LED, warm white illumination LED  
**Scan method:** CMOS area sensor, 640 x 480 pixels, greyscale 10-bits  
**Scan rate:** Up to 100 fps  
**Reading pitch angle:** -65 to 0°, 0 to +65°  
**Reading skew angle:** -65 to 0°, 0 to +65°  
**Reading tilt angle:** 360°  
**Curvature:** R>15 mm (EAN8), R>20 mm (EAN13)  
**Min. resolution at pcs 0.9:** 0.1 mm / 4 mil  
**Min. pcs value:** 0.2  
**Field of view:** Horizontal 38°, Vertical 28.9°

#### Depth of field at code 39:

52 - 126 mm (0.127 mm) / 2.05 - 4.96 in (5 mil),  
46 - 246 mm (0.254 mm) / 1.81 - 9.68 in (10 mil),  
60 - 466 mm (0.508 mm) / 2.36 - 18.35 in (20 mil)

#### Depth of field at QR code:

64 - 106 mm (0.169mm) / 2.52 - 4.17 in (6.7 mil),  
30 - 234 mm (0.381mm) / 1.18 - 9.21 in (15 mil)

### Supported symbologies

**Barcode (1D):** JAN/UPC/EAN incl. add on, Codabar/NW-7, Code 11, Code 39, Code 93, Code 128, GS1-128 (EAN-128), GS1 Databar (RSS), IATA, Industrial 2of5, Interleaved 2of5, ISBN-ISSN-IS-MN, Matrix 2of5, MSI/Plessey, S-Code, Telepen, Tri-Optic, UK/Plessey  
**Postal code:** Chinese Post, Intelligent Mail Barcode, Korean Postal Authority code, POSTNET  
**2D code:** Aztec Code, Aztec Runes, Chinese Sensible code, Codablock F, Composite codes, Data matrix

(ECC200), Passport MRZ (OCR-B), maxi Code (mode 2-5), MicroPDF417, MicroQR Code, PDF417, QR Code

### Durability

**Temperature in operation:** -10 to 50 °C / 14 to 122 °F  
**Temperature in storage:** -30 to 60 °C / -22 to 140 °F (without battery)  
**Humidity in operation:** 30% to 80% (non-condensing)  
**Humidity in storage:** 5% to 90% (non-condensing)  
**Drop test:** 1.8m / 6 ft drop onto concrete surface, MIL-STD 810G with protective bumper. 1.5m / 5 ft drop onto concrete surface without bumper, MIL-STD 810G.  
**Protection rate:** IP67

### Physical

**Dimensions (WxHxD):** 79 x 158 x 20.8 mm / 3.11 x 6.22 x 0.82 in  
**Weight body:** Ca. 319 g / 10.8 oz (inc. battery)  
**Color:** Black

### Regulatory & Safety

**Product compliance:** CE, CB, FCC, VCCI, TELEC, RoHS, WEEE, REACH

### Items

**Enclosed:** Standard battery, hand strap, USB C cable  
**Sold Separately:** Extended battery, extended battery cover, USB adapter (QC3.0), protection bumper, pistol grip, stylus, holster, OptiCare comprehensive care for 2, 3 or 5 years  
**Cradle (charging and communication):** USB single charge cradle, cradle power adapter, multi-cradle