OPTICON

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 transflective 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,V,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 visable laser diode
Scan rate: 100 scans/seconds
Reading pitch angle: ± 35°
Reading skew angle: -50 to -8°, +8 to +50°
Reading tilt angle: ± 20°
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: ± 50°
Reading skew angle: ± 50°°
Reading tilt angle: 360°
Min. pcs value: 0.45
Field of view: Horizotal 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

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