

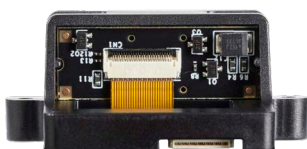
# N-210

## 2D CMOS Imager

The N-210 is super thin 2D CMOS imager with a fast shutter speed, a high speed processor and excellent motion tolerance. It rapidly and easily scans barcodes off cell phone, tablet and computer displays.



scale  
100%



## Highlights

- Low profile, full spectrum illuminated 2D CMOS imager
- Perfect for integration into small, space constrained devices, medical, or retail barcode scanning devices
- High performance, lower power 1.2GHz CPU and an ultra-fast 100 fps CMOS imager sensor enable high speed scanning of 1D and 2D barcodes and OCR fonts
- Fast global shutter technology providing exceptional motion tolerance
- Improved scanning of curved, wide, poorly printed and damaged barcodes
- Well-defined, single line of green LED light and cool white LED for illumination makes it easy to aim while providing safety and an extended service life
- Low power consumption to fit your design needs
- Communication interface: USB Composite device (both serial and HID. Serial is always available for configuration) and RS232
- Communication interface: 12 pin FFC connector
- Engineering kit available - enables faster time to market
- Two year warranty

# N-210

## Product Specifications

### Communication

**Serial CMOS:** 12 pin FFC connector: USB (serial and HID) and RS232

### Power

**Voltage requirement:** 5.0V

**Current consumption:** Typical 300 mA

**Low power current:** 10 mA

**Suspend mode:** 10 mA

### 2D Imager optics

**Light source:** Aiming green LED,  
cool white illumination LED

**Scan method:** CMOS area sensor, 640 x 480 pixels,  
black and white

**Scan rate:** Up to 100 fps

**Reading pitch angle:** 360°

**Reading skew angle:** 15°

**Reading tilt angle:** 360°

**Curvature:** R>20 mm (UPC)

**Min. resolution at pcs 0.9:** 0.2 mm / 7,9 mil

**Min. pcs value:** 0.2

**Field of view:** Horizontal 33.2°, Vertical 25.4°

**Depth of field at code 39:**

55 - 128 mm (0.127 mm) / 2.16 - 5.04 in (5 mil)

54 - 238 mm (0.254 mm) / 2.13 - 9.37 in (10 mil)

71 - 435 mm (0.508 mm) / 2.79 - 17.13 in (20 mil)

**Depth of field at code 128:**

64 - 193 mm (0.2 mm) / 2.52 - 7.6 in (7.9 mil)

**Depth of field at EAN/UPC:**

52 - 293 mm (0.33 mm) / 2.05 - 11.54 in (13 mil)

**Depth of field at PDF417:**

51 - 148 mm (0.169 mm) / 2.01 - 5.83 in (6.7 mil)

44 - 213 mm (0.254 mm) / 1.73 - 8.39 in (10 mil)

**Depth of field at QR code:**

62 - 113 mm (0.169 mm) / 2.44 - 4.45 in (6.7 mil)

24 - 252 mm (0.381 mm) / 0.94 - 9.92 in (15 mil)

**Depth of field at Data Matrix:**

64 - 118 mm (0.169 mm) / 2.52 - 4.65 in (6.7 mil)

45 - 175 mm (0.254 mm) / 1.77 - 6.89 in (10 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-ISMN, 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:** -20 to 50 °C / -4 to 122 °F

**Temperature in storage:** -40 to 70 °C / -40 to 158 °F

**Humidity in operation:** 5 - 90% (non-condensing)

**Humidity in storage:** 5 - 90% (non-condensing)

**Ambient light immunity:** Fluorescent 10,000 lx max, Sunlight 100,000 lx max, Incandescent 10,000 lx max

**Drop test:** Packed in dummy case 1.8 m / 6 ft drop onto concrete surface

**MTBF:** 395,297 hours

### Physical

**Dimensions (WxHxD):** 38.53 x 16.2 x 24.33 mm / 1.52 x 0.64 x 0.96 in

**Weight:** Ca. 5.5 g / 0.19 oz

### Regulatory & Safety

RoHS, IEC62471