

# Capsule™ Neuron 2 Specifications

## TECHNICAL DATA SHEET



The Capsule Neuron 2 is the second generation bedside mobile clinical computer that enables the automatic collection of vital signs data. It features local data storage, and connects to the hospital network through a wired Ethernet or a standard 802.11 a/b/g/n wireless network, thereby eliminating additional network ports at the bedside. It is the core hardware component of Capsule™ Medical Device Information System.

### CPU and Storage

- Intel® Atom™ Processor N2600
- 2GB DDR3 memory
- 16GB industrial SLC flash memory with hardware access protection

### Security/Authentication

#### Wireless authentication:

- WPA-PSK
- WPA2-PSK
- WPA2-Enterprise (PEAP-MSChapV2)

#### Wireless encryption:

- AES/802.11i
- TKIP

### User Interface

#### Display:

- 10.1" wide active matrix TFT, 1024 x 600
- Brightness: 375 cd/m<sup>2</sup>
- Contrast: 400:1
- Analog resistive touch screen
- Multi-color LED indicator
- Internal speaker
- Ambient light sensor

### Lan Connectivity

- Ethernet: 10/100/1000 base-T Half/Full duplex LAN

### Wireless Connectivity

- QoS IEEE 802.11e with IEEE 802.1q tagging
- WLAN IEEE 802.11 a/b/g/n 2.4 and 5GHz
- Modulation technology: DSSS, OFDM
- Modulation type: CCK, DQPSK, DBPSK for DSSS, 64QAM, 16QAM, QPSK, BPSK for OFDM

#### EIRP (Equivalent Isotropically Radiated Power)

- 2.4GHz: 17.64dBm
- 5.18-5.24GHz: 17.76dBm
- 5.26-5.32GHz: 17.76dBm
- 5.50-5.70GHz: 17.89dBm
- 5.745-5.825GHz: 15.30dBm

- Range: 10-20 meters, depending on Wi-Fi network configuration

#### Operating frequency

- For 2.4GHz band:
  - 2412 MHz - 2472MHz
- For 5.0GHz band:
  - 5180MHz - 5240MHz
  - 5260MHz - 5320MHz
  - 5500MHz - 5700MHz
  - 5745MHz - 5825MHz

### Rapid Authentication

#### Internal RFID Prox card reader:

- ISO/IEC 14443 Type A and B Proximity Card
- Operating frequency: 13.56 MHz
- Modulation: ASK

#### Optional proximity card readers:

- HID Prox : Operating frequency: 125kHz
- HID iClass: Operating Frequency: 13.56MHz

## TECHNICAL SPECIFICATIONS

### Battery

#### Internal battery pack

- Li-Ion 3S1P, 10.9V 3.05Ah 33.2Wh (2600 mA)
- Charging time: 120 minutes
- Autonomy under nominal load: 150 minutes

#### Optional extended battery pack

- Li-Ion 3S2P, 10.9V 6.1Ah 66.6Wh (5200 mA)
- Charging time: 240 minutes
- Autonomy under nominal load: 240 minutes (extended battery alone), 360 minutes (both batteries)
- 80% of design capacity held after 500 cycles with recommended maintenance

### Power Supply

- External medical grade AC/DC switching power supply (100-240V AC, 47-63 Hz, 60 W, 20VDC @3.53A) with regional power cable
- Power supply connector with positive locking mechanism to prevent accidental disconnection

### Mechanical & Environment

#### Operating environment

- Temperature: 0°C to 40°C (32°F to 104°F)
- Humidity: 10% to 95% (non-condensing)
- Atmospheric pressure: 700 hPa to 1060 hPa
- Altitude: -100 m to 2000 m (-330 ft to 6560 ft)

#### Storage and transportation environment

- Temperature: -20°C to +60°C (-4°F to 140°F)
- Humidity: 0% to 95% (non-condensing)
- Atmospheric pressure: 500 hPa to 1060 hPa

### Physical Characteristics

- Size (W x H x D): 265 x 210 x 45 mm (10.4 x 8.3 x 1.8 inches)
- Weight: 2.3 kg (5.1 lbs) with AC power supply, and 3.5 kg (7.7 lbs) with extended battery
- VESA 75/100 standard mounting bracket
- Security lock slot for theft prevention
- Passive fan-less cooling system for audible noise < 40dB

### Medical Device Connectivity

#### 5 serial medical device connections

- RS-232 communication
- 5 RJ45 style connectors
- Automatic hardware (RTS/CTS) flow control
- 2500VAC galvanic isolation input-to-output and between ports

#### 2 USB medical device connectors

- USB 2.0 Type A ports with positive locking mechanism
- 2500VAC galvanic isolation

### Extension

- 2 USB 2.0 Type A ports
- 1 Internal USB 2.0 Type A extension port

### Certifications

- EN/IEC 60601-1, EN/IEC 60601-1-2
- FCC Part 15 Class A

### CE regulations

- R&TTE Directive ( Radio Equipment Directive 2014/53/EU) 1999/5/EEC
- WEEE Directive (Waste Electrical and Electronic Equipment) - 2012/19/EU
- Battery Waste Directive - 2006/66/EEC
- RoHS Directive - 2011/65/EU
- Packaging Waste Directive - 94/62/EC
- REACH Regulation - 1907/2006

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## ORDERING INFORMATION

Part Number	Description
DC-NU2-UMPC	Capsule Neuron 2 - UMPC
DC-NU2-BAT	Capsule Neuron 2 - Internal Battery
DC-NU2-EXTBAT	Capsule Neuron 2 - Extended Battery
DC-NU2-PS	Capsule Neuron 2 - Power Supply
DC-NU-PC-xx	Capsule Neuron 2 - Power Cable
DC-NU2-IM-DOC	Capsule Neuron 2 - Installation & Maintenance Manual
SL-PROXKIT-HID-ICL	Capsule Neuron 2 iclass Prox Card Reader
SL-PROXKIT-HW-HID	Capsule Neuron 2 HID Prox Card Reader Kit

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