

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 needs for additional network ports at the bedside. It is the core hardware component of Capsule™ platform.

CPU & STORAGE

- Intel® Atom™ Processor N2600
- 2GB DDR3 memory
- 32GB industrial iSLC 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/m²
- 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, AWID, EM, CASI, ICL, INDALA, IOPROX: Operating frequency: 125kHz
- HID iClass: Operating Frequency: 13.56MHz

OR

- HID Prox: Operating frequency: 125kHz
- AWID: Operating frequency: 125kHz
- EM: Operating frequency: 125kHz
- CASI: Operating frequency: 125kHz
- ICL: Operating frequency: 125kHz
- INDALA: Operating frequency: 125kHz
- IOPROX: Operating frequency: 125kHz
- HID iClass: Operating Frequency: 13.56MHz

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

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 Kit
SL-PROXKIT-HW-HID	Capsule Neuron 2 HID Prox Card Reader Kit
SL-PROXKIT-HW-IOPROX	Capsule Neuron 2 IOPROX Card Reader Kit
SL-PROXKIT-HW-CASI	Capsule Neuron 2 CASI Card Reader Kit
SL-PROXKIT-HW-INDALA	Capsule Neuron 2 INDALA Card Reader Kit
SL-PROXKIT-HW-EM	Capsule Neuron 2 EM Card Reader Kit
SL-PROXKIT-HW-AWID	Capsule Neuron 2 AWID Card Reader Kit

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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
- IEC 60950-1
- CISPR22, CISPR32, CISPR24

CE regulations

- Radio Equipment Directive 2014/53/EU
- 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