

CAPSULE NEURON 3

Technical Data Sheet

The Capsule Neuron 3 is the next generation mobile clinical computer within the Capsule platform, enabling the automatic collection of medical device data. It features data caching for network outage resilience, battery for power autonomy, and connects to the hospital network through a wired Ethernet or a standard 802.11 ac/a/b/g/n wireless network.

THE NEURON 3 IS AVAILABLE IN THREE CONFIGURATIONS:



NEURON 3

A total of 2 serial ports — used for Chart Xpress or Vitals Stream when the Neuron is mounted on the device



NEURON 3 WITH 7S CONNECTIVITY MODULE

A total of 9 serial ports — 7 in the front, 2 in the back



NEURON 3 WITH 4S2U CONNECTIVITY MODULE

A total of 8 ports — 4 serial and 2 USB in the front, 2 serial ports in the back (due early 2020)

TECHNICAL SPECIFICATIONS

CPU & Storage

- Intel® Atom™ E3930 Processor
- 4GB DDR3L memory
- 32GB SSD M.2 module with hardware access protection
- Caching capability for several hours, depending on the configuration

Security/Authentication

- Encrypted data exchange with the Capsule Server
- Single Boot USB: allows boot USB port access control
- Wireless authentication:
 - WPA2-PSK
 - WPA2-Enterprise (PEAP-MSChapV2)
- Wireless encryption:
 - AES/802.11i

User Interface

Display:

- 10.1" wide active matrix TFT, 1280x800
- Brightness: 440 cd/m2
- Contrast: 1300:1
- Viewing angle: 85° (both vertical and horizontal)
- Projected capacitive touch screen
- Multi-color LED indicator
- Ambient light sensor
- Internal speaker compliant with 60601-1-8_2012 ed2.1

LAN Connectivity

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

Wireless Connectivity

- WLAN IEEE 802.11 ac/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, 256QAM for OFDM in 11ac mode and VHT (20/40) mode in 2.4GHz

EIRP (Equivalent Isotropically Radiated Power)

- 2.4GHz : 2412MHz-2472MHz: 19.89dBm
- 5180MHz - 5240MHz : 22.76 dBm
- 5260MHz -5320MHz : 22.80 dBm
- 5500MHz -5720MHz :22.78 dBm
- 5745MHz -5.825MHz : 25.66 dBm
- Range: 10-20 meters, depending on Wi-Fi network configuration

Rapid Authentication

Optional RFID Badge Reader:

- 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, 10.8V 3.35Ah 36.2Wh
- Charging time: 180 minutes
- Autonomy under nominal load: 180 minutes

Optional extended battery pack

- Li-Ion 3S2P, 10.9V 6.1Ah 66.6Wh
- Charging time: 270 minutes
- Autonomy under nominal load: 270 minutes (extended battery alone), 450 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, 50-60 Hz, 65 W, 20VDC @3.25A) 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: 15% 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: 15% to 95% (non-condensing)
- Atmospheric pressure: 500 hPa to 1060 hPa

Physical Characteristics

- Width: 263 mm (10.4 inches)
- Depth: 40 mm (1.6 inches)
- Height:
 - without Connectivity Module: 210 mm (8.3 inches)
 - with Connectivity Module: 265 mm (10.4 inches)
- Weight:
 - without Connectivity Module: 2kg (4.4 lb)
 - with Connectivity Module: 2.4 kg (5.3 lb)
- VESA 75/100 standard mounting bracket
- Security lock slot for theft prevention
- Passive fan-less cooling system

Medical Device Connectivity

Serial Ports

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

USB Medical Grade Ports

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

Certifications

- IEC 60601-1, IEC 60601-1-2 (in September)
- FCC Part 15B Class B
- ICES-003
- IEC 60950-1
- CISPR22, CISPR32, CISPR24, CISPR35

ORDERING INFO

PART NUMBER	DESCRIPTION	PART NUMBER	DESCRIPTION
SL-NU3-UMPC-IOCOVER	Capsule Neuron 3 with the Connectivity Module Port Cover	SL-NU3-IM-DOC	Capsule Neuron 3 - Installation & Maintenance Manual
SL-NU3-UMPC-IOM7S	Capsule Neuron 3 with the 7 Serial Ports Connectivity Module	SL-NU3-PRXKT-AWID	Capsule Neuron 3 - AWID Prox card reader kit (125KHz)
SL-NU3-UMPC-IOM4S2U	Capsule Neuron 3 with the 4 Serial +2 USB Ports Connectivity Module	SL-NU3-PRXKT-EM	Capsule Neuron 3 - EM Prox card reader kit (125KHz)
NU3-CX-UPGRADE	Neuron 3 Chart Xpress Upgrade with Generic Pole Mount & Cable Set	SL-NU3-PRXKT-HID	Capsule Neuron 3 - HID Prox card reader kit (125KHz)
NU3-CX-UPGRADE-EWSS	Neuron 3 Chart Xpress Upgrade with Generic Pole Mount, Cable Set & EWSS	SL-NU3-PRXKT-CASI	Capsule Neuron 3 - CASI Prox card reader kit (125KHz)
SL-NU3-BAT	Capsule Neuron 3 - Internal Battery	SL-NU3-PRXKT-ICL	Capsule Neuron 3 - ICL Prox card reader kit (13.56MHz)
DC-NU2-EXTBAT	Capsule Neuron - Extended Battery	SL-NU3-PRXKT-INDALA	Capsule Neuron 3 - INDALA Prox card reader kit (125KHz)
SL-NU3-PS	Capsule Neuron 3 - Power Supply	SL-NU3-PRXKT-IOPROX	Capsule Neuron 3 - IOPROX Prox card reader kit (125KHz)
DC-NU-PC-xx	Capsule Neuron - Power Cable		

FOR MORE INFORMATION, CONTACT US

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