

Type-C Ambulatory EEG

Model: Nation7128WH-C20



Type-C EEG Amplifier

Specifications for Type-C EEG Amplifier

Input channels: 20 channels (19 Monopolar EEG and 1 Bipolar ECG)

Power supply: 4AA batteries, or external rechargeable lithium battery;

Continuous Monitoring Time: up to 72 hours with 4 AA batteries;

Internal memory: Built-in Flash memory card (2GB);

Connection to PC: Wireless Bluetooth for real-time data transmission; USB (2.0) for data

uploading from Flash memory card.

Operation Modes: Real-time; LTM (Long Term Monitoring)

Sampling Rate: 128Hz, 256Hz, 512Hz

Input impedance: $\geq 10\text{M}\Omega$

A/D conversion: 16 bit

CMRR: $\geq 100\text{dB}$;

Noise: $\leq 0.5\mu\text{VRMS}$;

Low-pass filter: 1~60Hz arbitrary;

Amplitude-frequency characteristic: 0.5~60Hz;

High-pass filter: 0.01s, 0.02s, 0.03s, 0.1s, 0.2s, 0.3s, 1s, 2s, 3s (16Hz, 8Hz, 5.3Hz, 1.6Hz, 0.8Hz, 0.5Hz, 0.16Hz, 0.08Hz, 0.05Hz);

Interface: USB2.0, interface transfer rate: 480Mb/s;

Dimension & Weight: 130*89*40mm; 250g (Amplifier only).

Key Features & Advantages

1. **Amplifier functions:** Integrates all the functions of signal magnification, A/D transform, data storage, LCD display and wireless data transmission, capable of showing one channel waveform (arbitrarily and can be changed), present time, collection time, storage capacity, version information, serial number and battery status;
2. **Input channels:** Supports 19 EEG channels plus 1 channel ECG to meet with doctor's clinical

requirements;

3. **Long time monitoring:** Low power consumption, capable of supporting up to 72 hours recording with 4 AA batteries;
4. **Safety & low interference:** Use of DC power supply eliminates risk of electric shock to patients and prevents signal interference, and removes the need for ground wire or other shielding features;
5. **Recording mode:** Supports real-time EEG waveform recording and display via Wireless Bluetooth transmission, or dynamic recording with flash memory card capable of storing up to 2GB of EEG data (data storage capability depends fully on memory card used);
6. **Powerful playback function:** amplitude and playback rate can be adjusted freely to meet doctor's needs.
7. **Report modes:** EEG software provides various reports to meet doctors' need.
8. **Data conversion:** The case data acquired can be converted to EDF or TXT format, which is convenient for further analysis and academic exchange.
9. **Event marking ability:** Event button on the amplifier enables on-the-spot manual event marking of patient's epilepsy seizure during recording;
10. **High quality electrode:** Single-shielded electrodes with touch proof connectors that meets international standard, and can be replaced individually if necessary;
11. **Convenient application:** Compact design and easy to carry, complete with EEG signal isolation to support maximum patient movement without distortion;
12. **Optional parts:** Optional video system for recording, editing and displaying video images

synchronously with EEG signals.

Software Functions

1. Acquisition & Settings

- ◆ Colors of waveforms are in accord to colors of events, and users can mark on the waveforms with character directly; it's available to open respiration leading sound to instruct patient's respiration frequency in a deep respiration event;
- ◆ EEG channels can be arbitrarily set up for users to customize the layout of channels during collection process and playback analysis. This includes the choice of processing EEG waveforms with filters, baseline and other arbitrary parameters;
- ◆ Configuration chart display and data source of physical channel configuration are displayed together at the same interface, making channel editing simpler and more intuitive;
- ◆ Events markers enable user to mark timings of seizures or any abnormal wave occurrences

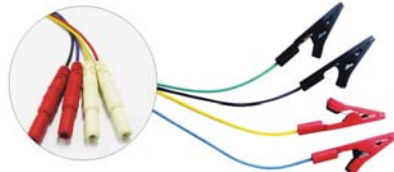
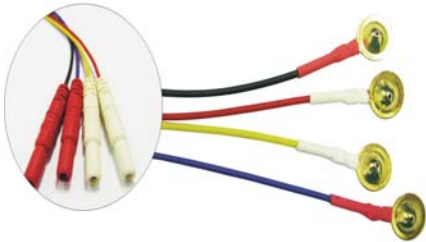
during recording, whereby events marked are listed and can be traced with the event localization feature during playback;

- ◆ Same-screen, and real-time display brain tendency chart is in synchronism with EEG waveforms acquisition. Brain tendency chart include various energy curve maps: energy curve, peak value frequency, relative energy, absolute energy, energy peak frequency, medium frequency index, side frequency index and coma index.

2. Replay & Analysis

- ◆ EEG mapping;
- ◆ EEG tendency analysis;
- ◆ EEG spectral analysis;
- ◆ Brain waves fast playback and fast positioning function;
- ◆ Automatic spike recognition with adjustable arbitrary spike-wave parameters;
- ◆ User can list the events marked during replay and locate each of the event markers in the waveform. User can add, change or remove event markers based on manual observation made during recording;
- ◆ User can also review the EEG waveforms with a different combination of parameters and filters;
- ◆ Automatically generates EEG case reports with customizable print templates.

Accessories: Shielded Single disc electrode cable; Shielded Single bracket electrode cable, Net cap, General bracket electrode cap.



Optional accessories: Split-type EEG cap (23holes/51holes); Electrode cables for split-type EEG cap



Optional Parts

1.Video System

- Supported BUS Interface of video card: PCI

- Power supply: AC240V 50/60Hz 2A
- PAN/TILT Turn speed: $0.5^{\circ}\sim 30^{\circ}/s$
- Night-vision survey with IR-illumination: Supported
- Maximum picture resolution: 640×480
- Operation System: Windows XP, Win 7
- Video camera with remote control: By software.

2. Photic Stimulator

Stimulation Frequency: 1–30Hz

3. Computer (requirements)

CPU: Pentium 4 with memory 1G or higher

USB2.0 interface

Operating system: Windows XP, Win 7

4. Printer

Monochrome laser printer

5. Trolley

Smart and pretty trolley as operation platform

6. Pentagonal stand

Removable, support all kinds of EEG amplifier, flash lamp and electrodes

General Specifications

1. Dimension and Weight

Type-C EEG with standard accessories: 1 carton, 370*260*225(mm); Charge weight: 6kg.

Video system (optional): 1 carton, 450*300*300(mm); Charge weight: 7kg.

Pentagonal stand with Photic stimulator (Optional): 1 carton, 1000*620*210 (mm);

Charge weight: 25kg.

2. Environment

Temperature: $\pm 10^{\circ}\text{C}$ ~ $+50^{\circ}\text{C}$

Relative humidity: 30%~80%

Power supply: AC100—240V (Host computer system)

Amplifier: DC 6V

3. Quality System

ISO13485: 2003; CE (93/42/EEG)