COMMODITY DESCRIPTION

HS. NO	ITEM NO.	DESCRIPTION	Q'ty	UNIT
9018.19.1000		**60-Ch Digital EEG System** Compumedics Model : Grael	1	System

A. Features :

1. An even more powerful evolution of the Grael EEG amplifier built for EEG studies for clinical and research applications including routine, LTM, ICU and Evoked potentials.
2. A DC-coupled, digital amplifier system with a high input range and 22-bit resolution providing amplification and digitization of electroencephalographic physiologic signals from surface, cortical and depth electrodes.
3. The amplifier provides 60 channels, an integrated pulse-oximeter and event button input.
4. The unit has a POE 100BASE-TX network connection for both power and communication.
5. High sampling and data rates – up to 16384 samples per second
6. 32-referential channels (monopolar), fully isolated
7. 16 bipolar inputs for ECG or EMG leads
8. User selectable gain allows choice of lower noise or higher allowable DC offset
9. Powered by the network connection using Power Over Ethernet, the single cable connection allows for neat, simple, convenient and flexible setup.
10. Integrated HD-Pulse oximeter
11. Convenient connections for event button and photic strobe
12. Connector for passive Jackbox or "Quik-Cap" electrode cap
13. Multiple Device Synchronization
    - Allows for the creation of virtual channel counts
14. One-box, One-cable solution
    - All connections are integrated
    - Built-in light sensor
    - A single cable to the Grael provides both power and data transmission

B. Specifications :

1. DC Amplifier
   1) Dimensions : 235mm L x 144mm W x 49mm H including cradle
   2) Weight : 1.1kg including cradle
   3) Network : POE (power over Ethernet)
   4) Network connection : drop in cradle for quick disconnect
   5) Analogue to Digital Converter : 24 bits resolution
   6) Data save rate : up to 4096 sps
   7) Channel skew : negligible (ADC per channel)
   8) Patient connections : CF as per IEC60601-1
   9) Safety : IEC60601-1, IEC60601-2-26
   10) EMC : IEC60601-1-2
2. 32 Referential Channels
   1) Full scale range : 300mVpp, (Low noise mode)

600 or 1200 mVpp, Standard mode
3000 mVpp, Large offset mode

2) Input impedance : >100MΩ at DC, >20MΩ at 10Hz
3) CMRR : >100dB
4) Noise : <2μVpp typical at 256 sps
5) Low pass filter(3db): 71Hz at 256sps, 143Hz at 512sps,
284Hz at 1024sps, 580Hz at 2048sps, 1150Hz at 4096sps
6) High pass filter : DC coupled
7) Electrode impedance measurement range : 1kΩ ~ 1MΩ ±1kΩ 또는 10%

3. 16 Differential Channels
1) Input impedance : >20M Channel 33 : 48MΩ±10% at dc, >30 MΩ at 10Hz
Channel 34~48 : 48MΩ±10% at dc, >40 MΩ at 10Hz

4. Communication Interface
1) Network Type: 802.3/802.3u twisted pair Ethernet with auto
MDIX; RJ45 connector

5. Electrical Specifications
1) Power Supply: All power provided by the network connection using Power Over Ethernet
(either mid-span injector or POE Switch, per IEEE 802.3af standard)
2) Operating voltage: 48 volts
3) Power consumption: >10 watts

C. Consist of :

1. Recording Computer System (Local Supply).....1 set
1) Windows 10 OS
2) Intel i7 Processor
3) SSD 128GB, HDD 1TB, RAM 8GB
4) LED 24" Display.
2. 60-Ch Amplifier Main Unit.....1 set
1) Amplifier and Cradle
2) Power Over Ethernet Mid-Span injector
3) Lead Cable
3. Profusion EEG 6 Online Acquisition and Review Software.....1 ea
4. Amplitude Brain Mapping Software.....1 ea
5. Spectral Brain Mapping Software.....1 ea
6. Coherence Brain Mapping Software.....1 ea
7. EEG Light Software.....1 ea
8. Cart (Local Supply).....1 ea
9. Online Operating & Service Manual.....1 ea

D. Accessories :

1. EEG Electrode kit.....1 set

E. Remarks :

1. One year warranty after the performance test and installation.
2. Supplier should be responsible for the performance test and installation.
3. One week training for operators and servicemen should be provided by supplier.