

TSA 2 System – Technical Specifications

Parameter	Specification
Thermode Types	30x30 mm, 16x16 mm, Intraoral (Ø6mm), CHEPS
fMRI Compatibility	30x30mm fMRI, 16x16mm fMRI (including dual-Thermode configuration) CHEPS (single Thermode configuration)
Dual Thermode port configuration	Yes - applicable for 30x30mm, 16x16mm, Intraoral (Ø6mm)
Temperature Range	0°C – 55°C Note: range depends on the protocol used. Ramp and hold, Levels, Search, VAS Search: 0°C – 53°C Ramp and hold (CHEPS): 1°C – 53°C Limits: 0°C – 50°C Pulses (CHEPS): 5°C – 55°C Pulses (other Thermodes): 0°C – 53°C
Temperature change rate range	30X30: 0.1 – 13 °C/sec (Range may be lower depending on protocol used) 16X16: Heating 0.1 – 6.5 °C/sec, Cooling 0.1 -3°C/sec (>10°C), 0.1-1.3°C/sec (between 5-10°C), 0.1-0.8°C/sec (<5°C) Ø 6mm: Heating 0.1 - 3°C/sec, Cooling 0.1 -1°C/sec (>10°C), 0.1-0.5°C/sec (between 5-10°C), 0.1-0.3°C/sec (<5°C) CHEPS: Heating 0.1 - 70°C/sec, Cooling 0.1 - 40°C/sec
Maximum duration at target temperature	600 sec Note: may be further limited according to safety temperature duration table, please see DC 00082 TSA 2 Operation Manual.
Stimulation Methods	Limits, Levels, TSL, Chain, Pulses , Ramp and Hold, Search, VAS Search, CPM (for dual Thermode protocols)
External control support	Yes
Absolute temperature accuracy	± 0.3°C
Temperature Repeatability	± 0.15°C
Set-Point resolution	0.1 °C
Display Resolution	0.01 °C
Baseline Temperature	10°C – 45°C
Programmable Parameters	Method, Adaptation Temperature, Heating Rate, Cooling Rate, Number of Stimuli, ISI, Sound Option, Randomize Option, events
TTL Output	Voltage: ± 5V Duration: >10[msec] (Default is 100 [msec])
TTL Input	Voltage: 3.3V- 5V
Accessories	2 Button Response Unit (Y/N)
Communication with host PC	USB (2.0)
Approvals	CE, FDA
Weight	Approx. 9 Kg
Supply Voltage	100 – 240 VAC 50Hz/60Hz 5A-2.5A Main fuse for 240VAC / T2.5A@250V Main fuse for 120VAC / T5A@125V
Software	Dedicated graphic based software – MMS (Medoc Main Station)
Software Operation System	Windows 10
PC Requirements	2 GHZ and above CPU, 4GB RAM, 16 GB free disk space