

Touch22 Technical Specifications

About Specifications

All specifications listed are **typical performance values** based on the Touch22 reference design and internal measurements using final-intended components. **Final production units may vary slightly** due to normal manufacturing tolerances. Touch22 is designed to **meet or exceed** these specifications in real-world use, and final values will be verified through factory measurement during mass production.

1. Inputs

Microphone Inputs (Mic Inputs CH1–2)

Item	Typical Values
Dynamic Range (Mic In → ADC, A-weighted)	112 dB(A)
Equivalent Input Noise, EIN (150 Ω, A-weighted, max gain)	−130 dBu(A)
Input Impedance (Balanced)	1.8 kΩ
Gain Range	0–50 dB (3 dB steps)
Pad	−12 dB
Maximum Input Level (minimum gain)	11 dBu
THD+N (Preamp + ADC, 1 kHz, 0 dBFS)	0.002%

Line Inputs (Line Inputs CH1–2, Balanced TRS)

Item	Typical Values
Dynamic Range (Line In → ADC, A-weighted)	119 dB(A)
Input Impedance (Balanced)	10 kΩ
Gain Range (Line mode)	0–38 dB (or 0 to +12 dB)
Sensitivity (corresponding to –1 dBFS)	–37 dBu (balanced)
Maximum Input Level	+22.5 dBu
THD+N (1 kHz, 0 dBFS)	0.002%

Hi-Z / Instrument Input

Item	Typical Values
Input Impedance	1.0 MΩ
Gain Range	0–45 dB
Sensitivity (corresponding to –1 dBFS)	–45 dBu
Maximum Input Level	+10 dBu
THD+N (1 kHz, 0 dBFS)	0.02%

2. Outputs

Main Outputs / Monitor Outputs (Balanced)

Item	Typical Values
Output Impedance	47 Ω
Dynamic Range (DAC \rightarrow Output, A-weighted)	119 dB(A)
THD+N (1 kHz, 0 dBFS)	0.0007%
Maximum Output Level (Balanced)	+12.2 dBu

Headphone Outputs (3.5 mm & 6.35 mm)

Item	Typical Values
Output Impedance	< 30 Ω
Dynamic Range (A-weighted)	119 dB(A)
Maximum Output Level	2.0 Vrms
Output Power (optional)	56 mW @ 32 Ω

Note: The 3.5 mm and 6.35 mm headphone outputs typically use the same amplifier with different connectors. Whether their performance is completely identical is subject to factory confirmation.

3. Computer / OTG Interfaces

Computer USB-C Interface

Item	Typical Values
USB Standard	USB 2.0 High-Speed (480 Mbps)
USB Audio Class	UAC2 (driverless on macOS)
Windows Support	WDM + optional ASIO driver
Maximum Audio Specification	Up to 32-bit / 192 kHz

OTG / Mobile Device USB-C Interface

Item	Typical Values
USB Standard	USB 2.0 High-Speed (OTG mode)
USB AudioClass	UAC2
Supported Devices	Android / iPad / USB-C iPhone
Notes	Some mobile devices may limit channel count or sample rate due to system policies

4. Power

Item	Typical Values
Power Consumption (Typical)	4 W
Power Consumption (Maximum)	5.0 W
Power Supply Method	USB bus power + optional external USB-C power
Recommended Power Supply	5 V / 2 A