



T2M^{SEMI}

8K

TRUE 8K WIRELESS GAMING SoC

ULTRA-LOW LATENCY. MAXIMUM PERFORMANCE.



8K Polling Rate



~220µs Latency



6Mbps HDT RF (2.4GHz)
Stable up to >5m



High-Speed USB
(480Mbps) HS USB



CSP Package for
Nano USB-C Dongle



Ultra-Low Power
Extended Battery Life

TRUE 8K WIRELESS GAMEPAD SoC

Single SoC: 6Mbps HDT RF (2.4GHz) + 12b ADCs + 24b Audio + HS USB

- Dual 12-bit, 2 Mbps ADCs for high-precision analog input
- Supports TMR and Hall Effect joystick sensing
- Supports 21-byte long payload for 8K Booster Mode
- 17 ms audio downstream with 24-bit/48 kHz stereo
- 16-bit/48 kHz mono audio upstream



8K WIRELESS GAMING MOUSE SoC

Single SoC: 6Mbps HDT RF (2.4GHz) + HS SPI (48MHz) + HS USB

- Ultra-low latency of approximately 195–220 µs
- 48 MHz High-Speed SPI for flexible sensor integration
- Dual 192 MHz RISC-V cores with Edge AI capabilities
- High-Speed USB supporting up to 480 Mbps
- Flexible QFN package options: QFN56 and QFN40



TRUE 8K WIRELESS GAMING KEYBOARD SoC

Single SoC: 6Mbps HDT RF (2.4GHz) + HS USB + 8 SPIs + 64 GPIOs

- Dual 192 MHz RISC-V cores with Edge AI capabilities
- Dual 12-bit, 2 Mbps ADCs for precision sensing
- Optimized for TMR and Hall Effect keys
- Supports 21-byte long payload for 8K Booster Mode
- Rapid low-latency key scanning



ULTRA-LOW LATENCY GAMING HEADSET

Engineered for Real-Time Responsiveness and Immersive Gameplay

- Ultra-low latency of less than 17 ms
- 2.4 GHz wireless with Adaptive Frequency Hopping
- LC3plus audio supporting 16-bit / 48 kHz
- Plug-and-play compatibility with PC, PS5, Switch, and Mac
- Hardware-based sidetone processing with less than 50 μ s latency



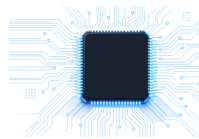
Single 8K Receiver for Mouse + Keyboard with Configurable Latency

- Single USB-C Nano Dongle Controlling Mouse + Keyboard
- Configurable 8K Report Rate for Wired Like Responsiveness
- Single-chip, Dual Core, Integration for Smallest Lowest BOM
- Supports BLE ULL Over SCI & ISO



Pin-Compatible Wired Solution

- Wired solution available with a similar, pin-compatible SoC
- Enables easy transition from wireless to wired designs
- Minimizes PCB redesign and hardware changes
- Helps reuse the existing hardware architecture
- Simplifies development across wired product variants



One Chip for Every Gaming Peripheral

High Performance. Low Latency. Lower BOM. Faster Time-to-Market.

T2M SEMI
LEADERS

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