



Whaptics

Data Sheet

+ Touchless Touch®

Whaptics solutions for different implementations:

Whaptics 1

Whaptics 1 for “pass through” and “mid-air” systems (through plexiglass, infrared-transparent materials, small holes in metallic surfaces, behind LCD)

Whaptics 2

Whaptics 2 for surface-based systems using nearly any material, including steel, chrome, wood, leather, and glass.

Applications

- Automotive, household goods, sensitive/hazardous environments

Highlights

Flexible UI solution

- For custom human-machine interfaces on nearly any surface
- Mechanics-free buttons, switches, sliders, dials
- Waterproof, heat resistant, works in direct sunlight
- Based on standard, low-cost, multiple-source components
- Supports multi-touch
- Prevents accidental operation by restricting detection when multiple keys are pressed simultaneously

Robust technical implementation

- Dynamic signal analysis for position calculation
- Infrared presence and position sensing
- Insensitive to parasite light, random stroboscopic effects for indoor and outdoor use

Custom integration flexibility

- Flexible system with small footprint for integration in innovative product designs
- Portable software library can be implemented on most microcontrollers, even alongside an existing application
- Includes Whaptics API for connecting custom applications to Whaptics detection library

Technical profile

- Modular detection area: 80 x 80 mm
- Resolution: 100 points/cm (254 dpi)
- Absolute precision: ± 2 mm on 90% of the surface (± 5 mm worst-case)
- Reaction time = 20 ms
- Tracking period = 10 ms
- High light level tolerance: up to 1400 W/m² under a DIN 75220-compliant spectrum
- For use with 8-bit microcontrollers
- Temperature: -40° to +95° C
- Compatible with automotive EMC standards
- Immunity to electromagnetic fields up to 200 V/m, 100 kHz to 2 GHz, AM modulation 80%, 1 kHz sine wavelengths (ISO 11452-3/2004)
- Immunity to 25 kV against electrostatic discharges, powered equipment, (ISO 10605-7/2001)
- Proximity detection distance up to 1 meter (39 in.)

More information

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