



UltraTouch Technology for Smart Devices

UltraTouch 7" TDM: Briefing Note

User Experience, User Interface and
System Control benefits

October 2024



UltraTouch 7" TDM

Key features

- HD resolution (1280 x 720p)
- Sunlight readable (1,000 cd/m²)
- HDMI video-in
- PCAP & UltraTouch USB 'plug and play' (Windows, Linux, RPi, Okdo Rock etc.)
- Adjustable force threshold(s) (1-6N)
- Mount in any orientation

User Experience benefits

- Mechanical switches operate by force touch
- Force touch is a natural action (e.g. pianist)
- Force touch is an emotionally satisfying experience (e.g. hugging / holding hands)
- Force touch conveys luxury & quality as the TDM is perceived as compliant

User Interface benefits

- Multiple new input options
 - Touch (PCAP)
 - Single force
 - Multi-force (staircase)
 - Push-hold
- New interface examples
 - Divided display area (e.g. automotive driver force-touch, passenger PCAP)
 - Zoom-in = single finger push, Zoom-out = dual finger push (e.g. map view)
 - Parameter rate change proportional to force (e.g. temperature control steps)

System Control benefits

- Fast response (force threshold detection 10's mS)
- Force detection unaffected by water, oil, dirt, frost, gloves etc.
- Human finger detection
- Passive sensor – no emitted EMI
- Dual sensor system (PCAP & UltraTouch) can improve reliability and provide safety redundancy

PCAP long press vs UltraTouch force-touch

PCAP long press

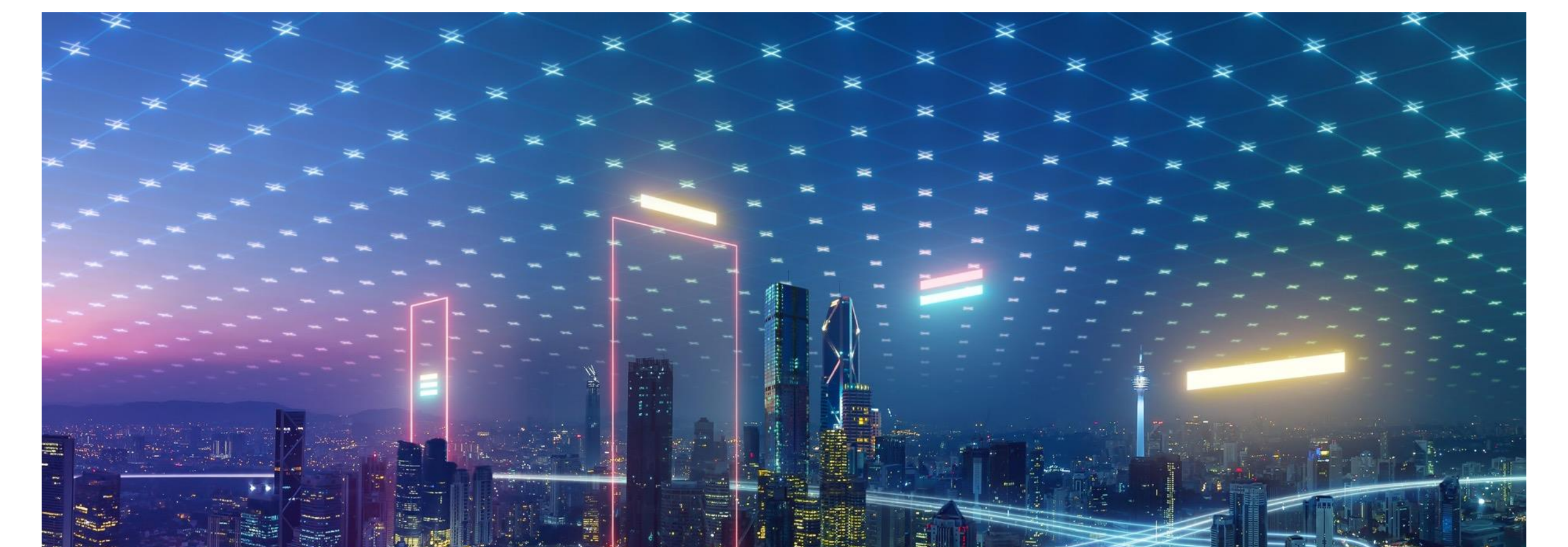
- Simple to instigate
- Adjustable delay
- Low cost

- Aberrant touch action
- Counterintuitive gesture
- Frustrating user experience
- Slowed system response
- Accidental trigger potential

UltraTouch

- Built-in during manufacture
- Adjustable force threshold(s)
- Multiple new features enabled

- Natural virtual interface
- Multi-force buttons & sliders
- Pleasing user experience
- Fast system response
- Human finger detection



THANK YOU!

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