

Comparison of Touch Screen Technologies

Product	NextWindow	Capacitive	SAW	Infrared	Resistive
Technology	Optical imaging	Electrostatic field	Sound waves	Light interruption	Resistive
Activation	Zero activation force required	Low activation pressure required	Low activation pressure required	Zero activation force required	Low activation pressure required
Transmissivity /optics	Very good >92%	Very good >92%	Very good >92%	Very good >92%	<82%, some distortion to graphics due to coatings
Drag and drop	High resolution, draws smooth lines	Requires constant pressure to draw smooth lines	Requires constant pressure to draw smooth lines	Low resolution due to spacing of IR sensors and interpolation	Requires constant pressure to draw smooth lines
Calibration	No drift	Requires periodic recalibration	Requires periodic recalibration	No drift	Requires periodic recalibration due to wearing of coatings
Surface contaminants /durability	Resistant to moisture and other surface contaminants	Resistant to moisture and other surface contaminants	Adversely affected by moisture or surface contaminants	Potential for false activation or dead zones from surface contaminants	Unaffected by surface contaminants. Polyester top sheet is easily scratched
Sensor substrate	Any substrate	Glass with ITO coating	Glass with ITO coating	Any substrate	Polyester top sheet, glass substrate with ITO coating
Multi-touch	Can discern two distinct points	NA	NA	NA	NA
Display size	23"-65"	8.4"-21"	10.4"-30"	10.4"-60"	up to 19"
Size constraints	Can be easily made for any display 23" or greater	Originally designed for smaller sizes, and may not scale easily; largest is 19"	Originally designed for smaller sizes and may not scale easily; largest is 30"	Scales to larger size	Originally designed for smaller sizes and may not scale easily; largest sensor is 19"
Right mouse	Activated by holding finger in one place	NA	NA	NA	NA
Integration	Two Versions: Overlay for standard displays or as component for integration in custom enclosures	Component only	Component only	Large frame overlay	Component only
Touch method	Can use any pointing device	Human touch	Finger only	Can use any pointing device	Can use any pointing device
Drivers	HID compliant no additional drivers required	Proprietary drivers, may not be compatible with all software	Proprietary drivers, may not be compatible with all software	Proprietary drivers, may not be compatible with all software	Proprietary drivers, may not be compatible with all software
Main limitations of technology		Requires human touch, scratches in coatings causes dead zones. Field replacement difficult due to calibration	Surface contaminants cause dead zones and requires periodic recalibration.	Surface contaminants can cause false activation. Thick border area around display	Polyester top sheet affects optics and is susceptible to damage. May not scale easily over 19" screens