

Comparison of All Elo Touch Technologies

	Acoustic Pulse Recognition	Resistive		Surface Acoustic Wave (SAW)			Capacitive		Infrared
	APR	AT4 4-wire	AccuTouch 5-wire	IntelliTouch	SecureTouch	iTouch	Surface Capacitive	Projected Capacitive	CarrollTouch
Performance									
Speed	+++	+++	+++	+++	+++	+++	+++	--	
Sensitivity	++			++	++	+++	+++		+++
Resolution	+++	+++	+++	+++	+++	+++	+++		+++
Accuracy	+++		+++	+++	+++	+++	--	--	+++
Calibration Stability	+++		+++	+++	+++	+++	--		+++
Drag	+++					++	+++		+++
Z-axis	---	---	---	+++	+++	+++	---	---	---
Double Touch ¹	+++	--	--	+++	+++	+++	--		
Parallax (lack of)						+++ ²		--	-- ³
Input Flexibility									
Glove	++ ⁴	+++	+++	+++	+++	+++	---	+++	+++ ⁴
Fingernail	+++	+++	+++	---	---	---	---	--	++
Credit Card	+++	+++	+++	---	---	---	---	---	++
Pen	+++	+++	+++	---	---	---	---	---	++
Signature Capture	+++	+++	+++	---	---	---	---	---	---
Handwriting Recognition	++	--	--	---	---	---	---	---	---
Optics									
Light Transmission	+++	--	--	+++	+++	+++ ⁵	--		+++
Reflection (lack of)	+++			+++	+++	+++ ⁵	---		+++
Clarity	+++			+++	+++	+++			+++
Color Purity	+++	--	--	+++	+++	+++			+++

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Key	
+++	Best in category
++	Some advantage
Neutral	
--	Perhaps not acceptable
---	Not possible, worst in category

Notes

- = Incorrect (averaged) coordinate reported.
+++ = Simultaneous touches rejected; nearly simultaneous touches reported accurately.
- Touch is closest to image, as there is no overlay.
- Touch activates just before actual contact (1 mm).
- Only technology recommended for metal gloves.
- The utmost possible, as there is no overlay.
- For LCDs only; plasma is not possible, due to EMI.
- Special sealing materials required (Elo touchmonitors are watertight sealed).

- Assuming proper materials are used.
- Although splashing liquids are OK, extended rain and humidity exposure can lead to internal condensation.
- Works with stationary water drops; excessive or moving water must be wiped away.
- Polyester coversheet may yellow after years of exposure.
- Required for food processing and some in-vehicle applications.

No guarantee of acceptability of the technology to the application is implied by this quick reference table.

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Mechanical									
Small Sizes (<10")	+++	+++	--	--	--	--		--	--
Large Sizes (>19")	+++	---	--	+++	---		-- ⁶		+++
Curved CRTs		---			---	+++		---	---
Ease of Integration	++	+++	+++	--	--	--	++	--	
Sealability	+++	+++	+++	-- ⁷	-- ⁷	-- ⁷	+++	+++	+++
IP 65/NEMA 4	+++	+++	+++	---	---	---	+++	+++	+++
Electrical									
Controller Chip Available		+++	+++				+++		+++
Low Power/Battery Operation	TBD	+++							
Operation with Poor Ground	+++						---	---	
ESD	+++		+++	+++	+++	+++	--		+++
EMI/RFI	+++	+++	+++	+++	+++	+++	--	---	+++
Environmental									
Temperature	+++						+++	+++	+++
Humidity	+++							+++	+++
Shock/Vibration		+++	+++						+++
Altitude	++								+++
In-vehicle	TBD	++	++						+++
Chemical Resistance	+++	+++	+++				---	+++	+++
Scratch Resistance	+++			+++	+++	+++		+++ ⁸	+++ ⁸
Breakage Resistance					+++	+++		+++ ⁸	+++ ⁸
Safe Break Pattern		++	++		+++			+++	+++

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Dust/Dirt	+++	+++	+++				+++	+++	--
Liquids	++	+++	+++	-- ¹⁰	-- ¹⁰	-- ¹⁰	+++	+++	--
Rain	++	--- ⁹	--- ⁹	---	---	---		+++	--
Snow		---	---	---	---	---	--	+++	--
Ice		---	---	---	---	---	--	+++	--
Ambient/UV Light	+++	-- ¹¹	-- ¹¹						
Fly on Screen	+++								---
Non-Glass Surface Possible ¹²	+++	+++	+++					+++	+++
Works Through Other Materials	++	---	---	---	---	---	---	+++	
Durability/Wear	+++	--	++	+++	+++	+++	++	+++	+++
Surrounding Metal	+++						--	--	
Reliability/Warranty Length	+++	---		+++	+++				+++
Lowest Cost		+++				++		--	--

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