

# 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
<b>Performance</b>									
Speed	+++	+++	+++	+++	+++	+++	+++	--	
Sensitivity	++			++	++	+++	+++		+++
Resolution	+++	+++	+++	+++	+++	+++	+++		+++
Accuracy	+++		+++	+++	+++	+++	--	--	+++
Calibration Stability	+++		+++	+++	+++	+++	--		+++
Drag	+++					++	+++		+++
Z-axis	---	---	---	+++	+++	+++	---	---	---
Double Touch 1	+++	--	--	+++	+++	+++	--		
Parallax (lack of)						+++ <sup>2</sup>		--	-- <sup>3</sup>
<b>Input Flexibility</b>									
Glove	++ <sup>4</sup>	+++	+++	+++	+++	+++	---	+++	+++ <sup>4</sup>
Fingernail	+++	+++	+++	---	---	---	---	--	++
Credit Card	+++	+++	+++	---	---	---	---	---	++
Pen	+++	+++	+++	---	---	---	---	---	++
Signature Capture	+++	+++	+++	---	---	---	---	---	---
Handwriting Recognition	++	--	--	---	---	---	---	---	---
<b>Optics</b>									
Light Transmission	+++	--	--	+++	+++	+++ <sup>5</sup>	--		+++
Reflection (lack of)	+++			+++	+++	+++ <sup>5</sup>	---		+++
Clarity	+++			+++	+++	+++			+++
Color Purity	+++	--	--	+++	+++	+++			+++

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

Notes	
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<b>2</b>	Touch is closest to image, as there is no overlay.
<b>3</b>	Touch activates just before actual contact (1 mm).
<b>4</b>	Only technology recommended for metal gloves.
<b>5</b>	The utmost possible, as there is no overlay.
<b>6</b>	For LCDs only; plasma is not possible, due to EMI.
<b>7</b>	Special sealing materials required (Elo touchmonitors are watertight sealed).
<b>8</b>	Assuming proper materials are used.
<b>9</b>	Although splashing liquids are OK, extended rain and humidity exposure can lead to internal condensation.
<b>10</b>	Works with stationary water drops; excessive or moving water must be wiped away.
<b>11</b>	Polyester coversheet may yellow after years of exposure.
<b>12</b>	Required for food processing and some in-vehicle applications.

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

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

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