



# Acoustic Pulse Recognition (APR)

Combines the best of other touch technologies

**Elo's Acoustic Pulse Recognition (APR)** touchscreens use a completely new and unique way of sensing touches on a display. Consisting only of a glass overlay mounted in front of the display, together with a small electronic controller board, Elo's APR technology provides a new set of benefits that have only been partially achieved before by other touch technologies.

APR combines the ultimate in optical qualities, durability, and stability of surface wave (SAW) and infrared technologies, with the excellent dragging properties of capacitive, along with stylus, glove and fingernail activation, and low cost advantages of resistive technology. In addition, it is resistant to water and other contaminants on the screen, can be scaled from PDA to 42-inch displays, and provides palm rejection during signature capture.

As with many of the best inventions in history, APR works in a simple and elegant way—by recognizing the sound created when the glass is touched at a given position.

Elo TouchSystems, the global leader in resistive and acoustic touch technology for over 35 years, is expanding APR technology across a wide range of markets and applications.

## Benefits

- Optics and durability of pure glass
- Works with finger, glove, pen, credit card
- Resistant to water, dust, grease
- No wear-out mechanism
- Works even with scratches
- Excellent drag performance
- Sealable to NEMA 4/IP 65 standards
- One time factory calibration, no drift
- Thin borders—only 5mm
- True flat surface
- Small and large sizes
- Palm rejection for signature capture

## Applications

- Restaurant and hospitality automation
- Retail Point-of-Sale (POS) terminals
- Pharmacy automation
- Industrial automation
- Office automation

# Acoustic Pulse Recognition Specifications

## MECHANICAL

Input Method Finger, finger nail, gloved hand, or stylus activation

## ELECTRICAL

Positional Accuracy 1% max. error

Resolution Accuracy Touchpoint density is based on controller resolution of 4096 x 4096

Touch Activation Force Typically 2 to 3 ounces (55 to 85 grams)

Controller Board: USB

## OPTICAL

Light Transmission 92% ± 2%

## ENVIRONMENTAL

Temperature Operating: -20°C to 60°C  
Storage: -40°C to 71°C

Relative Humidity Operating: 90% RH at max 50°C for 240 hours, noncondensing

Altitude Operating: 10,000 ft (3,048 m)  
Storage/transport: 50,000 ft (15,240 m)

Chemical Resistance The touch activation area of the touchscreen is resistant to chemicals that do not affect glass such as: acetone, toluene, methyl ethyl ketone, isopropyl alcohol, methyl alcohol, ethyl acetate, ammonia-based glass cleaners, gasoline, kerosene, vinegar

Electrostatic Protection Per EN 61000-4-2, 1995: Meets Level 4 (15kV air/8kV contact discharges)

Agency Approvals UL, cUL, TÜV, CE, FCC Class A

Sealability Can be sealed to meet NEMA 4 and 12 and IP 65 standards

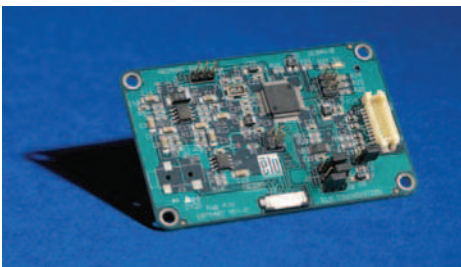
## DURABILITY

Surface Durability Surface durability is that of glass, Mohs' hardness rating of 7

Expected Life No known wear-out mechanism, as there are no layers, coatings, or moving parts. APR technology has been operationally tested to more than 50 million touches in one location without failure, using a stylus similar to a finger.

Impact Resistance Compatible with UL-60950 and CSA 22.2 No. 60950 ball drop test (0.5 kg, 50 mm diameter ball dropped from height of 1.3 m) depending on the base glass design selected

Warranty Touchscreen: 10-year limited warranty  
Controller: 5-year limited warranty



7000 controller board