

3M Touch Systems

# Large Format Multi-Touch Displays

May 21, 2013



# Multi-Touch Displays





# Today's Agenda

- Market Expectations of Large Format Displays
- Features to Consider When Selecting Displays
- Large Format Touch Technology Options
- 3M Large Format Product Offering





# Market Expectations of Large-Format Multi-touch

- Smart phone-like experience
- Responsive touch performance
  - Fast touch for interactive applications
- Engineered touch surface
  - Durable, glass front surface
  - With smooth, “anti-stiction” draw and gesturing



- Smart phone-like industrial design
  - “Touch first” design must have familiar appearance
  - Flat front surface or “virtual bezel” is indication of “touch first” interactivity
- Multi-user interface
  - Multiple users getting simultaneous individualized interactivity
  - Collaborative interactions





# Features to Consider when Selecting Large-Format Displays

- What is the display orientation?
  - Portrait format (signage): 1-2 users
  - Landscape format (signage): 2-3 users
  - Horizontal format (table): 3+ users
- Who will use the interactive displays?
  - Single users
  - Multiple "discrete" users
  - Multiple "collaborative" users
- "Future Proof" Your Purchase
  - What's the longevity of the installation?
  - Buy technology for tomorrow's applications
- Product Construction
  - Engineered glass solution
  - Horizontal configuration needs strengthened/tempered glass
- How many touch points are necessary?
  - Single users, one finger
  - Single users, two hands
  - Five users, two fingers
  - Unlimited user capability
  - Palm and arm rejection



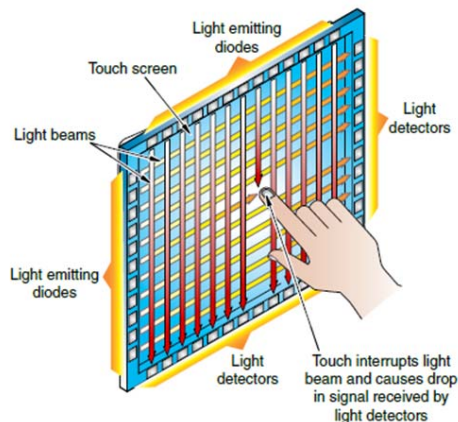




# Large Format Touch Technologies

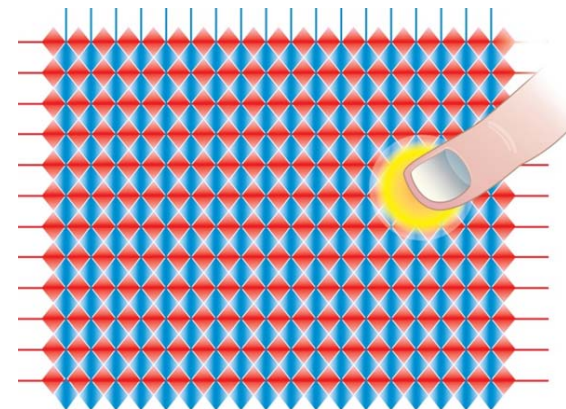
## ■ Infrared / Optical

- IR detectors / Cameras around the perimeter to track finger or stylus movement on screen
- Scalable over 100 inches
- Challenges:
  - Bezel required
  - False touches
    - › Pre-touch (touch events above the glass)
    - › Inadvertent touch (jewelry)
    - › High ambient light
  - Operation affected in high ambient light
  - Specific portrait and landscape configuration requirements



## ■ Projected Capacitive

- Same core technology as used in most smart phones and tablets
- Can be scaled for Big-touch (32 to 82 inches)
- Fast response
- Dual-touch (two touches)
- Multi-touch (3 to 40 touches)
- Robust glass surface
- Industrially-designed flat front surface
- Vertical or horizontal configurations



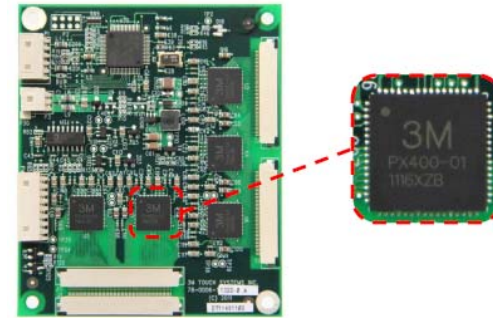
Rows and columns grid enable multi-touch as multiple fingers simultaneously create electrical grid intersections





# 3M Large-Format Product Features

- 3M PCT Technology
  - High Performance 3M Designed ASIC
  - High # of touches: 40+
  - Fast Response Rate: <8-12 ms
  - Long Product Lifecycle
  - Palm rejection algorithm
- Engineered touch surface
  - Flat front surface design
  - Durable, glass front surface with antiglare
  - Smooth, "anti-stiction" draw and gesturing



- Commercial Grade Design
  - All-metal construction for reliability in public environments
  - Thermal mgmt system for tabletop configurations
  - Thin designs for tabletop integrations
- Premium Display Technology
  - High refresh rates & resolutions
  - LED backlights





# 3M Multi-touch Product Offering

Medium Format Displays  
18.5" – 27"



Large Format Displays  
32" & 46"





# Come and Experience 55" PCAP Multitouch



*Come Visit 3M Booth 901*

