



## Linear Correlating Infrared Touch Technology

Fully impervious to Sunlight. Two-Touch.

### Key Features

- ◆ IR Optical Touch Sensor
- ◆ 2-Touch
- ◆ 100% Optical Clarity
- ◆ -40°C to +75°C operation
- ◆ RFI Immune
- ◆ Full Immunity to Sunlight
- ◆  $\pm 0.06''$  ( $\pm 1.5\text{mm}$ ) Touch Resolution
- ◆ Glove Compatible
- ◆ Negligible RF Emissions
- ◆ 0.25" Wide Flex Interconnect  
16" Long (Extensions Available)
- ◆ 12.1" Demo Kit Available
- ◆ Custom Sizes available from  
7" to 27"
- ◆ Custom night vision (NVIS)  
versions available for Military
- ◆ Common USB2.0 Controller  
and interconnect for all sizes.

A D Metro's solution for markets that require multi-touch but have difficulty integrating projected capacitive (PCAP) is the recently developed (patent pending) Linear Correlating Infrared (LCIR) touch technology. Even when exposed to challenging environments such as strong radio frequency interference (RFI) and full sunlight interference, LCIR technology offers:

- 1) 100% optical clarity due to the absence of substrate
- 2) Reliable two touch functionality
- 3) Glove and Stylus compatibility

Linear correlating technology can tolerate any sunlight exposure – even strobing sunlight such as in helicopters. The simple architecture of LCIR also tolerates atmospheric extremes having no constraints (like controlled air gaps used by resistive touch screens) to limit performance.



### Applications

- ◆ Automotive Consoles
- ◆ Aviation Control Panels
- ◆ All Terrain Vehicles
- ◆ Nautical Displays
- ◆ Kiosks

A D Metro's LCIR touch screen is the recommended touch screen technology for critical user input in automotive, aviation and medical applications, and all markets where ultra reliable touch screen function is critical. Reliability in automotive applications is particularly important as driver distraction due to glove removal, loss of touch response (in RF interference) and insufficient display contrast can cause accidents. LCIR's responsive and accurate single and two touch functions are perfect for navigation applications.

# Linear Correlating Infrared Touch Technology

## Datasheet

### Sensor Mechanical Specifications

Detection Type .....	Infrared Path
Screen Size Range .....	Customizable From 7" - 27"
Demonstration Kit Screen Size .....	12.1" 4:3
Formats .....	Customizable Including 4:3 and 16:9
Sensor Thickness including cover .....	0.17" (4.33mm)
Light Transmission with bezel cover .....	100%
Light Transmission with full screen cover .....	99%

### General Touch Parameters

Input .....	Any Non-Transparent Object > 0.015" (4mm)
Number of Touches .....	2
Palm Masking .....	Yes
Touch Force .....	0 g
Touch Proximity .....	< 0.06" (1.5mm) from screen
Operating Max Sunlight.....	Full Sun 1413W/m <sup>2</sup>
Artificial Light Rejection .....	Yes
Max Height Dust and Water Beads on Screen .....	0.04" (1mm)
Transient Water Droplet Interference Rejection .....	Yes

### 12.1" bezel Touch Parameters

Touch Refresh Rate .....	> 100 Screen Reads per Second
Response Time .....	< 10ms



### Controller Specification

Part Number .....	ADM-A3007-000
Sensor Viewing Area Size .....	Customizable From 7" - 27"
Controller Dimensions ...	3.0" x 1.2" x 0.3" (75mm x 30mm x 8mm)

### Regulatory

RoHS .....	Yes
FCC and CE Class B Emissions .....	Pending
FCC and CE RF Immunity (>10V/m).....	Pending
IEC 60601 Medical Isolation .....	Pending
MIL-STD-461G EMC Compliance .....	Pending
MIL-DTL-901E Shock and Vibration Compliance .....	Planned

### Interface

Controller Interface .....	USB-2.0
Powering .....	USB

### Operation System Compatibility

OS Driver Support .....	Windows 7, 8, 10
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### Sensor Environmental Specifications

Operating Temperature .....	-40°C to +75 °C
Storage Temperature .....	-50°C to +95 °C

### Environmental Protection Options

Bezel cover:

Enclosure Performance .....	NEMA 6, 12; IP64
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Full screen and bezel cover:

Enclosure performance .....	NEMA 3r, 12; IP65
Chemical Resistance ...	ATSM-D-1308 and ASTM-F-1598-95 (OEM responsible for their product housing seal to glass)



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Disclaimer: Technical specifications are provided for guidance and subject to change without notice. Specifications and performance may depend on sensor dimensions, selected options, installation and mounting. Please contact A D Metro for confirmation of the applicable specifications, individual sensor drawings, as well as installation and mounting best practices.

#### ABOUT US:

Established in 1988, A D Metro designs, manufactures and supplies innovative touch screen technology solutions for original equipment manufacturers (OEMs), system integrators and value added resellers. Everyday A D Metro's products are touched by millions of people around the world. Our ULTRA product line is the most durable resistive touch screen sensor available on the market and our projected capacitive (PCAP) touch screen solutions simplify design and accelerate time to market.

Contact us, for more information on our innovative touch screen products, enhancements and custom manufacturing solutions.

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