



Linear Correlating Infrared Touch Technology

Fully impervious to Sunlight and Two-Touch Capability

Key Features

- ◆ IR Optical Touch Sensors
- ◆ 2-Touch
- ◆ 100% Optical Clarity
- ◆ -40°C to +75°C operation
- ◆ RFI Immune
- ◆ Full Immunity to Sunlight
- ◆ 0.08" (2mm) Touch Resolution
- ◆ Glove Compatible
- ◆ Negligible RF Emissions
- ◆ 0.25" Wide Flex Interconnect up to 18" Long
- ◆ 12.1" Demo Kit Available
- ◆ Custom Sizes available from 7" to 27"
- ◆ Night vision (NVIS) versions available for Military
- ◆ Common USB2.0 Controller for All Sizes.

Applications

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

A D Metro's solution for markets that require multi-touch but have difficulty integrating projected capacitive (PCAP) is the newly 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) Any 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.



A D Metro's LCIR touch screen is the recommended touch screen technology for critical user input in automotive, aviation and medical applications because it is ideal for markets where reliable touch screen function is critical. Reliability in automotive applications is particularly important as driver distraction from unreliable technologies such as PCAP can cause accidents. Also, the accurate single touch and two touch functions are perfect for navigation applications.

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Preliminary 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	0.1" (2.45mm)
Light Transmission with acrylic bezel cover	95%
Light Transmission with overall glass 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
Maximum Operating Sunlight Exposure	Full Sun 1050W/m ²
Artificial Light Immunity	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"x0.3" (75mm x 30mm x 8mm)

Regulatory (Formal certifications pending)

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

Interface

Controller Interface	USB-2.0
Powering	USB

Operation System Compatibility

OS Driver Support	Windows 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

Deep red acrylic 2423 bezel cover:

Enclosure Performance	NEMA 6, 12; IP64
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Full Screen and Bezel Bonded Cover:

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