DYNAPRO
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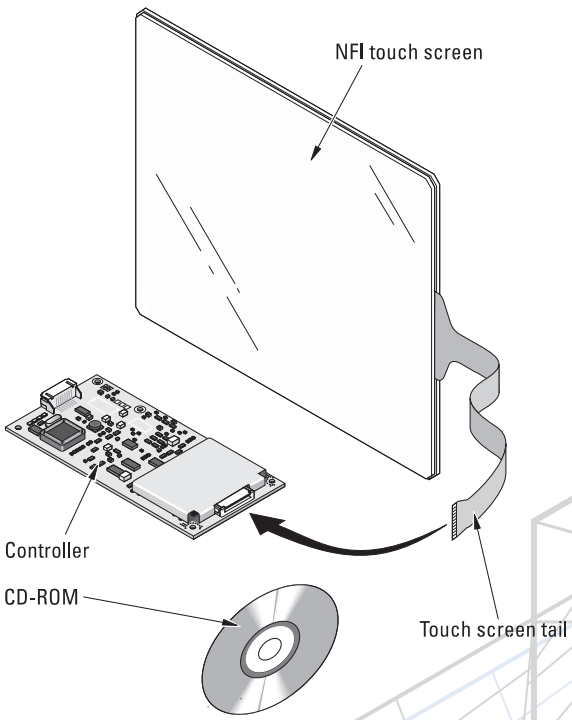
Dynapro Near Field Imaging™ Touch Screen System
product profile

NFI

NEAR FIELD IMAGING™
TOUCH SCREEN SYSTEM



Dynapro Near Field Imaging (NFI) Touch Screens were developed to overcome problems with existing touch screen technologies. They combine years of expertise in data acquisition and product development for demanding industrial applications. NFI's unique performance advantage is ideally suited to industrial environments, unsupervised locations, critical applications demanding high reliability, and especially the great outdoors.

NFI Advantages

NFI offers advantages in performance and durability and provides the following unique combination of:

- Accuracy – equipment can be controlled consistently and precisely even in extreme environmental conditions.
- Sensitivity – operate the touch screen with gloves; or through moisture, dirt, and other surface contaminants.
- Durability – withstands scratches and other surface damage caused by abrasives, chemicals, or vandalism.
- Optical Performance – provides exceptional brightness, clarity, and readability.

While other touch screen technologies address some of these needs, NFI is the first touch screen system to tackle them all.

The NFI Touch Screen System

Dynapro NFI Touch Screen System combines an all glass sensor element and image processing controller with resident firmware, driver software, and a setup and diagnostic utility.

The touch screen sensor is composed of laminated layers of chemically strengthened glass. The base layer is patterned with a conductive sensor and optically bonded to a front layer of tough and durable glass. The sensor is highly transmissive and provides protection against glare and reflections.

The image processing controller provides an excitation signal to the sensor and detects changes caused by a touch. The resident firmware is optimized to provide touch sensitivity, accuracy, and rejection of false touches.

Driver software is available for MS-DOS, Windows 3.1, Windows 95/98, and Windows NT. The drivers support advanced features like drag and drop, concurrent touch, and Dynapro's TouchSurround™ feature, which extends the touch sensitive area beyond the display and provides an efficient way of handling static touch points and simple key input, through touchable pictures, symbols, buttons and icons.

The set up and diagnostic utility provides the user with support for integrating the touch screen into the user's system, and diagnosing problems and potential weaknesses.

Uncompromising performance and toughness makes NFI the most advanced touch screen technology available today.

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Dynapro NFI Touch Screen Systems Specifications

System Performance	Touch inputs:	gloved hand or bare finger; conductive stylus
	Touch speed:	< 20ms nominal controller response time
	Resolution:	minimum 1024 points per axis
	Touch positional accuracy:	+/- 1.0% in one direction and +/- 2.0% in the other direction
	Drift:	none
Sensor	Standard sizes:	10.4", 12.1", 14.1", 15.0", 18.1" available custom sizes also available
	Optical performance:	Transmissivity > 83% standard product Transmissivity > 90% custom product
	Construction:	laminated layers of chemically strengthened glass
	Touch surface:	clear or anti-glare glass
	Edge finish:	seamed glass
	Thickness:	0.20" nominal
	Perimeter electrode width:	0.55" nominal, varies according to sensor size
	Dimension tolerance:	+/- 0.030"
	Parallelism/perpendicularity:	+/- 0.015"
	Tail Placement:	exits center of bottom or side edge
	Tail length:	7" standard, other lengths available
Controller	Communications:	RS-232 or USB
	Size:	5.5" x 2.75" x 0.32" (W x L x H)
	Power requirements:	5V +/- 5%, 4.75V minimum ; 150mA average, peaks to 300mA
	Excitation signal on sensor:	50 to 60Khz 12V p-p
Software	Dynapro drivers for:	MS-DOS, Windows 3.1, Windows 95/98, Windows NT4.0; support for other operating systems available
	Utilities:	set-up and diagnostic utility included
	Sensitivity:	adjustable to optimize for individual application
	Multiple touches:	can detect and accept/reject second touch can reject invalid (large or multiple) touches
Environmental	Operating temperature:	-20ºC to +70ºC for sensor 0ºC to +70ºC for controller
	Storage temperature:	-40ºC to +85ºC
	Humidity:	95% RH non-condensing
	ESD:	exceeds EN 61000-4-2; 8kV air discharge, 4kV contact discharge
	EMI:	unaffected by EMI from nearby CRT's and displays, environmental EMI; complies with ENV 50140
	Radiated Emissions:	capable of FCC Class B
	Vibration (operating):	5-57 Hz, 0.015" (p-p), 58-2000Hz, 2.5G
	Vibration (non-operating):	5-57 Hz, 0.030" (p-p), 58-2000Hz, 5G
	Shock (operating):	30G peak. (pulse duration 11 +/- 1ms)
	Shock (non-operating):	50G peak. (pulse duration 11 +/- 1ms)
	Certifications:	will allow: FCC Class A and B, CE, UL and cUL, UL-1950
Reliability	Touch life:	tested to more than 100 million touches in one location without failure
	Surface durability:	equivalent to soda lime glass, Mohs hardness rating of 6
	Sealing capability:	unit can be sealed to protect against splashed liquids, dirt, and dust; will not prevent NEMA12 and NEMA 4X
	Chemical resistance:	resistant to all chemicals that do not affect soda lime glass; highly resistant to corrosives in accordance with ASTM-D-1038.
	Impact resistance:	meets UL-1950 and CSA C22.2 No. 950 ball drop test; 0.5kg 50mm diameter ball dropped from height of 1.3m

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To find out more about this and other Dynapro products, contact your Dynapro representative.

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ISO 9002

Dynapro simplifies interaction between people and technology by designing and manufacturing world class touch products, from touch screen components to touch computers, terminals and monitors.

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