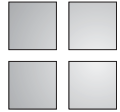


# The MicroNav™ Family

## MicroNav™ ARRAY



*Grid patterned sensor for location identification*

The MicroNav family provides

- 360° pointing
- Multi-menu scrolling
- Character entry
- Mousing

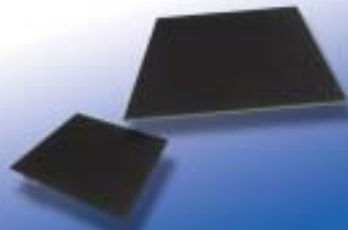
using specialized variations of Force Sensing Resistor® (FSR) technology optimized for handheld consumer electronics

## MicroNav™ RING



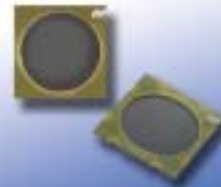
*Circular sensor for navigation and scrolling in cell phones and MP3 players*

## MicroNav™ PAD



*Finger or pen input for mousing, electronic signature and character recognition applications*

## MicroNav™ 360



*Micro-size 360° input for mousing and gaming*

## MicroNav™ STRIP



*Strip sensor for linear sensing applications and scrolling*

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# The MicroNav™ Family

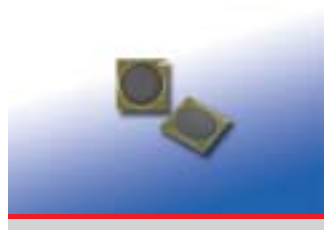
Developed by Interlink Electronics, Inc. to provide intuitive interface solutions for portable consumer devices such as cellular phones, tablet PCs, MP3 players, the new MicroNav family of sensor interface components delivers 360° "mouse" navigation, quick circular or linear menu scrolling, pressure switch sensing and alpha-numeric character input capabilities.

## MicroNav 360

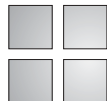


**MicroNav 360** -- intended for integration into cell phones, PDA's, tablet PCs and digital cameras, MicroNav 360 provides precise 360° mouse navigation for Internet browsing, e-mail devices, online games and image editing, as well as, traditional mouse functions.

<b>Dimensions:</b>	9.9mm x 9.9mm x 1.4mm .390" x .390" x .055
<b>Force Sensitivity Range</b>	1N to 100N 100 to 10,000gf
<b>Break Force</b>	<1N (dependent on mechanics)
<b>(Turn-on Force)</b>	100gf and FSR build)
<b>Stand-Off Resistance</b>	>10M
<b>Switch Characteristic Lifetime</b>	Essentially zero travel >10 million actuations
<b>Temperature</b>	Storage: -40°C to +85°C (-40°F to +185°F) Operating: -20°C to +65°C (-4°F to +149°F)
<b>Sensitivity to Noise/Vibration</b>	Not significantly affected
<b>EMI / ESD</b>	Passive device
<b>Lead Attachment</b>	Solder/solder reflow



## MicroNav ARRAY



**MicroNav Array** -- a grid-pattern sensor component used for location identification or pressure sensing, MicroNav Array is design to gather information pertaining to the location or pressure applied by one's fingertip on a cell phone or other handheld device.

<b>Tail Connector</b>	Recommended connector: AVX #04-6227-004, or equivalent.
<b>Force Sensitivity Range</b>	Average: 8.3g/maximum 15g force.
<b>Lifetime</b>	Will withstand 2 million actuations at 500g ±50g force, with a repetition rate of 123 hits per minute.
<b>Temperature</b>	Storage: 30°C to 70°C (-20°F to 158°F) 5-95% RH, non-condensing Operating: 0°C to 50°C (-32°F to 122°F) 0-85% RH, non-condensing
<b>Shelf Life</b>	Adhesive performance/properties retained for two years if stored at 22°C (72°F) and 50% R.H.



## MicroNav RING



**MicroNav Ring** -- provides quick circular scrolling and menu navigation for consumer electronic devices in an easy-to-integrate, high resolution, ultra low-power package. Well suited for controlling streaming media (volume and audio, audio levels and balance), menus, long lists, and gaming functions.

<b>Dimensions</b>	From tail to center of hole: 42.7 mm. Circumference: 43 mm.
<b>Tail Connector</b>	Recommended connector(s): LIF AVX #04-6227-004, ZIF Molex #0522070485 or equivalent.
<b>Linearity</b>	Angle is measurable to within ±3° of touch position.
<b>Power Consumption</b>	Equivalent to 3 passive resistors. For 100µS ADC measurements 40x/sec., and 3V circuit, measuring requires 0.3mA, 0.1µA avg current
<b>Lifetime</b>	>2 million taps at 500g ±50g force >2 million revolutions
<b>Temperature</b>	Storage: -30°C to 70°C (-20°F to 158°F) at 5-95% RH, non condensing Operating: 0°C to 50°C (-32°F to 122°F) at 0-85% RH, non-condensing
<b>Chemical Resistance</b>	Alcohols, hydrocarbons and household cleaning agents.



## MicroNav STRIP



**MicroNav Strip** -- designed for linear pressure sensing applications, providing navigation and scrolling capabilities for MP3 players and other handheld applications.

<b>Dimensions</b>	Varies: From 10mm W x 40 mm L to 1.5" W x 24" L
<b>Tail Connector</b>	Recommended connector: AVX 6227 series
<b>Force Sensitivity Range</b>	Actuation force at center: ~10g and ≤ 50g. Mean actuation force is 17g with a single standard deviation of 4g.
<b>Linearity</b>	Proportional to actuation position to within ±3% over the length of active area.
<b>Tap Lifetime</b>	1.0kg Force: >1 M actuations at 1000g ±50g force at rate of 2 Hz. 2.5kg Force: >24 hours of a constant 2500g ±50g force
<b>Lifetime</b>	
<b>Temperature</b>	Storage: -30°C to 70°C (-20°F to 158°F) 5-95% RH, non-condensing Operating: 0°C to 50°C (-32°F to 122°F) 0-85% RH, non-condensing

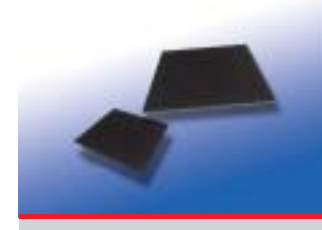


## MicroNav PAD



**MicroNav Pad** -- a customizable input pad solution for fingertip-based cursor pointing or stylus-based pen-input for electronic signature and character recognition applications.

<b>Dimensions</b>	35mm W x 35 mm L (scalable) or 65mm x 49mm
<b>Actuator Type</b>	Stylus, finger, gloved hand
<b>Technology</b>	Semiconductive
<b>Pad Gestures</b>	Tap/double tap/tap and drag/drag edge motion
<b>Power Input</b>	Standard: 5 vDC ±5%
<b>Power Consumption</b>	3mA max. at 5vDC operating
<b>Power Consumption in PS/2 Auto Sleep Mode</b>	<10µ A (yes MicroAmps!)
<b>Levels of Z-Pressure</b>	128
<b>Resolution of Pad</b>	1000 lines per inch
<b>Lifetime</b>	>5 million strokes at pressure 10-150g; 118 miles
<b>Shock</b>	Comparable to MIL-STD-202; 80G acceleration in 11msec
<b>Temperature</b>	Storage: -40°C to 70°C (-40°F to 158°F) 5-95% RH, non-condensing Operating: 0°C to 50°C (32°F to 122°F)



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