



Let Your Fingers Do The Directing

Grayhill's Instinct technology tracks up to five finger touches at a time. The Multi-Touch Control Wheel combines a multi-touch touchpad with a circular groove to offer even more functionality. Touching the North, South, East or West points in the groove can be interpreted as joystick switch inputs. Running your finger around the groove can be interpreted as an encoder input. The number of relative state changes is user configurable from 4 to 256 per revolution. A proximity sensor automatically detects when a user approaches the device, allowing the OEM equiptment to enter a power-saving mode when not in use. A few of the many multi-touch gestures are shown below.



Multi-Touch Control Wheel

Features

- Grayhill Instinct[™] Gesture Recognition
- Three devices in one:
- Multi-Touch touchpad
- 4-256 position rotary encoder
- $\,{}^{\circ}$ 4 position (N, S, E, W) joystick
- Proximity sensor
- Impervious to cleaning solutions
- Easy to integrate into any device
- Rugged, scratch-resistant surface
- USB compatible HID device

Possible applications include:

- Medical devices
- Clean room controls
- Off-Highway vehicles

Instinct[™] Technology. Intuitively Functional.

Grayhill Instinct is a set of multi-touch gesture recognition software tools that, when integrated with Grayhill multi-touch components, creates more intuitive human interface solutions.

A Shorter Distance from Mind to Machine

An intuitive, easy-to-use interface improves productivity. Instinctive movements provide a variety of commands, all without the fingers leaving the touchpad. This allows faster interaction without needing to take eyes off of the screen. Plus, ergonomics are improved by consolidating all controls within easy reach.

Simplicity in use & Device Design

The Multi-Touch Control Wheel can replace touchscreens, keypads, trackballs, switches and joysticks. This makes for clean design and cuts costs of manufacturing. The MTCW increases the engineer's flexibility in building functionality into any product, while reducing front panel size and complexity.



DIMENSIONS





NOTES: 1. TAB DENOTES TOUCH SCREEN "TOP" OR "NORTH"

ELECTROMAGNETIC COMPATIBILITY SPECIFICATIONS

to 80 MHz Radiated RF IEC 61000-4-3 3 V/M 80 MHz to 2.5 G		
Electrostatic DischargeIEC 61000-4-2 ±6kV Contact ±8kV AirElectrical Fast Transient/ BurstIEC 61000-4-4 ±1kV Coupling ClampPower Frequency (50/60 Hz) Magnetic FieldIEC 61000-4-8 3 A/mConducted RF*IEC 61000-4-6 Level 1 - 120dBuV, 150 to 80 MHzRadiated RFIEC 61000-4-3 3 V/M 80 MHz to 2.5 G	Designed and tested for use i	n systems requiring IEC 60601-1
Electrical Fast Transient/ Burst IEC 61000-4-4 ±1kV Coupling Clamp Power Frequency (50/60 Hz) Magnetic Field IEC 61000-4-8 3 A/m Conducted RF* IEC 61000-4-6 Level 1 - 120dBuV, 150 to 80 MHz Radiated RF IEC 61000-4-3 3 V/M 80 MHz to 2.5 G	RF Emissions	CISPR 11 Group 1 Class B
Burst Power Frequency IEC 61000-4-8 3 A/m (50/60 Hz) Magnetic Field IEC 61000-4-6 Level 1 - 120dBuV, 150 to 80 MHz Conducted RF* IEC 61000-4-3 3 V/M 80 MHz to 2.5 G	Electrostatic Discharge	IEC 61000-4-2 ±6kV Contact ±8kV Air
(50/60 Hz) Magnetic Field Conducted RF* IEC 61000-4-6 Level 1 - 120dBuV, 150 to 80 MHz Radiated RF IEC 61000-4-3 3 V/M 80 MHz to 2.5 G	_	IEC 61000-4-4 ±1kV Coupling Clamp
to 80 MHz Radiated RF IEC 61000-4-3 3 V/M 80 MHz to 2.5 G	, ,	IEC 61000-4-8 3 A/m
	Conducted RF*	IEC 61000-4-6 Level 1 - 120dBuV, 150 kHz to 80 MHz
see Grayhill application notes Specifications subject to	Radiated RF	IEC 61000-4-3 3 V/M 80 MHz to 2.5 GHz
	see Grayhill application notes	Specifications subject to change

SOFTWARE DEVELOPMENT KIT

part: T201-DEV1

Grayhill offers an Instinct Software Development Kit that provides the user with a common development platform for prototyping and evaluating different solutions. The Software Development Kit is comprised of a mounted Multi-Touch Control Wheel, a standard USB cable and demo software. The kit is available directly from Grayhill, or from one of several distributers. For more detailed information, including a copy of the User's Guide, go to www. grayhill.com/instinct.

ORDERING INFORMATION



Contact Grayhill for Custom Options.

ENVIRONMENTAL & MATERIAL SPECIFICATIONS

Operating temperature	-10°C to +60°C
Seal	IP67
Humidity	95% Humidity at 60°C for 240 hours
Chemical resistance (Resistance to accidental spills and disinfectants)	72 Hr exposure to Coffee, Cola, Saline, Methylated spirits, Isopropyl, Ammonia, Chlorine bleach, Sodium Hypochlorite, Ethanol, Dupont® Virkon®, Dupont® RelyOn®, Betadine, Hydrogen Peroxide, Cidex®, Steris®, Civco®
Material	Xenoy

ELECTRICAL PERFORMANCE SPECIFICATIONS

USB	2.0, 3.0 Compatible, Full speed HID Compliant
Operating Voltage	2.5 to 5.5 Vdc
Input Current	50mA max @5V
Icon Wear Resistance	Minimum 1,000,000 cycle
Touchpad Resolution	1280 x 1280 pixels

CONNECTION

Mating	Connector	Molex 501939-0400		
PIN	1	2	3	4
USB	+ Vcc	USB Negative (D-)	USB Positive (D+)	Gnd

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