

MicroModule USB Data Sheet

USB MicroModule for Rugged Mousing Applications

Features and Benefits

- Compact
- Durable
- Sealable design
- Easy to integrate
- Ultra-thin mounting profile

Description

Both Mini Joystick and Finger Disk modules are dual click-button mousing devices designed for integration into tight, cramped spaces. The MicroModule is plug-and-play, utilizing standard mouse output. Several cabling options are available.



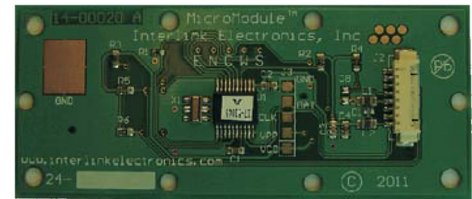
Gray Finger Disk Option



Black Finger Disk Option



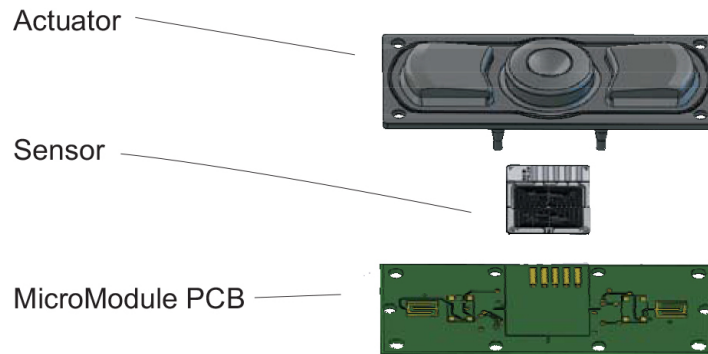
Mini Joystick Option



MicroModule Rear View

User Control Options

The touch of a fingertip on the MicroModule delivers simultaneous 360° control of cursor direction and speed. Choose from 2 actuators styles, either Mouse Button (round disk with a divot for a fingertip), or a Mini Joystick (a compact stick).



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Device Characteristics

Keypad Options	Black finger disk, gray finger disk, black mini joystick, black finger disk fluorosilicone
Weight	15 grams or less
Operating Temperature Performance	Functional before, during, and after exposure to the below conditions:
Cold Dry	-25°C <=5%RH for 96 hours
Cold Humid	10°C 95%RH for 96 hours
Hot Dry	70°C <=10%RH for 96 hours
Hot Humid	70°C 95%RH for 96 hours
Storage Temperature Performance	Functional after 96 hours of exposure to the below conditions:
Cold Dry	-40°C <=5%RH
Hot Dry	85°C <=10%RH
Hot Humid	85°C 95%RH
Thermal Shock	Functional after 20 cycles of -40°C to 85°C with a 30 minute dwell time and 5 minute transitions
Finger Disk Lifetime Durability	>3.5 million actuations with 500g at 4Hz
Keypad Lifetime Durability	>1 million cycles with 500g at 4Hz
Drop Test	Dropped from 1 meter onto concrete on all six sides
Mechanical Shock	Comparable to MIL-STD-202, 80G accelerated in 11msec
Mechanical Vibration	Comparable to MIL-STD-202, Method 204, Condition A
Chemical Resistance	Keypad surface resistant to most common cleaners and spills for 24 hours. These include: water, soap, bleach, alcohol, ammonia NH ₄ OH based window cleaner, acetic acid CH ₃ COOH based cleaner, cola, coffee with sugar and creamer. Robust MicroModule with Fluorosilicone keypad is also resistant to a variety of oils, fuels, and solvents.
UL	All materials UL grade 94 V-1 or better
RoHS	Compliant

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Connector Options

Header

The connector for the MicroModule is a wire to board header connector. The header is a Molex #53261-0871

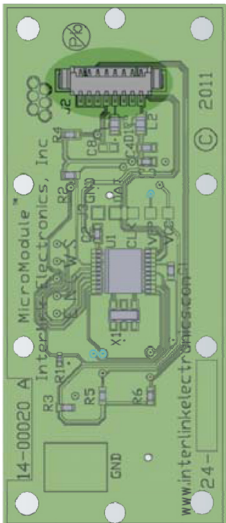
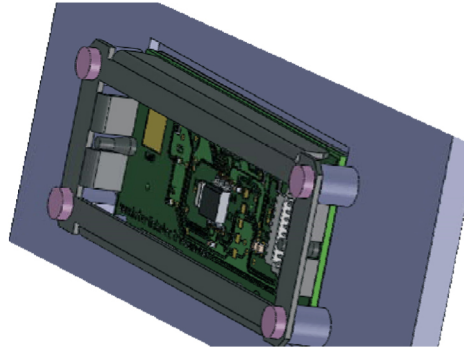
Header Wire and Cable Options

- USB Type A, PN 14-00054
- USB Type A with Strain Relief, PN 14-00108
- 12" Wire Cable Harness, PN 14-16576

Application Information

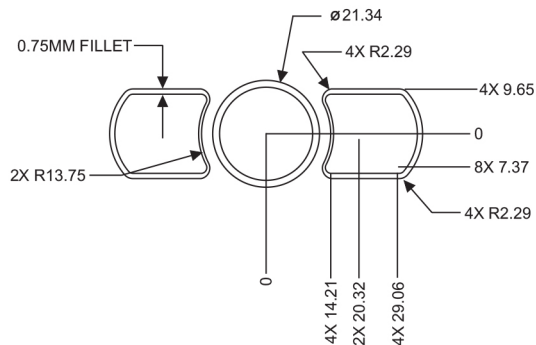
Mounting

Can be fitted into various assemblies to meet specific demands for user control locations.

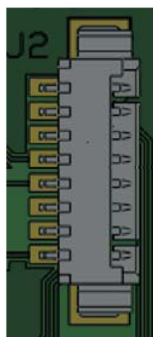


Mounting Recommendations

See the Integration Guide for more detailed mounting instructions.



Pin Out



J2 Pin	Signal	Signal Description
1	VCC	+5v
2	D+	D+
3	D-	D-
4	GND	Ground

MicroModule PS/2 Data Sheet

PS/2 MicroModule for Rugged Mousing Applications

Orderable Part Numbers

Hardware Development Kit, 54-00028

This Hardware Development Kit includes:

- MicroModule Demo (Black Finger Disk) w with USB Cable (Qty. 1)
- USB MicroModule with MiniJoystick (Qty. 1)
- Gray Finger Disk Keypad (Qty. 1)
- 12" Wire Cable Harness (Qty. 1)
- USB Cable Assembly (Qty. 1)
- USB Flash drive with product literature (Qty. 1)

USB MicroModule with Black Finger Disk, PN 54-00002

USB MicroModule with Gray Finger Disk, PN 54-00023

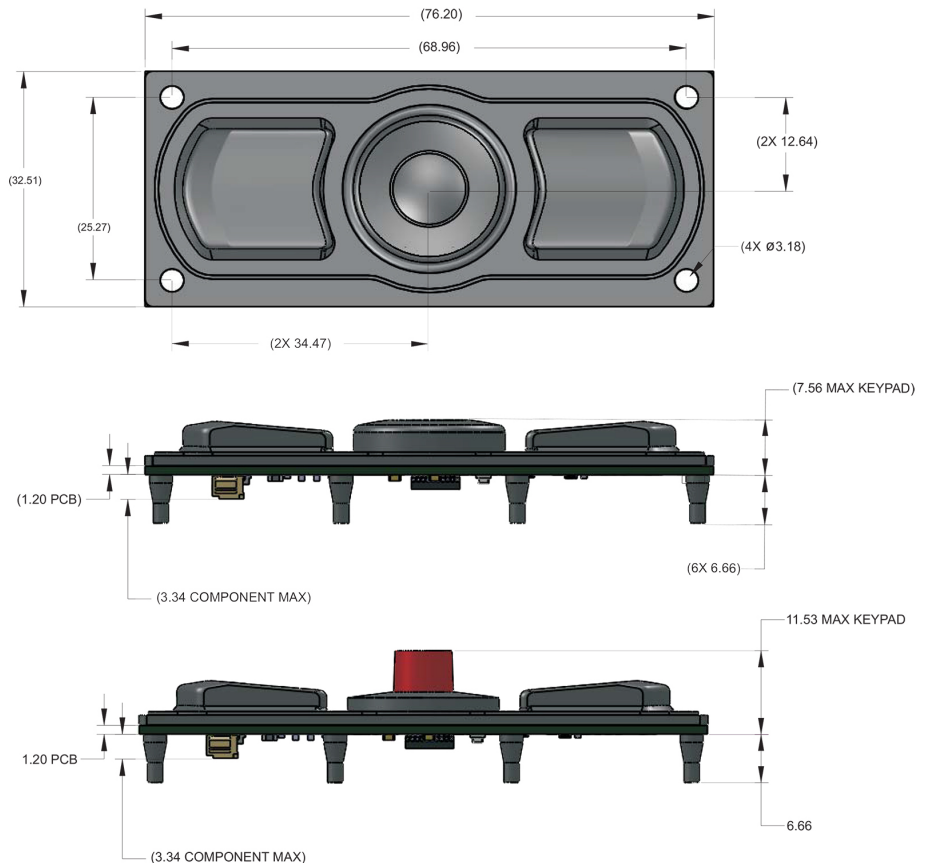
USB MicroModule with MiniJoystick, PN 54-00011

USB MicroModule with Black Finger Disk (Flourosilicone), PN 54-00046

12" Wire Cable Harness, PN 14-16576

USB Cable Assembly, PN 14-00054

USB Cable Assembly with Strain Relief, PN 14-00108



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