SK8707 FlexPoint™ Pointing Stick Mouse Module

3 Axis PS/2 Low Power Z-Tap CellMute™ Technology

FEATURES

- Low cost and space saving mouse solution
- Advanced motion control algorithm
- Z-Tap algorithm to simulate left button click, double click and drag
- CellMute™ technology filters the wireless EMI noise from cellular phones and wireless networks
- Works with standard Windows® mouse drivers
- Works with Lenovo TrackPoint® drivers
- Low power consumption. 890uA (idle), 3.21 mA (operation)
- 4.4V to 5.25V operating voltage. Other operating voltage is available upon request
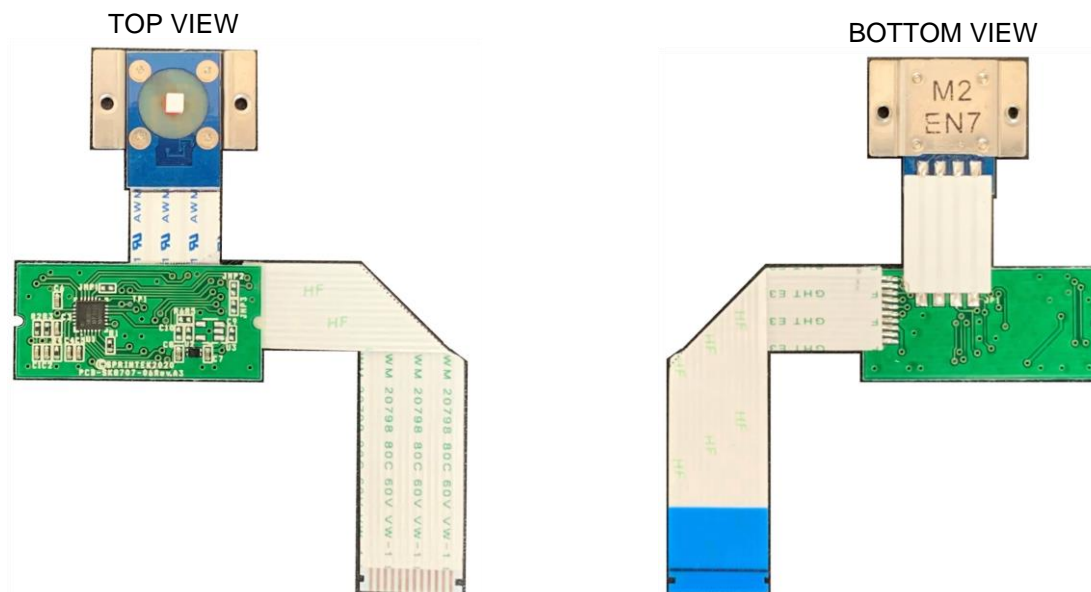- Temperature range: -40°C to +85°C

APPLICATION

- Notebooks/Laptops
- Handhelds
- Keyboards
- Instrumentation

ORDEING INFORMATION

SK8707-06A (4.4V to 5.25V) Pb-Free, RoHS

Sprintek U.S. patent number 8,593,403 applies to this module.

SCRIPTION

The SK8707 FlexPoint™ pointing stick module is a cost-effective, space-saving PS/2 mouse device deploying a Sprintek advanced pointing stick controller.

Typically, consuming 890uA in idle state, the SK8707 is ideal for battery-operated systems.

Deploying CellMute™ technology and patented signal conditioning circuit to filter the wireless EMI noise from cellular phones and wireless networks, the SK8707 modules can work quietly in wireless environment.

The SK8707 FlexPoint™ module partially implements the Lenovo TrackPoint® extended command protocol and can work with Lenovo TrackPoint® device drivers directly.

MODULE PICTURES

TOP VIEW

BOTTOM VIEW

CONNECTION DEFINITION

Pin No	Type	Name	Description
1	IO	IPD DATA	PS/2 data line
2	I	IPD RST	Reset. Active high external reset with internal pull down.
3	IO	MIDDLE	Middle button
4	IO	RIGHT	Right button
5	IO	LEFT	Left button
6	IO	IPD CLK	PS/2 clock line
7	P	GND	Ground
8	P	VCC	Power supply
9	NA	NC	
10	NA	NC	

LENGENG P = Power, I = Input, O = Output, IO = Input/Output

APPLICATION NOTES

Plastic Cap and Rubber Caps

Two extra components may be used to be assembled with the module. The plastic cap is used adjust the stick height to fit with the fixer such as keyboard. The rubber cap is assembled on top of plastic cap. When a low profile keyboard is designed, the rubber cap might be assembled to the module stick directly.
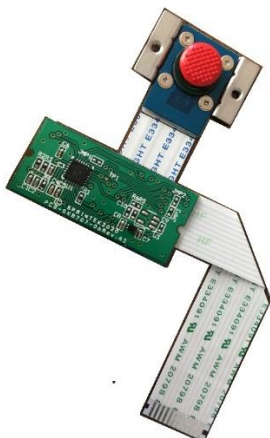
Communication Protocol

SK8707 simulates standard PS/2 mouse and follows its command protocol.

ELECTRONICS SPECIFICATIOIN

Absolute Maximum Ratings

Symbol	Description	Min	Typ	Max	Units	Notes
TSTG	Storage Temperature	-55	-	+100	ºC	
VDD	Supply Voltage on Relative to VSS	-0.5	-	+6.0	V	
ESD	Electro Static Discharge Voltage	2000	-	-	V	Human Body Model ESD

Operating Temperature

Symbol	Description	Min	Typ	Max	Units	Notes
TOP	Operating Temperature	-40	-	+85	ºC	

DC Electrical Characteristics

Symbol	Description	Min	Typ	Max	Units	Notes
VDD	Supply Voltage	4.4	-	+5.25	V	
IOP	Supply Current when module is in operation mode		3.21		mA	
IIDLEZ	Supply Current when module is in idle mode with Z-Tap enabled		1.94		mA	
IIDLE	Supply Current when module is in idle mode with Z-Tap disabled		890		uA	
ISD	Supply Current when module is in power down mode		32		uA	
RPU	Pull-up Resistor	4	5.6	8	kΩ	
VPOR	Power on reset voltage		2.92		V	

MECHANICAL SPECIFICATIOIN
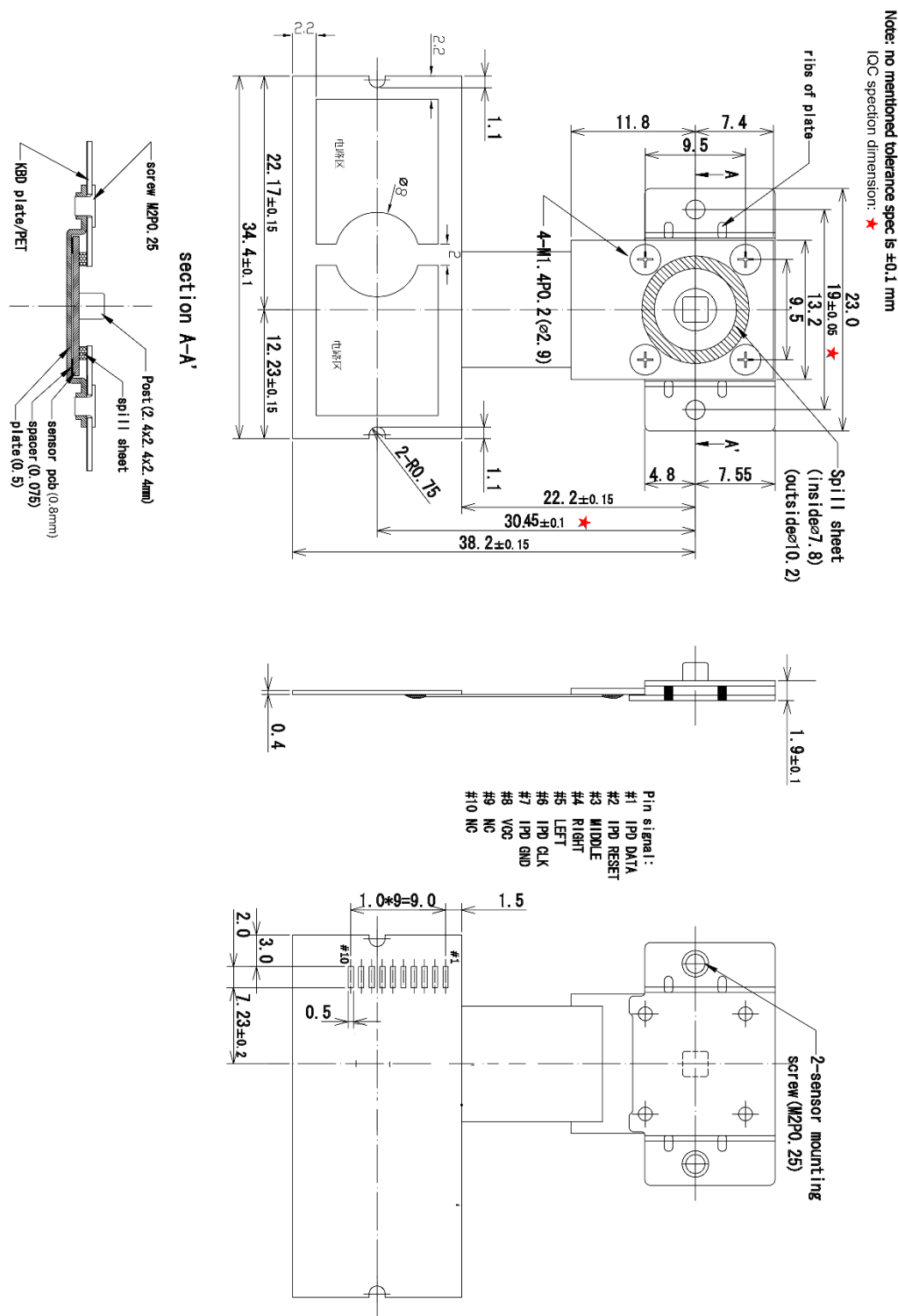
SK8707 Mechanical Drawing (Unit in mm)

SALE AND SERVICE INFORMATION

To obtain information about Sprintek Corporation or pointing stick product sales and technical support, reference the following information.

Sprintek Corporation
4969 Corral Street
Simi Valley, CA 93063, USA
Web Site: http://www.sprintek.com

REVISION HISTORY

Revision	Issue Date	Description
1.00	October 21, 2020	Initial Release