

# Pin connections of trackballs

Ver. 1.0

All NSI trackball series and all NSI keyboards with integrated laser X-range trackball are using trackball modules which are labelled as :

**XXX-xXxxxx** (f.i. X50-76021D)

**X** : denotes ball diameter in mm  
**x** : denotes the output protocol  
 0 = Phase quadrature output  
 6 = "Combo PS/2 & USB" output

<b>X=0</b>	
Pin Quad	Connector 1 Quad versions
Trackball Module Partnumber	X13-x0xxxx
1	5V DC
2	X1
3	X2
4	Y1
5	Y2
6	0V
7	-
8	-

<b>X=0</b>	
Pin Quad	Connector 1 Quad versions
Trackball Module Partnumber	X19-x0xxxx X25-x0xxxx
1	X1
2	X2
3	5V DC
4	Y1
5	Y2
6	0V

<b>X=0</b>	
Pin Quad	Connector 1 Quad versions
Trackball Module Partnumber	X38-x0xxxx
1	X1
2	X2
3	EARTH
4	-
5	5V DC
6	Y1
7	Y2
8	0V

<b>X=0</b>	
Pin Quad	Connector 1 Quad versions
Trackball Module Partnumber	X50-x0xxxx
1	X1
2	X2
3	Y1
4	Y2
5	EARTH
6	EARTH
7	5V DC
8	-
9	-
10	0V

<b>X=6</b>	
Pin Combo	Connector 1 Combo versions
Trackball Module Partnumber	X13-x0xxxx
1	5V DC
2	Data (/D-)
3	Clock (/D+)
4	Right Sw.
5	Left Sw.
6	0V
7	Middle Sw.
8	-

<b>X=6</b>	
Pin Combo	Connector 1 Combo versions
Trackball Module Partnumber	X19-x0xxxx X25-x0xxxx
1	EARTH
2	-
3	5V DC
4	Data (/D-)
5	Clock (/D+)
6	0V

<b>X=6</b>	
Pin Combo	Connector 1 Combo versions
Trackball Module Partnumber	X38-x0xxxx
1	EARTH
2	-
3	-
4	-
5	5V DC
6	Data (/D-)
7	Clock (/D+)
8	0V

<b>X=6</b>	
Pin Combo	Connector 1 Combo versions
Trackball Module Partnumber	X50-x0xxxx
1	-
2	-
3	-
4	-
5	EARTH
6	EARTH
7	5V DC
8	Data (/D-)
9	Clock (/D+)
10	0V

Pin Switch	Connector 2 Switch input	Colour code switch cable
Trackball Module Partnumber	All protocol types	IC040035
1	Left Button	Red
2	Middle Button	Orange
3	Right button	White
4	GND (common)	Black

Connector 1 = 10 pin JST PH series 2,0 mm pitch  
 Connector 2 = 4 pin JST PH series 2,0 mm pitch



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