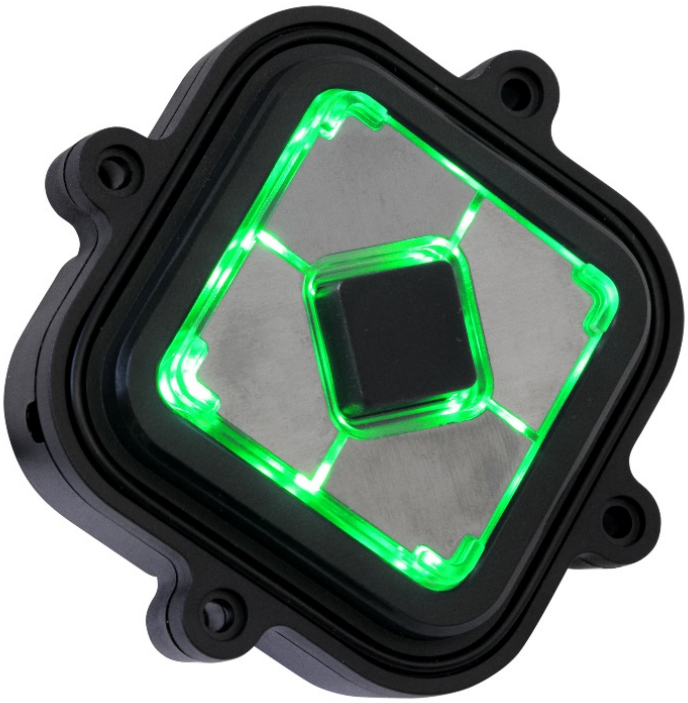
1600 Series USB Navigation Keypad
Technical Manual



Product Overview Page

Product Features

This highly tactile, USB compatible, pointing device is ideal for use in any application requiring X-Y positional control. Four directional keys allow navigation to specific menu items or graphic icons (targets). Functions or options associated with those targets can be selected using the central 'enter key'. The keypad can also be used to control linear movement of mechanical systems. Integral LED illumination makes this 5 key control pad highly visible and suitable for use in all lighting conditions. Individual keytops feature both tactile and visual delineation to ensure accurate identification of key function. Intuitive functionality and 'Design for Accessibility' ensure this keypad is easy to use by those with sensory or mobility impairment. An industry standard USB interface ensures simple connection and compatibility with host systems, requiring no specialised drivers or software applications. The keypad's robust, weather resistant construction make it ideal for use in both indoor or exposed outdoor conditions. Its space efficient, compact, design ensures a neat, water and dust resistant 'under-panel' installation as part of any system control panel.

USB Connection / Features

The keypad is powered via a mini-USB socket. No additional drivers are required

- Device appears as a standard HID keyboard
- Controls LEDs with dimming capabilities via software
- Customise keypad table (using the configuration utility)
- Standard keypad tables supported as default
- Supports a HID-data pipe back channel.
- No additional drivers required
- Supports standard modifiers, i.e. Ctrl, Shift, Alt
- Supports loadable firmware for future upgrades

USB Codes

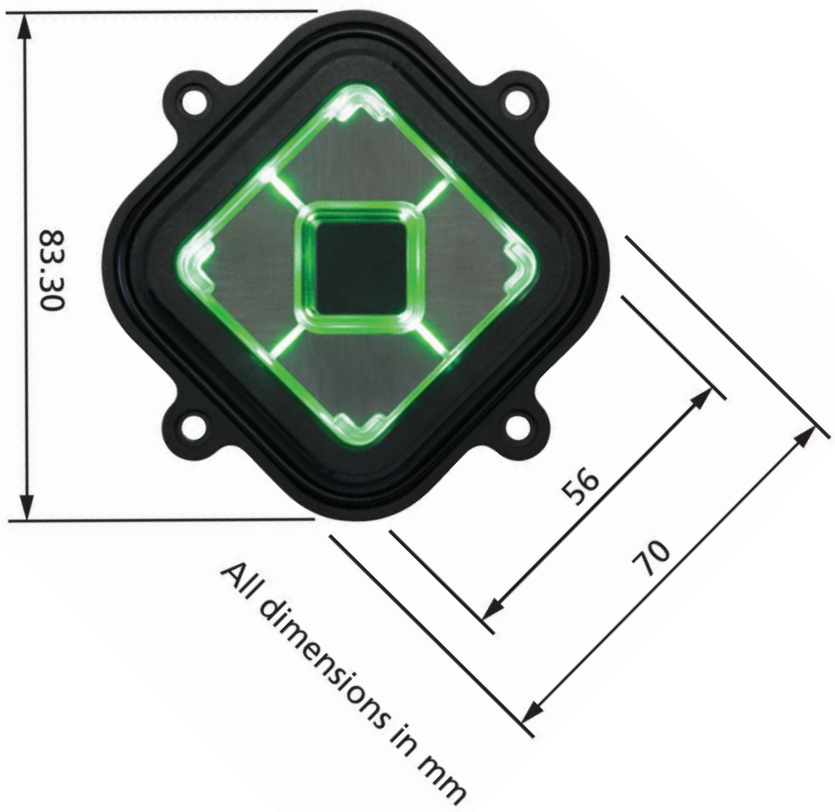
The USB keypress codes can be changed with the Configuration Utility

The Configuration Utility can be used to :-

• Control LED On/Off and brightness (0 to 9)
• Customise USB output codes
• Reset to factory default values
• Retrieve serial number
• Update device firmware

	OUTPUT CODES (STANDARD TABLE)	
Function	**Hex**	**USB Description**
Right	0x4F	Right Arrow
Left	0x50	Left Arrow
Down	0x51	Down Arrow
Up	0x52	Up Arrow
Select	0x28	Enter

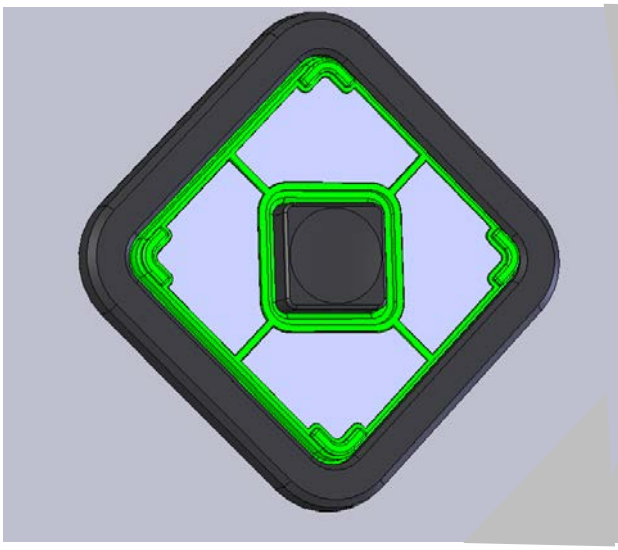
FRONT VIEW



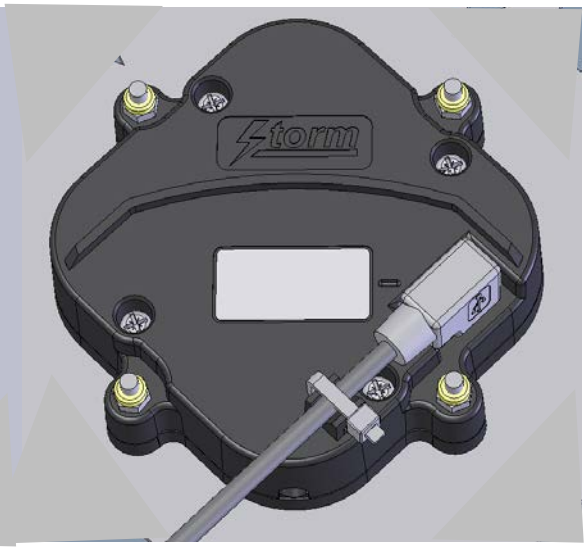
The keypad is designed to be installed from the underside of a host panel; fixed using M3 x 20mm weld studs or appropriate screw fixings.
Download CAD File for panel cutout drawing / dxf file.

It is recommended to use a cable tie as shown, to provide strain relief for the USB cable and connector.
(Use 2.5mm nylon cable tie, RS 233-402 or equivalent)

INSTALLED FRONT VIEW

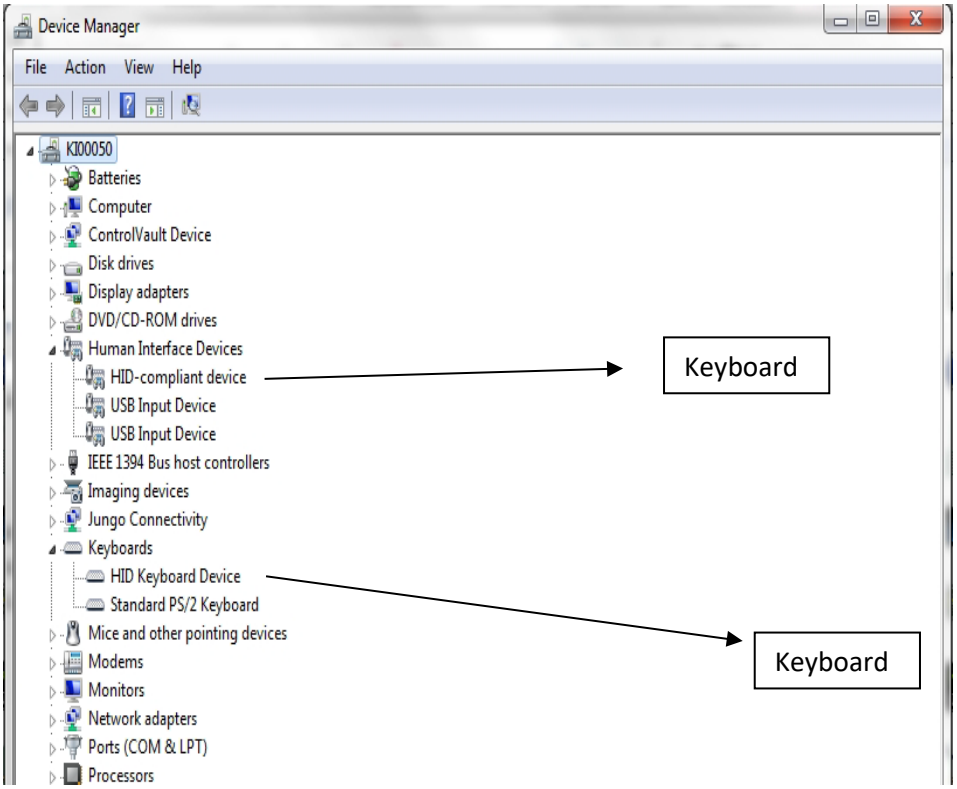


REAR VIEW



Device Manager

When connected to a PC, the keypad should be detected by the operating system and enumerated without installation of additional drivers. Windows shows the following devices in the Device Manager:



Specification

Rating	5V ±0.25V (USB 2.0)
Connection	mini USB B socket
Dimensions	70mm square
Underpanel Depth	25mm
Cable	Not Included

Part Numbers

1605-33001	1600 Series USB Navigation Keypad
4500-01	USB Cable (angled mini-B to USB-A, 0.9m long)

Performance

Operational Temp	-20°C to +70°C
Certification	CE, FCC, UL
Impact Resistance	1K09 (10J)
Shock & Vibration	ETSI 6M3
Sealing	IP65
EMC	EN55022 Class B/55024
ESD Immunity	15kV Contact and Air

Downloads

Panel Cutout, Installation Drawing, CAD Model, Configuration Utility all available from www.storm-interface.com/downloads

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Version Information

Engineering Manual	Date	Version	Details
	04 Jan 16	1.0	Introduced
	12 Apr 17	1.1	Firmware update
	19 Jan 21	1.2	FW and Utility update
	16 Aug 24	1.3	Instructions for Utility split out into new document

Product Firmware	Date	Version	Details
	04 Dec 15	1.0	Introduced
	12 Apr 17	2.0	Improve stability
	19 Jan 21	3.0	Reduce debounce to 30ms
API	Date	Version	Details
	24 Apr 24	2.0	Introduced