IR Tracker 2

Datasheet

Tracker Specific Datasheet

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MIMIC WITH IR TRACKER

Mimic with IR Tracker consists of a standard joystick with a Tracker that can be mounted into it. The Tracker uses infrared (IR) light for recording human motions and transferring them to a robot (Figure 2).

Mimic IR Tracker is a wireless tracking system. It provides the Mimic software with the joysticks position and orientation in 3D-space as well as the inputs of up to four buttons (Figure 1).

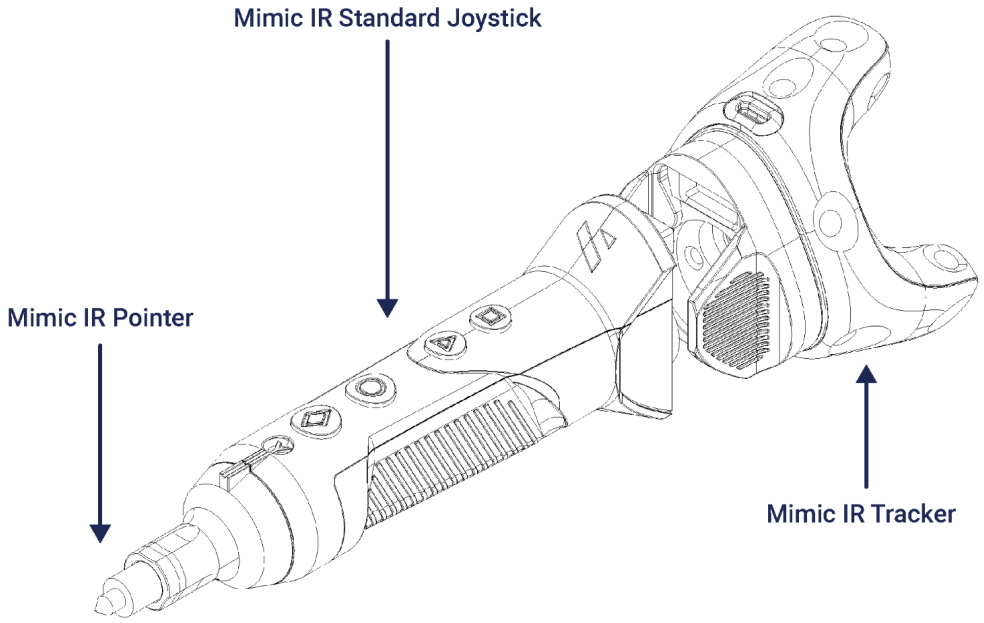

Figure 1 - Mimic IR Standard Joystick with Mimic IR Tracker

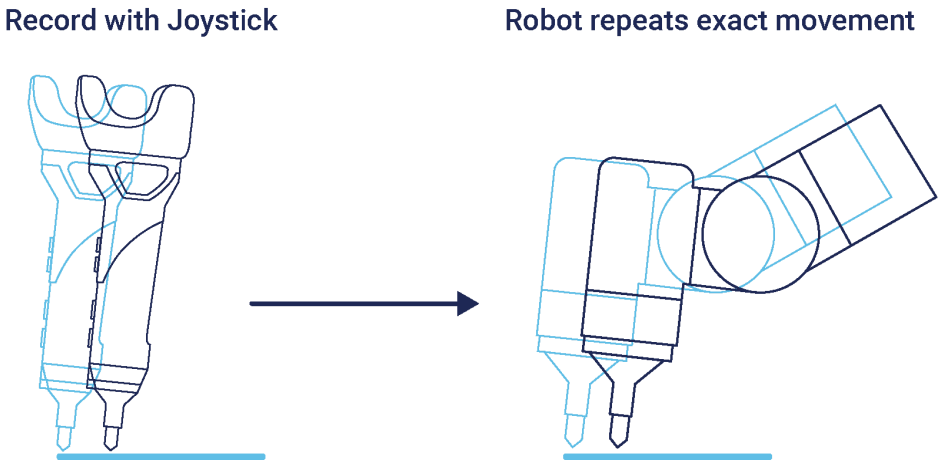

Figure 2 - Recording a movement with Mimic IR

IN THE BOX

Component	Referenced as	Description
	Nordbo Controller	Contains and runs the Mimic Software needed to use Mimic with IR Tracker.
	Power Supply for Nordbo Controller	Powers the Nordbo Controller.
	1x USB Flash drive	Contains documentation and URCap (only for Mimic UR)
	1x HTC Tracker 3.0 (Referred to as Tracker) (Additional can be purchased if needed) Including x1 Tracker Mount (Mounted onto Tracker with a ¼" Camera screw with 1.27 mm pitch (following ISO 1222:2010)	The Tracker is the object that captures position and movements. Used to mount the Tracker on a Joystick.
	1x HTC Dongle (Referred to as Dongle)	Communicates wirelessly with the Tracker.
	1x HTC Dongle Cradle (Referred to as Dongle Cradle)	Cradle for the Dongle.
	1x USB Type-C cable	Connects the Dongle Cradle to the Controller. Also used to charge the Tracker.

	1x HTC Base Station 2.0 (Referred to as Lighthouse)	Emits the infrared light that the Tracker uses to track.
	1x Power Supply for Lighthouse	Powers the Lighthouse.
	1x Mimic IR Standard Joystick including	A Joystick to mount the Tracker on is used as a tool to record movements.
	1x Joystick Pointer	This is used as a tool to calibrate.
 	1x Reference Frame Kit Including 1x Reference Plate and 1x Robot Pointer with 2 flanges.	Used to calibrate the Reference Frames.
	4x M6-10 mm stainless-steel bolts (for Robot Pointer)	Used to mount Robot Pointer.
	1x LAN-cable, 2 m	Used to connect Nordbo Controller and robot.

TECHNICAL SPECIFICATIONS

Joystick

The TCP (Tool Center Point) is illustrated below (figure 12). The Y and X values are 0. The TCP of the Joystick is measured from the TCP of the Tracker (see below).

- Without Joystick Pointer: Measured to the center of the magnet in the end of the Joystick
- With Joystick Pointer: Measured to the tip of the Pointer

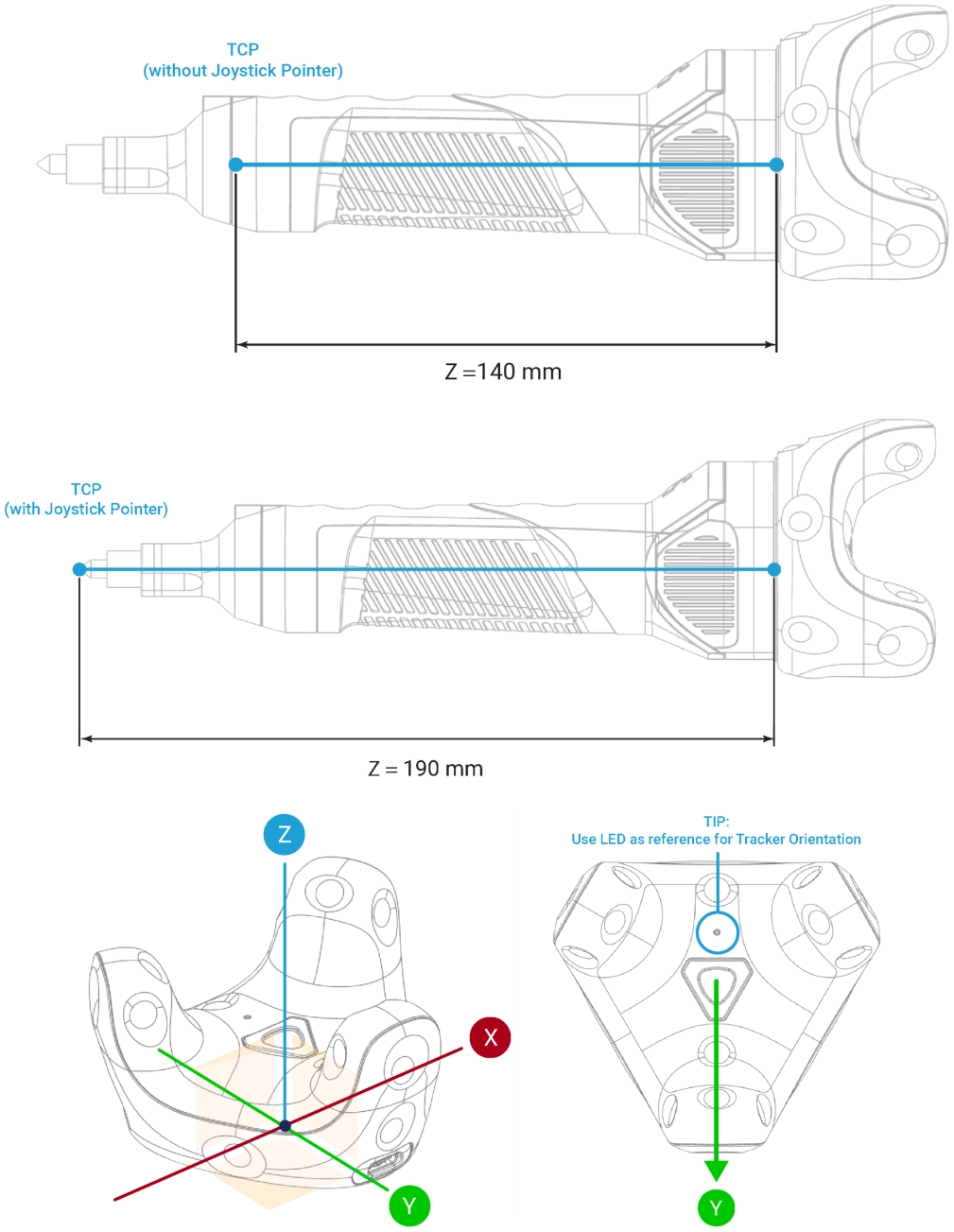

Figure 12 - IR Tracker TCP

Tracker

Description	Metric	Note
Storage Temperature	0°C to 40°C	Avoid using the product after a dramatic change in temperature
Radio Type	2.4GHz wireless	-
Transmitter Frequency	2402 – 2480 MHz	-
Maximum Declared Output Power	4.5 dBm	-
Maximum Power Supply	5 Volts DC 1 Amp	-

The setup of the pins on the Tracker can be seen in figure 13.

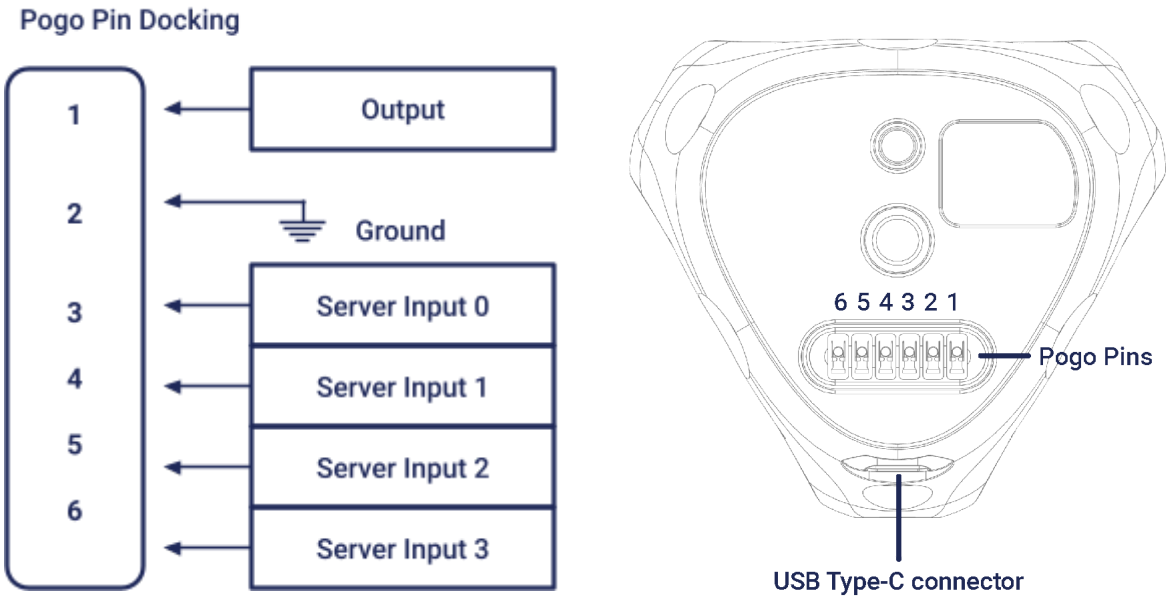

Figure 13 - Tracker Pin Setup

Dongle

Description	Metric	Note
Storage Temperature	0°C to 40°C	-
Radio Type	2.4GHz wireless	-
Transmitter Frequency	2402 – 2480 MHz	-
Maximum Declared Output Power	0.94 dBm	-

Lighthouse

Description	Metric	Note
Radio Type	2.4GHz wireless	-
Operating Frequency	2400 – 2483.5 MHz	-
Max EIRP	6.24 dBm +/- 1.5 dBi	-
Laser	Class 3B laser	Mitigated to Class 1 laser
Safety Distance While operating	20 cm	-
Horizontal Field of View	150°	-
Vertical Field of View	110°	-
Minimum Tracking Distance	0.5 m	-
Maximum Tracking Distance	7.0 m	-

Tracker

Description	Metric	Note
Length	79.0 mm	-
Width	70.9 mm	-
Height	44.1 mm	-
Weight	75 g	-

Dongle

Description	Metric	Note
Length	46.8 mm	-
Width	28.0 mm	-
Height	47.2 mm	-
Weight	37.5 g	-

Lighthouse

Description	Metric	Note
Length	74.7 mm	-
Width	63.0 mm	-
Height	77.4 mm	-
Weight	0.64 kg	-

For details on HTC Vive tracker, please see:
VIVE Tracker Guidelines - Developer Resources
(https://developer.vive.com/resources/hardware-guides/vive-tracker-developer-guidelines/)