ROBOT NANO HAND

THE HUMAN APPROACH TO ROBOTS

Full list of components that are required to complete a one hand build are listed below:

1 x NVIDIA Jetson Nano 4GB development kit
The NVIDIA Jetson Nano Developer Kit delivers the compute performance to run modern AI workloads at unprecedented size, power, and cost.

1x fully 3D printed hand
Either 3rd party printed or printed yourself.

2mm ground steel pins
Five different lengths: 58 pins in total

Pin Length/mm	Total needed
10	11
16-18	16
20	10
24	21

Tendons, guides and elastics

Tendons close the fingers, elastic bands open the fingers and guides make everything run smoother for longer. Ideally use the items recommended below but substitute as needed. For example by using any braided kite or fishing line of roughly the right diameter you already have to hand.

Sufix 832 SuperBraid
5m - White 80lbs breaking strain

Elastic bandS
Around 15mm diameter when unstretched and no more than 3mm wide in latex or polyurethane - sold as hair bands for humans and horses!

SCS0009 Micro Servo
10 X SCS0009 - Fingers and thumb

FE-URT-1 BOARD
USB board for reprogramming the servos (Feetech) Servos

PTFE tube
30cm x PTFE tubing AWG 18s 2mm OD, 1mm ID

1 x fully 3D printed hand
All the parts printed online or by yourself or get started as soon as you have enough to make a finger!

SCS15 SERVO
1 x SCS15 SERVO

Micro USB cable
1x Micro USB cable

All servos used have been sourced from a company called Feetech

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Cameras
One camera is located with in the palm of the robotic hand

Raspbery PI V2 Camera
1x Raspbery PI V2 Camera

Camera cable
1 x 30cm Raspberry PI V2 camera cable - the standard cable supplied with the camera is not long enough
Power Supplies

Two power supplies are needed to operate the hand correctly. One to power the NVIDIA jetson Nano development kit and other to power the servos

5V 4A Universal Power Supply
1x 5V 4A Universal Power Supply for NVIDIA Jetson Nano development kit

2.5mm Barrel jack
1x Barrel jack with flying leads for URT board, connects to UPS above

6v 3A Universal Power Supply
1 x 6v 3A minimum Universal Power Supply for the servos - or use the same as for the nano with slightly
 slower servo movments

Jumper
1 x Jumper - To enable power jack on development kit