

Arlo Top Deck Kit (#28965)

The Arlo Top Deck Kit includes a precision milled 17.875" diameter deck and appropriate hardware for mounting to your Arlo Robot Base Kit (#28960).

The Arlo Top Deck is cut from solid blocks of high-density polyethylene (HDPE). This deck conveniently adds height to your mobile robotic system.

Each Kit is stackable—you can add as many Arlo Top Decks as you wish to your system and build your robot as tall as you want! Each Arlo Top Deck Kit adds another 5.375" to the height of your robot. This provides room for additional sensors, cameras, manipulators, displays, etc.

The components used in this product work well in both indoor and outdoor environments.



Features

- Precision machined HDPE (High Density Polyethylene) Top Deck with pre-drilled and counter-sunk mounting holes.
- Designed to mount on top of the Arlo Robot Base Kit (#28960).
- Precision CNC milled HDPE is virtually indestructible, yet easily drilled, cut, or modified to suit your design preferences and application requirements. Tips on how to work with HDPE are included in this document.
- The Arlo Top Deck plate is 0.375" (0.95 cm) thick x 17.875" (45.09 cm) diameter, providing approximately 237 square inches of usable area.
- Weighs only 3.35 lbs. (1.52 kg)

Bill of Materials

Part #	Quantity	Description
765-28965	1	Arlo Top Deck
710-00034	4	1/4"-20 x 3/4", flat-head, black, socket-head screw
710-00105	4	1/4"-20 x 3/4", button-head, black, socket-head screw
713-00049	4	5" x 1/2" dia. 1/4"-20 tapped machined standoffs
720-28004	4	1/4"-20 x 1.5" threaded stud

Assembly Instructions

The instructions below show the Arlo Top Deck Kit installation onto an Arlo Robot Base Kit (#28960) with the Motor Mount and Wheel Kit -MP (#28963 in HDPE, also available in aluminum #28962) and the Caster Wheel Kit Rev B (#28961). Of course, you are free to use your own base and wheel system.

Step 1: Attach each of the four standoffs to the top of the Arlo Robot Base by using the four included #1/4"-20 x 5/8" button-head screws. Insert screws from the bottom up into the standoffs as shown.



Step 2: Place the Top Deck onto the standoffs, making sure that the counter-sunk holes are face-up. Secure the deck with the four included 1/4" - 20 x 5/8" flat-head screws.



Step 3: (Optional) if you wish to add a second Top Deck, simply replace the four flat-head screws with the included 1.5" x 1/4" - 20 all-thread studs. Next, place the additional deck onto those studs, and then screw on the next set of standoffs. Place the second Top Deck onto that level and secure with four flat-head 1/4" x 20 screws.

By stacking Arlo Top Decks, you can build a very sturdy upper structure to your robot, which provides lots of room for expandability.

Working with HDPE

- HDPE is a non-brittle form of plastic that is FDA approved for direct food contact (not that it matters unless you're going to place raw food on your robot).
- HDPE does not absorb liquids and is highly resistant to most cleaning agents. It is also resistant to breakdown from UV light exposure.
- Many common woodworking tools can be used to drill, cut, carve, and tap (cut screw threads) HDPE. Jigsaws, circular saws, standard drill bits, routers and router bits, all provide various ways to customize your Robot Base. Unlike wood products, HDPE has no grain. Therefore, when you cut, drill, plane, or chisel HDPE, it will not split or splinter.
- Although you can tap HDPE, in most cases this is not necessary. Simply drill a thru-hole that is slightly under-sized compared to the screw itself. As you insert the screw into the hole and twist it in, the screw will cut its own threads. Go slow so that you don't strip out the threads.
- You'll notice that the HDPE itself can act like a lock-nut. That is, when you stop turning the screw, the HDPE will tend to bind and hold the screw tight.
- If you do over-tighten and strip out the threads, remove the screw. Then, using a small straight-blade screwdriver and hammer, simply tap around the perimeter of the hole to "cave in" the material a bit. Now re-insert the screw, and it will tighten right up as it cuts a new set of threads.



Product Compatibility Notice

This (#28965) Arlo Top Deck Kit is compatible with the Arlo Base Kit (#28960), additional Arlo Top Kits (#28965), the Eddie robots (#28990 & 28992), and the discontinued MadeUSA Robot Base Kit (#28970).

Resources and Downloads

Check for the latest version of this document and additional resources on the Arlo Top Deck Kit product page. Go to www.parallax.com and search "28965".