

## DPRG RBNV Chat Record - November 28, 2023

Carl Ott

7:42 PM

Initial Queue for tonight

Doug P Paul Tom C Open Mic

~7:42pm - Doug P shared various items. 1) an article on cheapest ROS robot you can build

Paul Bouchier

7:45 PM

<https://robofoundry.medium.com/building-cheapest-ros2-robot-using-esp32-part-1-hardware-build-af0044de68ce>

Doug Paradis

7:46 PM

Part3 <https://robofoundry.medium.com/building-cheapest-ros2-robot-using-esp32-part-3-simulation-ff00b2e06681>

Carl Ott

7:48 PM

The author claims his plans can build a ROS based robot for about \$60, where you can drive the robot around with a joystick.

it's meant more as a demonstration platform - technology exploration.

Tom C - Hamilton, ON

7:52 PM

MicroROS on ESP runs on FreeRTOS OS

MicroROS: <https://micro.ros.org/docs/overview/hardware/>

Doug Paradis

7:57 PM

Part2: <https://robofoundry.medium.com/building-cheapest-ros2-robot-using-esp32-part-2-testing-calibration-3f2c6af55698>

Fake stepdown converter: <https://www.youtube.com/watch?v=hBOJDlftKTU>

Carl Ott

7:57 PM

Doug also showed a Youtuber who reviewed a very common 'cheap' switching converter - who proved that the stated chip was a fake...

OK guys- sorry but I have to do a work call for a little bit. I'll jump back on when it's over...

Carl Ott

7:58 PM

here's the queue.

Doug P Paul Tom C Open Mic

You

8:15 PM

~8:10pm - Doug showed compass comparisons

Doug Paradis

8:25 PM

BNO055 Magnetic Calibration Demo Post: <https://forums.adafruit.com/viewtopic.php?f=19&t=81133>

Ponder SomeMore

8:28 PM

i gotta go .. see you next time

Doug Paradis

8:29 PM

Using the QMC5882L compass library by Mprograms available on the Arduino library manager with some suggestions made by Robert's Smorgasbord YouTube channel, I was able to calibrate the compass and use it successfully.

Doug Paradis

8:32 PM

Robert's Smorgasbord YouTube channel first of a series on YouTube about QMC5882L: [https://www.youtube.com/watch?v=xh\\_KCkds038](https://www.youtube.com/watch?v=xh_KCkds038)

Mike Williamson

8:57 PM

I have an update on my new project just started.

Doug Paradis

8:59 PM

Mike sounds good. As soon as Paul finishes.

You

9:02 PM

Paul Presented MowBot.

You

9:06 PM

This was a steppingstone towards getting MowBot to run ROS2.

Carl Ott

9:11 PM

~9:10PM - Mike W gave an update on his inside robot build. Took advantage of Black Friday deals @ Pololu

Carl Ott

9:14 PM

and deals from GoBuilda - showed a 3d model of new platform.

Carl Ott

9:21 PM

~9:17pm - discussion around 3D printing- including an "expansion" setting available for many slicers- (different names in different slicers), which automatically scales sliced output to compensate for one printer or another...

Carl Ott

9:24 PM

also discussed different 3D modelling tools

Carl Ott

9:35 PM

Here is a list of DPRG contests and rules - check them out here from the DPRG website <https://www.dprg.org/contest-rules/>

Carl Ott

9:36 PM

Or check out the GitHub Repo which maintains DPRG contests <https://github.com/dprg/Contests>

Carl Ott

9:46 PM

~9:44pm - Mike W showed Battery he's selected from a large camera battery format -> 14.4V w/ 10A peak.

Carl Ott

9:48 PM

has a nice form factor and electromechanical interface.

Carl Ott

9:50 PM

Mike W also threw down the mitten -> "I Will Win the Indoor Contecst Next year."

Mike Williamson

9:50 PM

amazon [https://www.amazon.com/dp/B0BW3MX9ZT?ref=ppx\\_yo2ov\\_dt\\_b\\_product\\_details&th=1](https://www.amazon.com/dp/B0BW3MX9ZT?ref=ppx_yo2ov_dt_b_product_details&th=1)

Powerextra V Lock Battery PD 45W Fast Charging (60W+Charger)

Carl Ott

9:51 PM

cool thanks Mike!

Harold Pulcher

9:51 PM

<https://www.youtube.com/watch?v=qNfRgZMwyCI&list=WL&index=116&pp=gAQBIAQB>

Carl Ott

9:52 PM

~9:50pm - Harold showed a latest video from Disney - robots built to walk around Galaxy's Edge

Carl Ott

9:56 PM

Mike - looks like you can even buy standard "V Mount / V-Lock" adaptor plates for that battery - Do you plan to use something like this? <https://www.amazon.com/Fomito-V-Lock-Battery-Adapter-Output/dp/B082QZ7DWS>

Mike Williamson

9:57 PM

Oh I got a DIY plate HangTon New V Mount V-Lock Battery Plate Power Supply Adapter D-tap for Camera DIY [https://www.amazon.com/dp/B08R19XY7N?ref=ppx\\_yo2ov\\_dt\\_b\\_product\\_details&th=1](https://www.amazon.com/dp/B08R19XY7N?ref=ppx_yo2ov_dt_b_product_details&th=1)

Carl Ott

9:59 PM

Cool - same looking item. I love to find standards like this that are probably pretty safe but also relatively easy to repurpose. I wonder what kind of built-in safety measures V-Lock batteries have...

Mike Williamson

10:00 PM

I assume really good since it powers \$5,000 or more camera rigs.

It should have BMS etc.

Carl Ott

10:04 PM

Mike, will you take power from the red/black flying leads, or will you find a D-tap cable?

Mike Williamson

10:05 PM

planning on red/black wires and power distribution block/fuses and dc-dc converters for Pi and micros