Hello and Welcome to the newsletter.

The News from around New Zealand. Note: Only new updates are added each month

Tauranga
ZL1TPD now has a fixed IP at 222.154.227.90
The dashboard can be viewed at 222.154.227.90:81

Feedback from an international reader.
Hi I am G4LVV currently in WA on holiday and just read your news letter.

I built a GMSK hot spot using a GMSK-Mega on an Audino connected to a Pi and a Yaesu FT7800 as the radio. Details on DSTAR101.COM

It may be useful as all cables were supplied apart from Pi power lead. No cutting, very cost effective and output to a diamond X200

Regards, Alan G4LVV

HOTSPOTS Update – John ZL2TWS
Changes have been made during the month to the ZL3CHD, ZL1SB and ZL2NSA dashboards to better explain the information lines provided. For example Frames (s) has been changed to AMBE-Frames (sec) that is better understood to be the amount of time for a transmission of total D-Star frames. Silence is the percentage of frames missing DV or synchronization parts of the frames being transmitted. Good explanations about this topic can be found on internet searches.
In addition the Average CPU usage and CPU core idle times have been calculated to make more sense. The author of the dashboard is Kim DG9VH. There were some words that did not read well and hence why I wanted to tidy this up. The height above sea level for the hotspot is one example as previously this was (m a.g.)

Kim DG9VH has the following advice for hotspot operators:

Performance-tuning:

To get more performance into the processing be sure to have the log files of the gateway and repeater within a log-rotation. Especially header.log would sometimes grow up into infinitive.

It is also recommended to activate a ramdisk on linux-systems for longer lifetime of sd-cards in Raspberry Pi-systems. Configuration see ircddblocal.php

For those of you wanting to download and install the dashboard go here:
https://github.com/dg9vh/DG9VH-Dashboard-for-G4KLX-Software

The Odroid hotspots have Bit Error Rate-BER (%) displayed to better explain what BER means. Remember that internet searches will answer any queries about D-Star and its protocols. This will avoid people asking questions and lift their own level of knowledge. D-Star is self learning at your own pace via the online resources.

At the time of writing the most successful hotspot running on an FT-857 radio is zl2sfm.ddns.net:82. A total of 49 days until an RF QRM issue affected the DVRPTR. The CPU was forced into some loop pushing the average usage to 100% and thereby increasing the CPU temperature. Although the hotspot was still functioning the decision was made to remotely reboot it. After this the temperature dropped back from 64 degrees to 44 degrees.

The hotspot is using a Solid Run Humming board i2Ex. At times the CPU temperature has reached 64 degrees depending on system load. The Humming board continues to operate without fan assisted cooling.

Also being pressure tested is zl2nsa.ddns.net:82 running an Odroid C1+. I have seen the CPU temperature reach 69 degrees due to high ambient summer room temperatures. Also this Odroid C1+ is not fan cooled. Although fan cooling will increase the overall reliability and longevity of the hotspot it does not seem to be essential. ZL2NSA was running for a 20 day period until a power outage forced a reboot. The trial period has been restarted.

Remember to always check your DVRPTR beacon status and reboot the radio if you find no response from your hotspot.
Often operators think their hotspot needs rebooting when in fact a simple problem exists such as the radio was turned off or lost power.

Odroid C1+ Hotspot Cooling options – Brian ZL1HN
Refer to the printed letter on each Ethernet socket shown in the pictures for modifications to heat sinks used on the Odroid C1 Plus. All tests were done at 25c .
Below: Odriod-A standard after 2 hours of running temperature ranged between 60c to 65c.
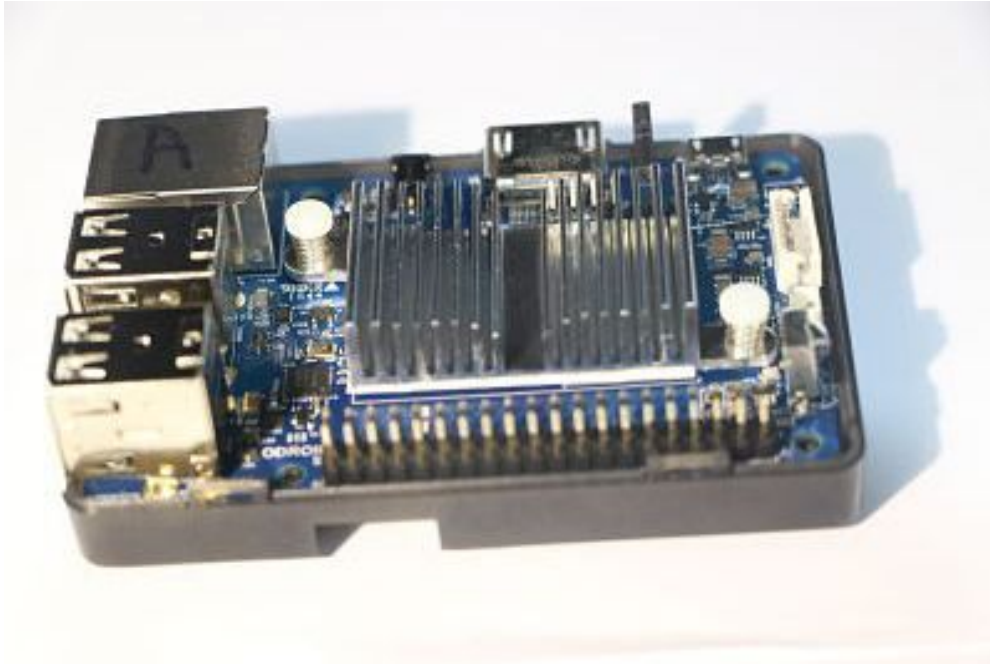
Below: Odroid-B is a standard Odroid with an additional heatsink tipped upside down and pressed into the fins. The temperature under 25c was 49c to 54c after 2 hours of running tested under the same conditions as Odroid-A.
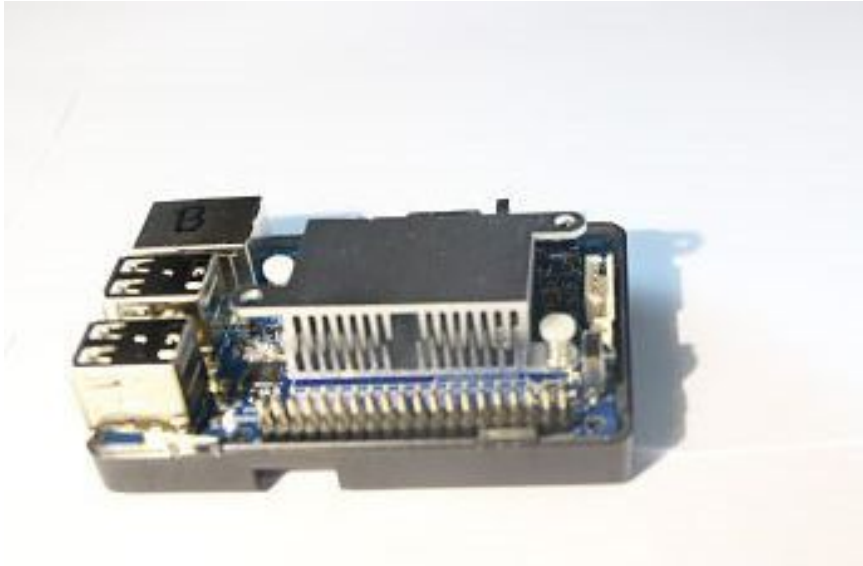
Below: Odroid-C is a standard Odroid with a small ball bearing fan purchased from Jaycar. It is a 5volt fan, part number YX2506 and suitable screws is YP0554. The temperature after 2 hours was between 48c and 54c run under the same test conditions as Odroids-A and B.
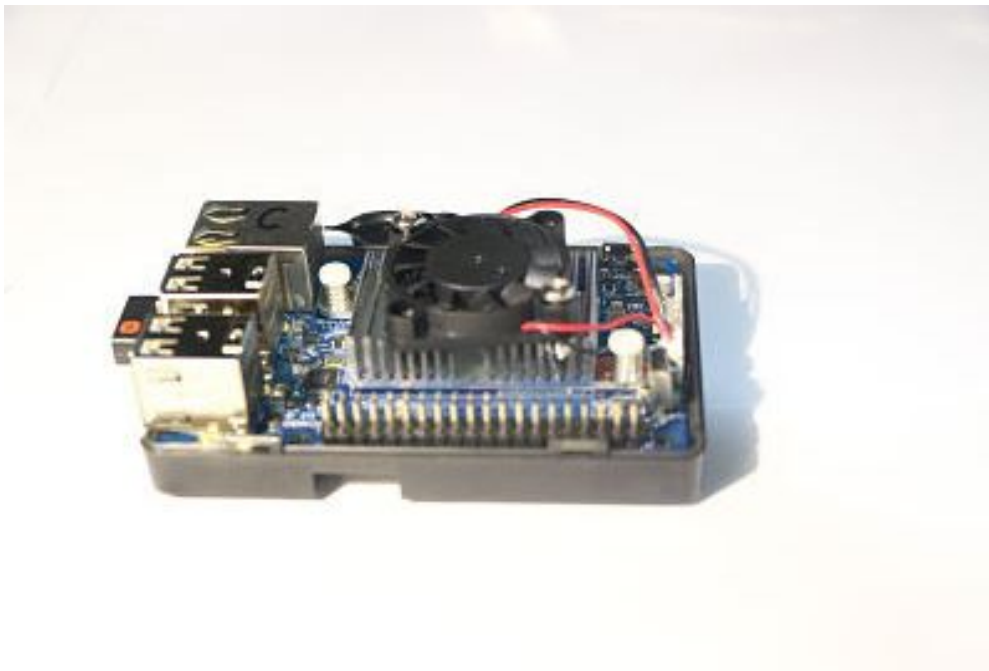
Below: Odroid-D has a modified Odroid XU4 fan and heat sink fitted. Quite a bit of modification required to the heatsink and the header pins behind the HDMI socket.
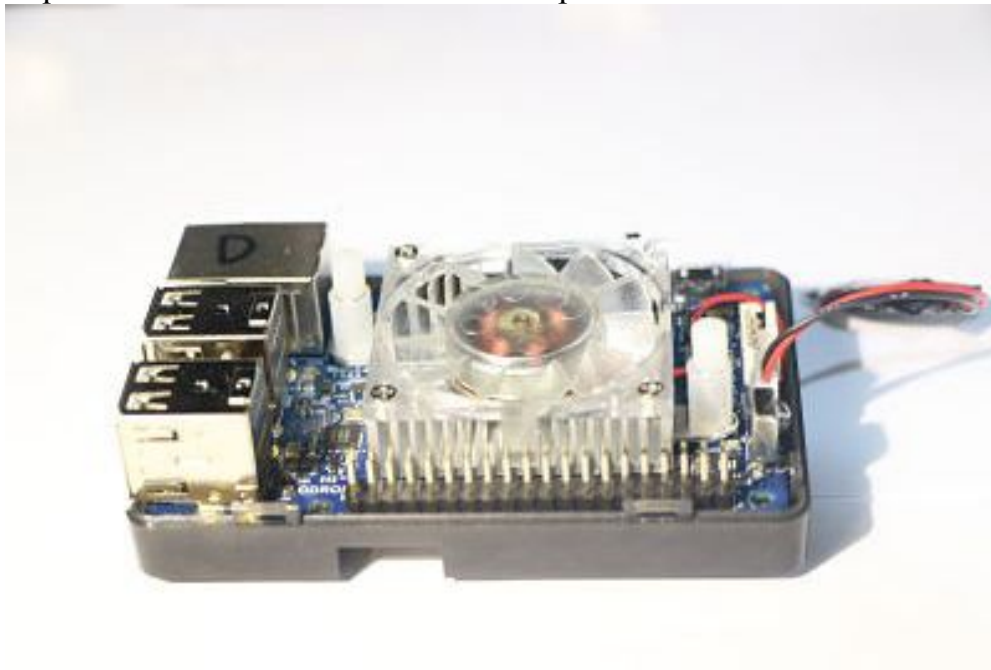
I am sure that the white thermal paste works better than the standard piece of plastic that they use from the factory. The temperature range under the same conditions as A, B and C was 38c to 43c. I think for simplicity of modification using thermal paste on Odroids-B and C, removing the original white plastic thermal material would work even better.

CCS7 (Call Connection System 7)
The following list of stations that are working at the time of publication. Please try them. You can check each hotspot dashboard to verify your connection.
ZL2ARN (530)1082
ZL1SB (530)1091
ZL2JML (530)2009
ZL2SFM (530)1072
ZL2NSA (530)2018
ZL3CHD (530)3049
ZL1HN (530)1074

DV Dongle and DVAP devices
Confirmation from Riku ZL1KLP that his DV4mini is being used on DMR-MARC in his home country of Finland. Riku gets access from Auckland into the OH-TRBO network.

WinDV (Dutch D-Star)
For those stations that have a DVdongle, DV3K or DVAP and want to connect to XRF063 B the DExtra host list has to have this entry in order to connect with the DExtra protocol. Port 30001 has to be forwarded in your internet router. If XRF063 is not included in the DExtra host list the WinDV software will attempt to use the Dplus protocol. DExtra Reflectors are designed to be "multilingual" and can default to Dplus.

How to contribute to this newsletter

The newsletter is published in the first week of each month.
Send any articles and pictures sized no larger than 200kbs to one of the editors listed below.
The editor will acknowledge that the information has been received and will be distributed to the chief editor for compilation. The close off date is the **last day** of each month.
The following is a list of editors and the local contact people to send articles for the newsletter.
The newsletter is compiled from input given to these editors.

Auckland and Hamilton is Brian ZL1HN (zl1hn@xtra.co.nz)
Tauranga is Kevin ZL1KRH (zl1krh@ihug.co.nz)
Hawke's Bay region is Jan ZL2CZE (jan.s@eastek.co.nz)
Wellington region is John ZL2TWS (zl2tws@clear.net.nz)
Christchurch is Mike Barnes ZL3TMB (mike@barnes.net.nz)
Invercargill and ZL4 is Daniel ZL4DE (zl4de@icloud.com)

Each month useful links will be placed at the end of the newsletter so you always know where to go quickly to find them.

facebook page called ZL DSTAR https://www.facebook.com/groups/184445028555391/

Gateways with dashboards:

Auckland. https://zl1vhd.dstar.org.nz/ (Dplus)

Auckland. https://zl1hk.dyndns.org (Dplus)

Hamilton. http://zl1cct.d-star.nz (ircDDB) **CCS7 8530100**

Tauranga. http://222.154.227.90:81 (ircDDB) **CCS7 8530001**

Te Puke. https://zl1ibd.dstar.org.nz (Dplus)

Wellington. http://123.255.47.67 (dual dashboard with Dplus below the ircDDB) **CCS7 8530304**

New Zealand Reflector XRF063. http://162.248.141.148

Other sites for reference information:

ZL2VH Web site. http://zl2vh.org.nz/d-star/

KiwiD-Star group. https://groups.yahoo.com/neo/groups/KiwiD-STAR/info

Examples of these hotspots with dashboards that you can view and connect to this month:
ZL2DRN (http://zl2arn.dyndns.org:82)
ZL1SB   (http://zl1sb.ddns.net:82)
ZL2JML (http://zl2jml.ddns.net:82)
ZL2SFM (http://zl2sfm.ddns.net:82)
ZL2NSA (http://zl2nsa.ddns.net:82)
ZL3CHD (http://zl3chd.ddns.net:83)

ZL Host lists
ZL gateways and hotspots.
On the Branch 63 site you can retrieve the host files at any time. They are small text files.
 http://zl2vh.org.nz/d-star/links/
Title is "ZL Gateways and Hotspot Host files"
Alternatively here. http://zl2vh.org.nz/assets/d-star-hosts/
Host Files Updated 20160227:
The DExtra and Dplus host files have been updated.
The changes include new reflectors and hotspots: DExtra = XRF223, XRF651, XRF789, and
ZL2JML. DPlus = ZL1TPD and ZL2HBD.

ircDDB Visibility
For those who want to be visible on the ircDDB "live" list.
http://www.ircddb.net/live.htm
Do the following from this URL:
http://ircddb.net/live-vis.html
UR:VIS ON and then transmit once.
Then revert the UR:CQCQCQ
Once you transmit via an ircDDB enabled gateway using RF your call sign will be seen to be live
on the dashboard and also listed on the ircDDB "last heard" list on the local dashboard.

Previous issues of this newsletter are available from http://zl2vh.org.nz/d-star/newsletter/
or the KiwiD-Star Yahoo group.
https://groups.yahoo.com/neo/groups/KiwiD-STAR/files/D-Star Newsletters/

D-Star Net to join
http://www.dstarinfo.com/nets.aspx
Friday afternoon at 16:00 REF012A PAPA D-Star round table net is a technical net and well worth
joining. The net runs for 3 hours or more and has a "shout box" type web forum you can also
contribute to. http://d-star-roundtable.boards.net/

73 and good DV.

Chief editor John ZL2TWS. Proof reader Brian ZL1HN