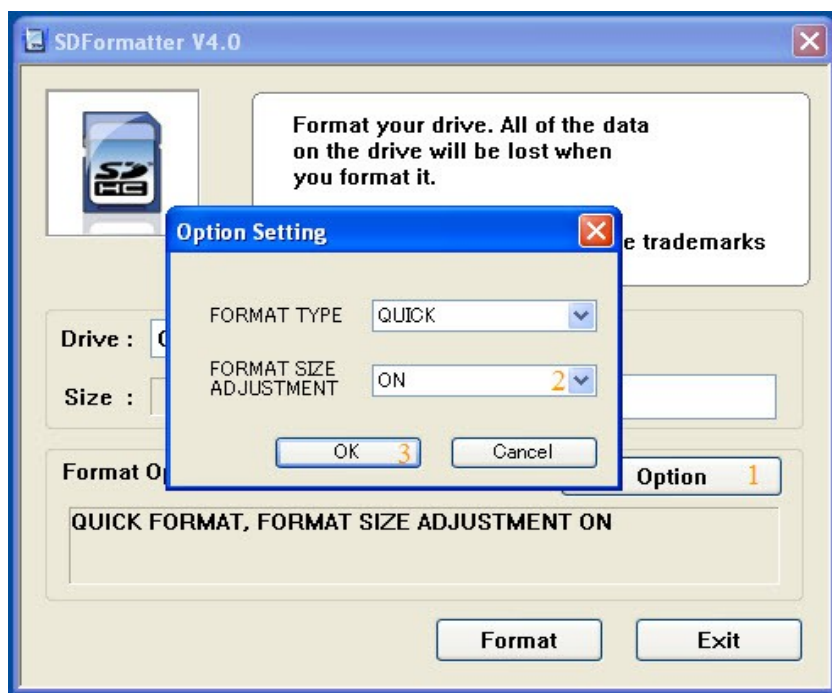


การติดตั้ง APRX สำหรับ BananaPI ทำงานด้วย Bananian Linux OS

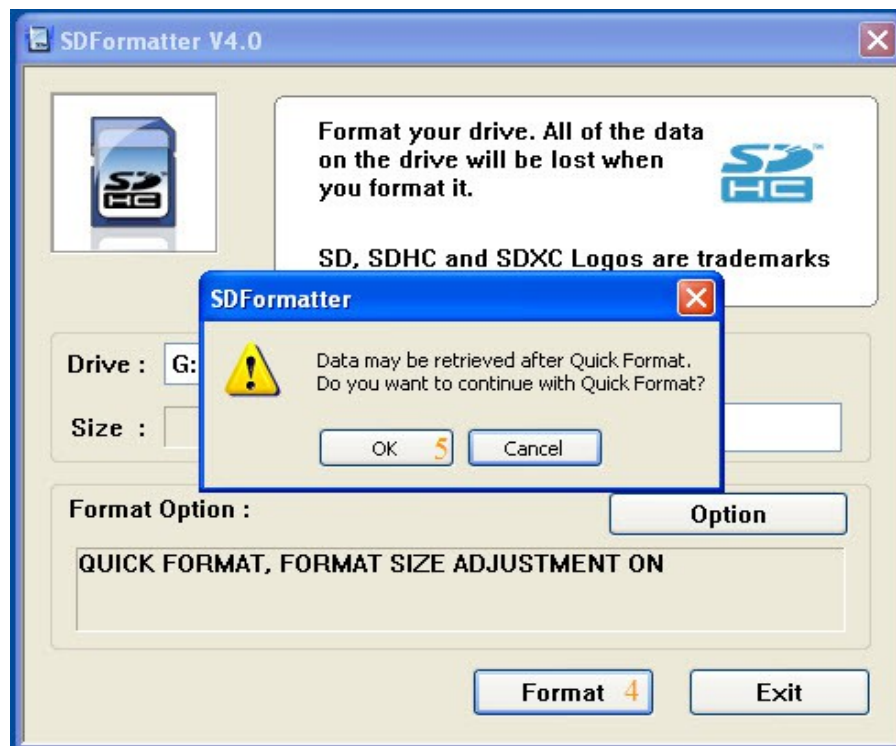
คำสั่งต่างๆ ใช้กับ BananaPI ทำงานด้วย Bananian Linux OS

Format SD ควรจะเป็น CLASS10

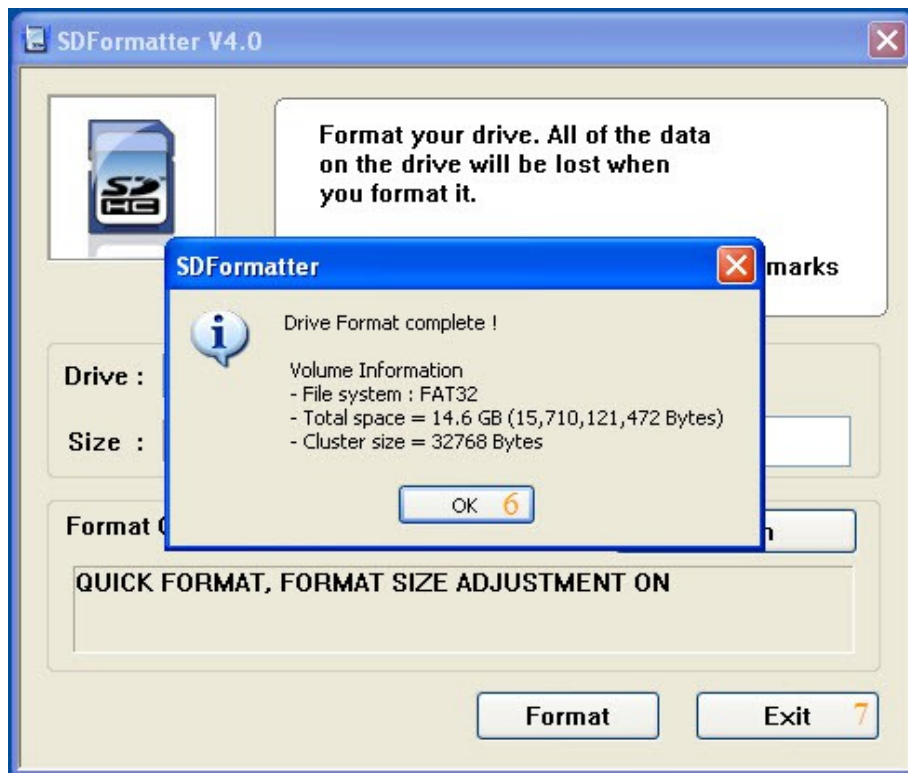


HS2QJJ

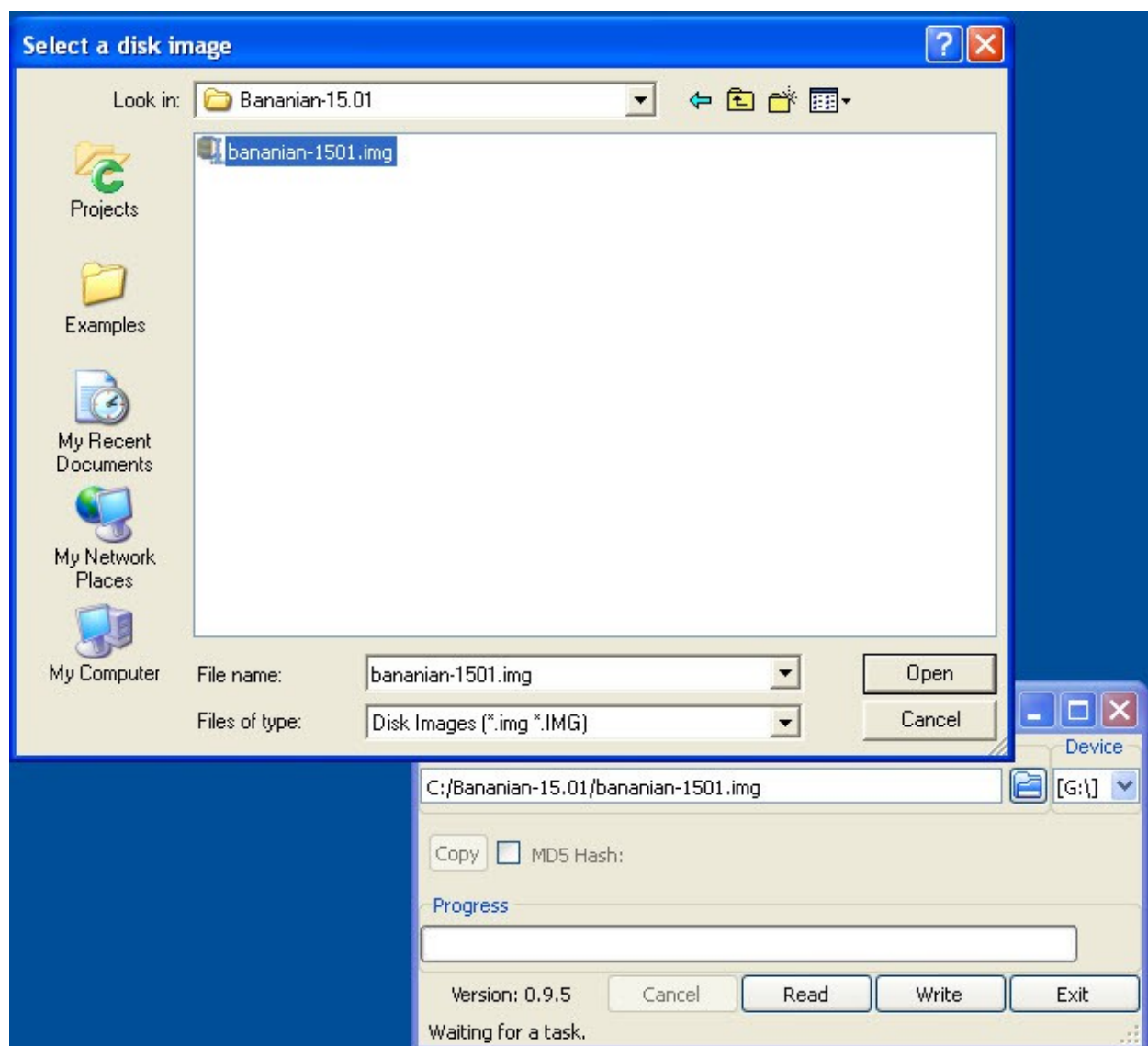
ตามรูปเลยครับ



HS2QJJ

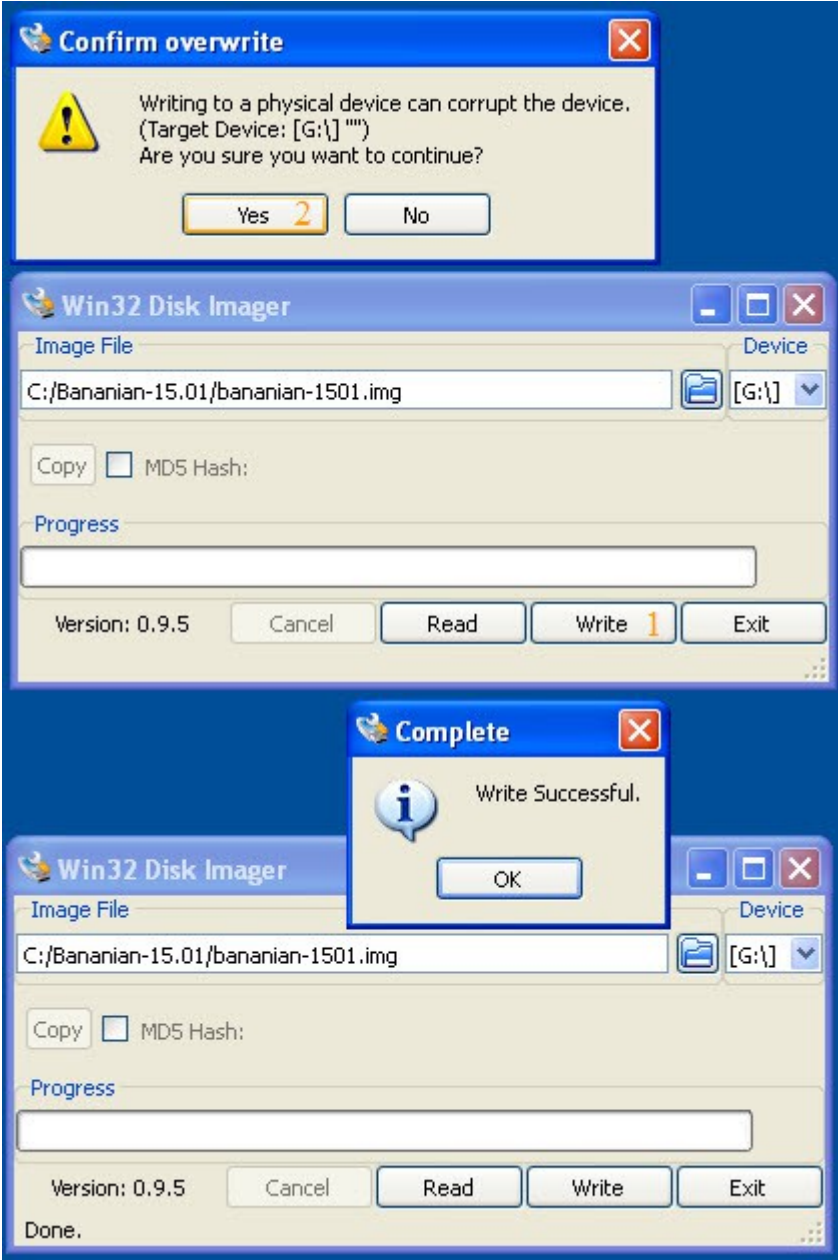


ลง Images ใน SD โหลดได้ที่ <https://www.bananian.org/>



ขั้นตอนเหล่านี้ดูตามรูปเลยครับ

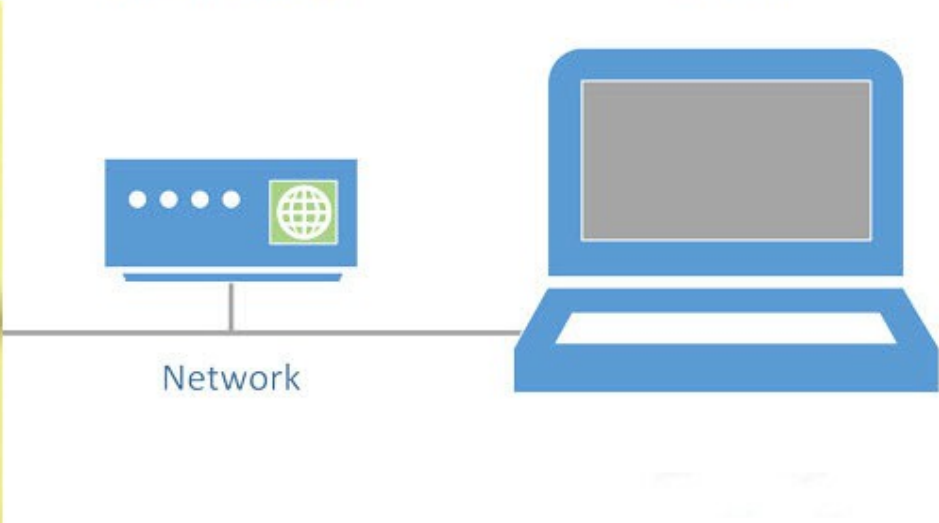
HS2QJJ



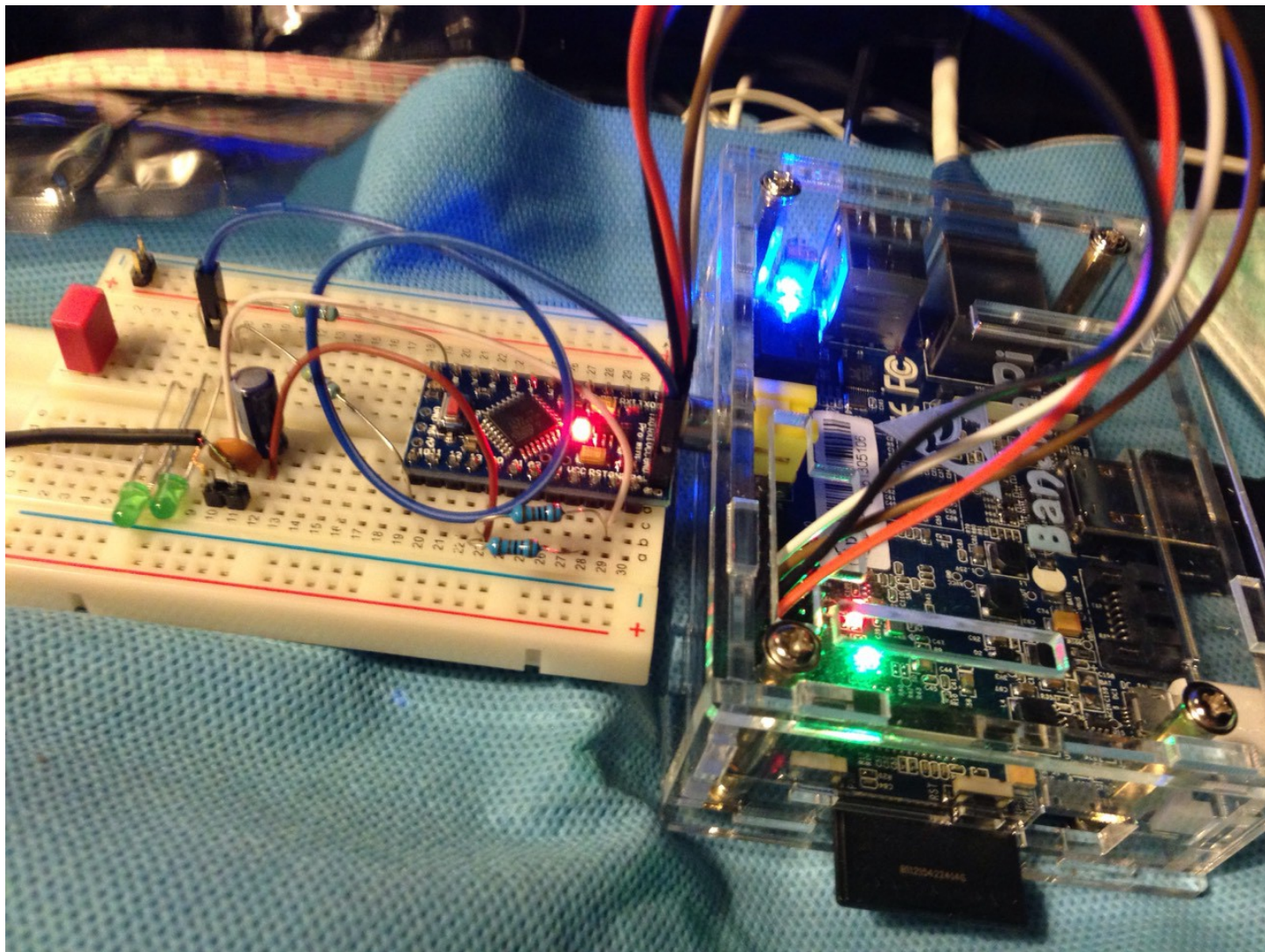
Banana PI

Internet Router

Laptop



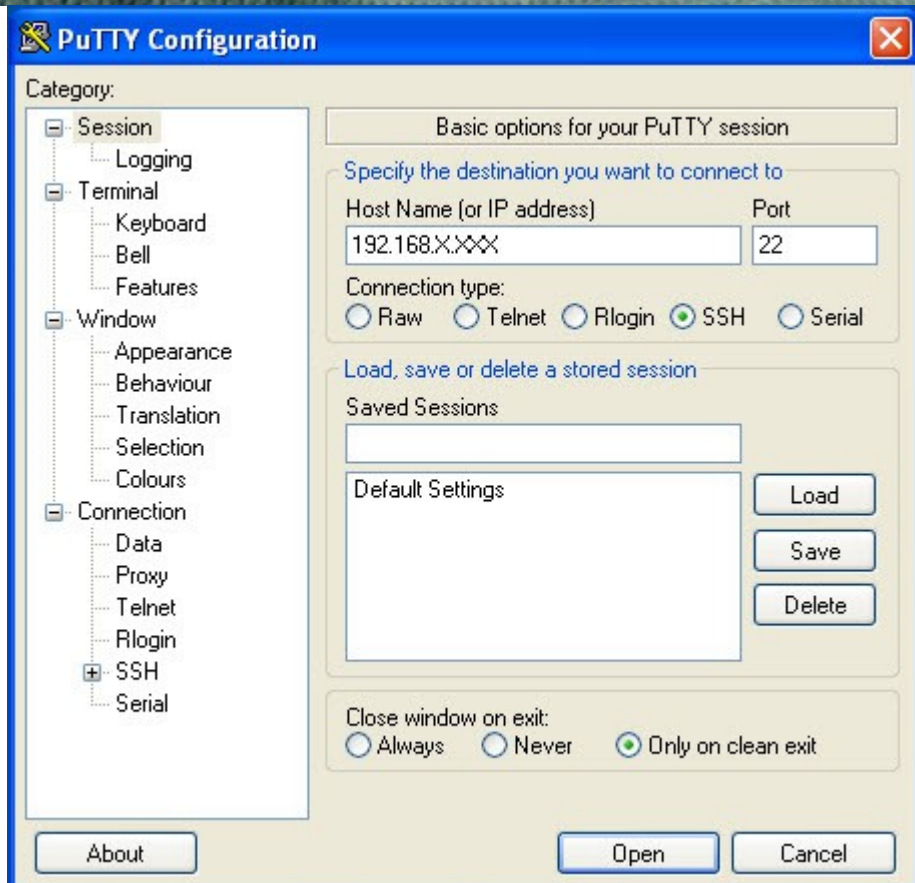
TNC KISS Mode ได้จาก <http://unsigned.io/projects/microaprs/>



**PuTTY** ตัวเก่ง

**IP address** เข้าดูจาเว็บไซต์ของท่าน  
ต่อ **internet** ให้พร้อมใช้

**HS2QJJ**



login = root password = pi

```
root@bananapi: ~
login as: root
root@192.168.XXX.s password:
Linux bananapi 3.4.104+ #1 SMP PREEMPT Thu Jan 8 15:40:40 CET 2015 armv7l

-----
Welcome to Bananian Linux!
For news and updates check: https://www.bananian.org
Any questions? Read the FAQ first: https://www.bananian.org/faq

Run 'bananian-config' to set up Bananian Linux
Run 'bananian-update' to check for distribution updates
-----
root@bananapi ~ # bananian-update
-----
Welcome to bananian-update!

This script upgrades your Bananian installation.

For news and updates check: http://www.bananian.org

Don't panic, you will be asked to confirm before applying any updates!

-----
receiving/updating public key...

gpg: requesting key 24BFF712 from hkp server keys.gnupg.net
gpg: key 24BFF712: "Nico Isenbeck (Bananian Linux) <download@bananian.org>" not
changed
gpg: Total number processed: 1
gpg: unchanged: 1
-----
```

HS2QJJ

คำสั่งการโหลด

wget [http://ham.zmailer.org/oh2mqk/aprx/aprx\\_2.08.593-1\\_armhf.deb](http://ham.zmailer.org/oh2mqk/aprx/aprx_2.08.593-1_armhf.deb)

```
root@bananapi: ~
login as: root
root@192.168.XXX.s password:
Linux bananapi 3.4.104+ #1 SMP PREEMPT Thu Jan 8 15:40:40 CET 2015 armv7l

-----
Welcome to Bananian Linux!
For news and updates check: https://www.bananian.org
Any questions? Read the FAQ first: https://www.bananian.org/faq

Run 'bananian-config' to set up Bananian Linux
Run 'bananian-update' to check for distribution updates
-----
Last login: Thu Mar 19 17:05:11 2015 from 192.168.2.101
root@bananapi ~ # wget http://ham.zmailer.org/oh2mqk/aprx/aprx_2.08.593-1_armhf.deb
```

```
root@bananapi: ~
login as: root
root@192.168.X.XXX's password:
Linux bananapi 3.4.104+ #1 SMP PREEMPT Thu Jan 8 15:40:40 CET 2015 armv7l

-----
Welcome to Bananian Linux!
For news and updates check: https://www.bananian.org
Any questions? Read the FAQ first: https://www.bananian.org/faq

Run 'bananian-config' to set up Bananian Linux
Run 'bananian-update' to check for distribution updates
-----

Last login: Thu Mar 19 17:05:11 2015 from 192.168.2.101
root@bananapi ~ # wget http://ham.zmailer.org/oh2mqk/aprx/aprx_2.08.593-1_armhf.deb
--2015-03-19 17:11:15-- http://ham.zmailer.org/oh2mqk/aprx/aprx_2.08.593-1_armhf.deb
Resolving ham.zmailer.org (ham.zmailer.org)... 212.16.98.133, 2a00:1c30:3::2, 2a00:1c30:3:0:20c:29ff:feaf:f1f1
Connecting to ham.zmailer.org (ham.zmailer.org)|212.16.98.133|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 650398 (635K)
Saving to: `aprx_2.08.593-1_armhf.deb'

100%[=====>] 650,398      201K/s   in 3.2s

2015-03-19 17:11:20 (201 KB/s) - `aprx_2.08.593-1_armhf.deb' saved [650398/650398]

root@bananapi ~ #
```

คำสั่งติดตั้ง

HS2QJJ

**dpkg -i aprx\_2.08.593-1\_armhf.deb**

```
root@bananapi: ~
login as: root
root@192.168.X.XXX's password:
Linux bananapi 3.4.104+ #1 SMP PREEMPT Thu Jan 8 15:40:40 CET 2015 armv7l

-----
Welcome to Bananian Linux!
For news and updates check: https://www.bananian.org
Any questions? Read the FAQ first: https://www.bananian.org/faq

Run 'bananian-config' to set up Bananian Linux
Run 'bananian-update' to check for distribution updates
-----

Last login: Thu Mar 19 17:05:11 2015 from 192.168.2.101
root@bananapi ~ # wget http://ham.zmailer.org/oh2mqk/aprx/aprx_2.08.593-1_armhf.deb
--2015-03-19 17:11:15-- http://ham.zmailer.org/oh2mqk/aprx/aprx_2.08.593-1_armhf.deb
Resolving ham.zmailer.org (ham.zmailer.org)... 212.16.98.133, 2a00:1c30:3::2, 2a00:1c30:3:0:20c:29ff:feaf:f1f1
Connecting to ham.zmailer.org (ham.zmailer.org)|212.16.98.133|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 650398 (635K)
Saving to: `aprx_2.08.593-1_armhf.deb'

100%[=====>] 650,398      201K/s   in 3.2s

2015-03-19 17:11:20 (201 KB/s) - `aprx_2.08.593-1_armhf.deb' saved [650398/650398]

root@bananapi ~ # dpkg -i aprx_2.08.593-1_armhf.deb
Selecting previously unselected package aprx.
(Reading database ... 13885 files and directories currently installed.)
Unpacking aprx (from aprx_2.08.593-1_armhf.deb) ...
Setting up aprx (2.08.593-1) ...
Processing triggers for man-db ...
root@bananapi ~ #
```

คำสั่งตั้งค่า

**nano /etc/aprx.conf**

```
root@bananapi: nano /etc/aprx.conf
root@bananapi ~ # nano /etc/aprx.conf
GNU nano 2.2.6 File: /etc/aprx.conf

#
# Simple sample configuration file for the APRX-2 -- an APRS iGate and Digipeater
#
# This configuration is structured with Apache HTTPD style tags
# which then contain subsystem parameters.
#
#
# For simple case, you need to adjust 4 things:
# - Mycall parameter
# - passcode parameter in APRS-IS configuration
# - Select correct type of interface (ax25-device or serial-device)
# - Optionally set a beacon telling where this system is
# - Optionally enable digipeater with or without tx-igate
#
#
# Define the parameters in following order:
# 1) <aprsis> ** zero or one
# 2) <logging> ** zero or one
# 3) <interface> ** there can be multiple!
# 4) <beacon> ** zero to many
# 5) <telemetry> ** zero to many
# 6) <digipeater> ** zero to many (at most one for each Tx)
#
#
# Global macro for simplified callsign definition:
# Usable for 99+% of cases.
#
mycall NOCALL-1
#
# Global macro for simplified "my location" definition in
# place of explicit "lat nn lon mm" at beacons. Will also
# give "my location" reference for "filter m/100".
#
#myloc lat dddmm.mmmN lon dddmm.mmmE

<aprsis>
# The aprsis login parameter:
# Station callsignSSID used for relaying APRS frames into APRS-IS.
# Use this only to define other callsign for APRS\ -IS login.
#
#login OTHERCALL-7 # login defaults to $mycall

^G Get Help ^C WriteOut ^R Read File ^Y Prev Page ^K Cut Text ^C Cur Pos
```

**HS2QJJ**

ลบ ตั้งค่าเดิม ทั้งหมด

กด Ctrl + K ลบที่ละบันทึก

แล้วใส่ค่าใหม่ ตรงที่ xxx ไว้ ให้ใส่ค่าของตัวเอง

```
root@bananapi: nano /etc/aprx.conf
GNU nano 2.2.6 File: /etc/aprx.conf Modified
mycall XXXXXX-X

<aprsis>
  passcode XXXXX
  server second.aprs.net 14580
  heartbeat-timeout 1m
</aprsis>

<logging>
  pidfile /var/run/aprx.pid
  rflog /var/log/aprx/aprx-rf.log
  aprxlog /var/log/aprx/aprx.log
</logging>

<interface>
  serial-device /dev/ttyS2 9600 8n1 KISS
  tx-ok true
</interface>

<beacon>
  beaconnmode aprsis
  cycle-size 12m
  beacon symbol "/- " lat "XXXX.XXN" lon "XXXXXX.XX" comment "PHG2130BananaPI iGate"
</beacon>

<beacon>
  beacon raw ">Bananian Linux OS"
</beacon>

<telemetry>
  transmitter $mycall
  source $mycall
</telemetry>

File Name to Write: /etc/aprx.conf
^G Get Help      M-D DOS Format  M-A Append      M-B Backup File
^C Cancel        M-M Mac Format  M-P Prepend
```

HS2QJJ

หมายเหตุการ ตั้งค่า คำสั่งต่างๆ ทั้งหมดนี้ ใช้กับ BananaPI Run Bananian Linux OS

**mycall XXXXXX-X**

**<aprsis>**

**passcode XXXXX**

**server second.aprs.net 14580**

**heartbeat-timeout 1m**

**</aprsis>**

**<logging>**

**pidfile /var/run/aprx.pid**

**rflog /var/log/aprx/aprx-rf.log**

**aprxlog /var/log/aprx/aprx.log**

**</logging>**

**<interface>**

**serial-device /dev/ttyS2 9600 8n1 KISS**

**tx-ok true**

**</interface>**

**<beacon>**

**beaconmode aprsis**

**cycle-size 12m**

**beacon symbol "/-" lat "XXXXX.XXN" lon "XXXXX.XXE" comment "PHG2130 BananaPI iGate"**

**</beacon>**

**<beacon>**

**beacon raw ">Bananian Linux OS"**

**</beacon>**

<telemetry>

transmitter \$mycall

source \$mycall

</telemetry>

หลังจาก ตั้งค่าต่างๆ แล้ว save กด Ctrl + O ออกจาก หน้าตั้งค่า กด Ctrl + X

ให้ทำการรันโปรแกรม APRX ด้วยคำสั่ง /etc/init.d/aprx start กด Enter

ตามด้วยคำสั่ง /etc/init.d/aprx enable กด Enter

(คำสั่งนี้จะ enable เองโดยอัตโนมัติเมื่อไฟดับและติดขึ้นมาใหม่)

คำสั่ง Reboot

shutdown -r now

HS2QJJ

```
root@bananapi: ~
login as: root
root@192.168.X.XXX: password:
Linux bananapi 3.4.104+ #1 SMP PREEMPT Thu Jan 8 15:40:40 CET 2015 armv7l

-----
Welcome to Bananian Linux!
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Run 'bananian-config' to set up Bananian Linux
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--2015-03-19 17:11:15-- http://ham.zmailer.org/oh2mqk/aprx/aprx_2.08.593-1_armhf.deb
Resolving ham.zmailer.org (ham.zmailer.org)... 212.16.98.133, 2a00:1c30:3::2, 2a00:1c30:3:0:20c:29ff:feaf:ff1
Connecting to ham.zmailer.org (ham.zmailer.org)|212.16.98.133|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 650398 (635K)
Saving to: `aprx_2.08.593-1_armhf.deb'

100%[=====>] 650,398      201K/s   in 3.2s

2015-03-19 17:11:20 (201 KB/s) - `aprx_2.08.593-1_armhf.deb' saved [650398/650398]

root@bananapi ~ # dpkg -i aprx_2.08.593-1_armhf.deb
Selecting previously unselected package aprx.
(Reading database ... 13885 files and directories currently installed.)
Unpacking aprx (from aprx_2.08.593-1_armhf.deb) ...
Setting up aprx (2.08.593-1) ...
Processing triggers for man-db ...
root@bananapi ~ # nano /etc/aprx.conf
nano /etc/aprx.conf 8.45s user 0.14s system 1% cpu 9:01.36 total
root@bananapi ~ # shutdown -r now

Broadcast message from root@bananapi (pts/1) (Thu Mar 19 17:23:16 2015):

The system is going down for reboot NOW!
root@bananapi ~ #
```