

Chaddy Huussin Vazquez

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Programming and Installing HUAWEI HiLink E3131 under Linux

Posted: August 13, 2012 in [Information Security](#)

[67](#)

Hi PPL recently i bought HUAWEI HILINK with the main goal to make my own SMS Getaway

So this are the steps i followed

Installation

1- In the inside memory of the Dongle there is the driver for both windows and linux , There is a way to make the devise appears as USB storage and this is done by using usb mode switch application BUT YOU CAN INSTALL THE DRIVER FROM [HERE](http://www.4shared.com/zip/ZNEdFASo/LIN.html?) (<http://www.4shared.com/zip/ZNEdFASo/LIN.html?>)

2- The following command will install the driver and next time when you plug the dongle it will appeaser as Ethernet interface

```
chmod +x autorun.sh
```

```
./autorun.sh
```

3- To make sure everything is fin try to access <http://hi.link/> (<http://hi.link/>) you should get The web interface 😊



(<https://chaddyhv.files.wordpress.com/2012/08/screenshot-from-2012-08-13-205411.png>)

Programming

As you can guess you cant use gammu or other standard libs that use /dev/ttyUSB so after analyzing the dongle web interface it appears that it runs as web service and it is being consumed from the javascript libs of the web app . so here i will post the main methods that you can use to request information and trigger actions , you can build on them any lib from any language

Information :

Connection Status :

URL : /api/monitoring/status

Request : empty

Response :

<response>

<ConnectionStatus>901</ConnectionStatus> -> 902 Desconnected , 901 -> Connected

<SignalStrength>96</SignalStrength>

<SignalIcon>5</SignalIcon>

<CurrentNetworkType>3</CurrentNetworkType>

<CurrentServiceDomain>3</CurrentServiceDomain>

<RoamingStatus>0</RoamingStatus>

<BatteryStatus></BatteryStatus>

<BatteryLevel></BatteryLevel>

<simlockStatus></simlockStatus>

<WanIPAddress>10.140.3.121</WanIPAddress>

<PrimaryDns>84.235.6.55</PrimaryDns>

<SecondaryDns>84.235.57.230</SecondaryDns>

<CurrentWifiUser></CurrentWifiUser>

<TotalWifiUser></TotalWifiUser>

<ServiceStatus>2</ServiceStatus>

<SimStatus>1</SimStatus>

<WifiStatus></WifiStatus>

</response>

Check Notifications :

URL : /api/monitoring/check-notifications

Request : empty

Response :

<response>

<UnreadMessage>0</UnreadMessage>

<SmsStorageFull>0</SmsStorageFull>

<OnlineUpdateStatus>10</OnlineUpdateStatus>

</response>

Network information :

URL : /api/net/current-plmn

Request : empty

Response :

<response>

<State>0</State>

<FullName> </FullName>

<ShortName> </ShortName>

<Numeric>42001</Numeric>

<Rat>0</Rat>

Device information :

URL : /api/device/information

Request : empty

Response :

<response>

<DeviceName>E3131</DeviceName>

<SerialNumber>G8J7SA1262800904</SerialNumber>

```

<Imei>862732017115150</Imei>
<Imsi>420013703501160</Imsi>
<Iccid>8996601370035011601F</Iccid>
<Msisdn></Msisdn>
<HardwareVersion>CH2E303SM</HardwareVersion>
<SoftwareVersion>22.157.39.00.00</SoftwareVersion>
<WebUIVersion>11.010.12.00.838</WebUIVersion>
<Uptime>5103</Uptime>
<MacAddress1>00:1E:10:E1:73:01</MacAddress1>
<MacAddress2></MacAddress2>
<ProductFamily>GW</ProductFamily>
<Classify>DataCard</Classify>
</response>

```

Operating

Disconnect :

URL : /api/dialup/dial

Request : <request><Action>0</Action></request>

OK – Response : <response>OK</response>

Connect :

URL : /api/dialup/dial

Request : <request><Action>1</Action></request>

OK – Response : <response>OK</response>

Get SMS Number :

URL : /api/sms/sms-count

Request : Empty

OK – Response :

<response>

<LocalUnread>0</LocalUnread>

<LocalInbox>0</LocalInbox>

<LocalOutbox>0</LocalOutbox>

<LocalDraft>0</LocalDraft>

<LocalDeleted>0</LocalDeleted>

<SimUnread>0</SimUnread>

<SimInbox>0</SimInbox>

<SimOutbox>0</SimOutbox>

<SimDraft>0</SimDraft>

<LocalMax>500</LocalMax>

<SimMax>100</SimMax>

</response>

Recive SMS Inbox :

URL : /api/sms/sms-list

Header : Referer = ... /html/smsinbox.html?smsinbox

Request :

<request>

<PageIndex>1</PageIndex>

<ReadCount>20</ReadCount>

<BoxType>1</BoxType> -> 1 Full details

<SortType>0</SortType>

<Ascending>0</Ascending>

```

<UnreadPreferred>0</UnreadPreferred>
</request>
OK- Response:
Box Type 1 :
<response>
<Count>1</Count>
<Messages>
<Message>
<Smstat>0</Smstat>
<Index>20000</Index>
<Phone> ##### </Phone>
<Content>Message content here </Content>
<Date>2012-08-13 20:54:42</Date>
<Sca>#####</Sca>
<SaveType>4</SaveType>
<Priority>0</Priority>
<SmsType>1</SmsType>
</Message>
</Messages>
</response>

```

IF THE PAGE NUMBER DOSE'T EXIST THE RESPONSE WILL BE

```

<response>
<Count>0</Count>
<Messages></Messages>
</response>

```

Set SMS AS READED :

URL : /api/sms/send-sms

Request : <request><Index>20000</Index></request>

OK – Response : <response>OK</response>

Send SMS :

URL : /api/sms/send-sms

Request :

```

<request>
<Index>-1</Index> -> -1 if its not a replay to any index
<Phones><Phone>+23428479287</Phone></Phones>
<Sca></Sca>
<Content>HELLO</Content>
<Length>29</Length>
<Reserved>1</Reserved>
<Date>2012-08-13 23:25:07</Date>
</request>

```

Response :

```
<response>OK</response>
```

Send USSD :

URL :

REQUEST : <request><content>*333#</content><codeType>CodeType</codeType></request>

RESPONSE : <response>OK</response>

Get OUTBOX SMS List :

URL : /api/sms/sms-list

HEADER : Referer = ... /html/smsinbox.html?smssent

Request :

<request>

<PageIndex>1</PageIndex>

<ReadCount>20</ReadCount>

<BoxType>2</BoxType>

<SortType>0</SortType>

<Ascending>0</Ascending>

<UnreadPreferred>0</UnreadPreferred>

</request>

Response :

<response>

<Count>4</Count>

<Messages>

<Message>

<Smstat>3</Smstat>

<Index>20001</Index>

<Phone>##### </Phone>

<Content> asdfasdfasdf </Content>

<Date>2012-08-13 23:25:07</Date>

<Sca>+966505031999</Sca>

<SaveType>3</SaveType>

<Priority>4</Priority>

<SmsType>1</SmsType>

</Message>

....

</Messages>

Managment :

Auto Connect Settings :

URL : /api/dialup/connection

Header : Referer: ... /html/autoconnection.html

Request :

<request>

<RoamAutoConnectEnable>0</RoamAutoConnectEnable>

<AutoReconnect>1</AutoReconnect>

<RoamAutoReconnctEnable>1</RoamAutoReconnctEnable>

<ReconnectInterval>3</ReconnectInterval>

<MaxIdleTime>0</MaxIdleTime>

<ConnectMode>0</ConnectMode>

</request>

RESPONSE :

<response>OK</response>

Pin Operations :

URL : /api/pin/operate

Header : Referer: <http://hi.link/html/pinodemanagement.html>

(<http://hi.link/html/pinodemanagement.html>)

OperationType = 1 Enable Pin

OperationType = 2 Disable Pin

OperationType = 3 New Pin

Example of OP3 :

Request :

```
<request>
```

```
<OperateType>3</OperateType>
```

```
<CurrentPin>6132</CurrentPin>
```

```
<NewPin>6132</NewPin>
```

```
<PukCode></PukCode>
```

```
</request>
```

Response :

```
<response>OK</response>
```

soon i will provide a Java and Python libs built on this services , if you have any question feel free to mail me

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Comments



max246 says:



November 6, 2012 at 8:54 am

Thanks so much! I am going to create a class in Python and then I will share it 😊

Reply



Chaddy HV says:

May 18, 2013 at 4:46 am

Great 😊

Reply

SimonJZurek says:

November 26, 2012 at 3:26 pm

Hi Chaddy HV!

Great article! Where did you get all that api info from?

I have this modem installed under Windows and I cant find it as modem. Looks like this modem is designed for Linux being accessible simply by /dev/ttyUSB.

I have build a gateway myself with 4 usb modems (different make) using "gammu". I am running four gammu services(daemons) on one PC that access same one database run on mysql. I have PHP scripts that populate outbox. It works really well.

This api is very different and it looks like you don't need to have a program like gammu. It looks like I can use it straight from PHP level.

Anyway I would still like to use gammu. Do you have any idea how to it in windows like you do on linux? It would be great if I could assign a com port to it. Do you know what I mean?

Best regards

Simon.

Reply

Chaddy HV says:

May 18, 2013 at 4:46 am

Hi SimonJZurek , i just reversed the functionality of the web application that's all.

You can use it directly from PHP it's just mater of knowing what URL request with witch parameters , and then parsing the json response .

About how to use it from windows , the things is it works perfect under windows for me it appears as a modem but i meant to use it in linux so i did what i did . the simplicity was thanks to the web services implemented in the device , i don't know if you can access it throw COM port it will work fine .

Reply

steven says:

December 12, 2012 at 9:04 am

Hey there, I am trying to do the same, can you tell me how you got those responses, every time I try to a post and get a response I get an error.

Reply

Chaddy HV says:

May 18, 2013 at 4:34 am

hi steven, the first 3 steps shows how setup the dongle after that you should make sure you are logged.

Reply

mark says:

January 10, 2013 at 12:45 am

Hi Chad,

What Python code would I use to send a sms message with the E3131?

Thanks
Mark

Reply



Chaddy HV says:

May 18, 2013 at 4:30 am

Hi mark , you can make a simple URL request using urllib2

Reply

Using the Raspberry Pi as a SMS-gateway by a Huawei HiLink 3G-dongle | DTU - Cold Chain

Logistics says:

May 19, 2013 at 12:03 pm

[...] great help from this article by Chaddy HV, we have setup a php library with functions for the features we use. Which [...]

Reply



Chaddy HV says:

May 21, 2013 at 6:36 pm

Hi emilbunk , i am glade it helped .

i sow your script you may like to edit your function getList to function
getList(\$boxNo,\$pageNumber) and make the function a little more flexible .

and thanks for referencing.

Reply



davidbonner106602912 says:

May 30, 2013 at 10:02 am

Hi Chaddy, great post. many thanks. did you ever find a command to gather the cell id?

Reply



Chaddy HV says:

May 30, 2013 at 4:06 pm

if you mean by cell id IMSI OR MSISDN ? , if so nop i did't find functionality that could show them .

Reply



Solick says:

January 9, 2014 at 4:56 pm

Hi, those information can be found at the device information: /api/device/information



Chaddy HV says:

April 15, 2014 at 3:53 am

Solick nice found 😊



Dustin Pinedo says:

June 13, 2013 at 2:11 am

Hi,

This is really helpful!! I am doing the url request from terminal. So far, it worked for the reciving the SMS Inbox but everytime I tried to send a sms I get an error 100002. I tried with wget and curl. I know the sms service is working because the hi.link interface for sending sms works.

What do you think may be the problem?

Thanks,
Dustin

Reply



Chaddy HV says:

June 13, 2013 at 2:36 am

Hi Dustin , can i see the command you are using

Reply



Dustin says:

June 13, 2013 at 2:16 pm

Hi,

For sending a sms, I had used these:

CURL:

```
curl -X POST -d mysms.xml http://192.168.1.1/api/sms/sms-send  
curl -X POST -d mysms.xml http://192.168.1.1/api/sms/sms-send -header "Content-Type:text/xml"
```

WGET:

```
wget http://192.168.1.1/api/sms/sms-send -post-file="mysms.xml"  
wget http://192.168.1.1/api/sms/sms-send -post-file="mysms.xml" -header="Content-Type:text/xml"
```

For reading Inbox, This has worked.

```
wget http://192.168.1.1/api/sms/sms-list -post-file="smsinbox.xml"
```

I appreciate your help.

Dustin



Chaddy HV says:

June 13, 2013 at 4:09 pm

when you use wget what is the information inside mysms.xml ? , you may like to use the php function Code provided by Emil Bunk, and remeber you have to be authenticated and connected to the device



Dustin says:

June 13, 2013 at 9:24 pm

Thanks for the quick reply. I didn't want to because I have almost zero experience in php. Although, I tried the libraries and at the end I just add:

```
$Messages = getList(1),  
foreach ($Messages>Message as $mes){  
echo $mes -> Phone;  
}
```

then I just browse with firefox: localhost/sms/hilik_Gateway_sms.php
Getting a blank screen.

I also added sendMessage("mynumber", "a msg");

with the same outcome.

How do I check if I am connected or authenticated to the modem? I can browse with firefox the hilink and it doesn't requires password and user.

Thanks,
Dustin



Dustin says:

June 13, 2013 at 9:55 pm

Hi Chaddy!

I found the problem. The function curl_init is only supported in versions equal or higher than php 4. After downloading php 5, I could use them properly.

Thanks for the help 😊

kindest regards,
Dustin



Chaddy HV says:

June 13, 2013 at 10:56 pm

You are welcome men , 😊



手機殼 says:

June 14, 2013 at 3:19 am

Great day! I just want to offer you a huge thumbs up for your fantastic information you've received right here on this post. I'll be coming back to your blog for much more soon.

Reply

Homepage says:

June 16, 2013 at 2:21 pm

... [Trackback]

[...] Read More Infos here: chaddyhv.wordpress.com/2012/08/13/programming-and-installing-huawei-hilink-e3131-under-linux/ [...]

Reply



courtship dating: courtship: dating advice says:

June 19, 2013 at 2:43 am

Good day! I know this is somewhat off topic but

I was wondering if you knew where I could get a captcha plugin for

my comment form? I'm using the same blog platform as yours and I'm having problems finding one?

Thanks a lot!

Reply



Chaddy HV says:

June 19, 2013 at 2:57 am

I think you can find something here <http://wordpress.org/plugins/captcha/>

Reply



Bart Elffers says:

June 22, 2013 at 11:46 am

Hi Chaddy,

Great work! You said in your post that you would come back with Python-libs, where can I find them? 😊 I'm very new to programming AND Linux.

I want to use a Raspberry Pi (Raspbian distro) with a Huawei E303s-2 3G-dongle for a stand-alone automatic temperature measurement project that will send me an email every now and then. To reduce power-consumption the RasPi will be switched on and off every 6 hours to do it's thing. I like to connect to internet via a (Python-)script, not by loading a browser and visiting the address "http://192.168.1.1", fill in PIN and click on "Submit", step 3 in your post. Is that possible? The 3G-dongle is in "12d1:14db – Web Mode / HiLink" (via /etc/udev/rules.d/10-Huawei.rules) and working properly. I can connect to internet using step 3 of your post. cdc_ether as driver, eth2 is on with address 192.168.1.100 (but I can't get ttyUSB0 and ttyUSB1 working). I hope you can help me, although I know there will be differences between the E3131 and E303 dongle....

Thanks for any reply!
Bart.

Reply

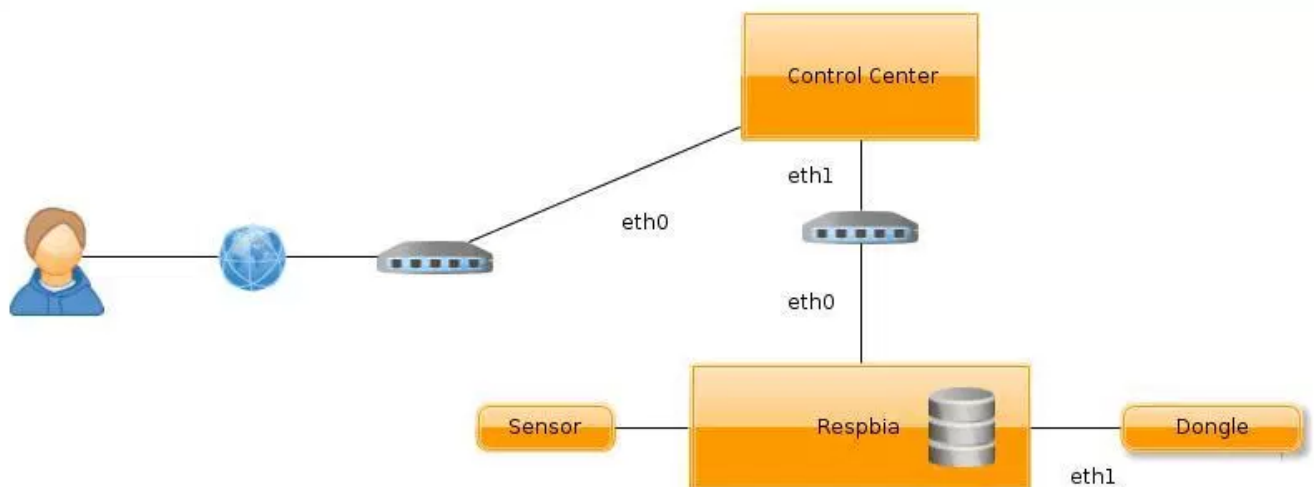


Chaddy HV says:

June 22, 2013 at 7:38 pm

Hi Bart , i am sorry but i didn't had the time to work on that , right now the project is dismantled , i did it for testing propose only but you may like to use the script made by Emilbunk , its in PHP but you can script it using the PHP command interpreter under Linux ,

regard your question off-course you can automate the whole process , i think yo may like to do something like this



Control Center : Web application working as main interface to the Respbia , With the following functionality

- 1- Chart a log information from the Respbia DB
- 2- Control the Respbia functionality

Respbia : Need to have a 2 daemon you can code it with your favorite programming language , i think it should follow this pseudo code

- 1-
Looping
Delay of time
Get Respbia DB control table
get the sensor temperature
store the sensor temperature

```

if the column regarded the monitor functionality is true
compare the sensor temperature with the top temperature
if the actual temperature its above
Di-activate the AC
Use the dongle interface and to send the information
else
get The minimum temperature
if the actual temp is bellow
Activate the AC
Use the dongle interface to send the information
2-
Looping
Delay of time
Get Msgs from dongle
if any of the messages arrived contain a special format
Get Rispba DB authorized number , userName, userPassword
if authentication bypassed
parse the command string & do action

```

I hope this could help in some way .
Best Regards

Reply



Bart Elffers says:

June 24, 2013 at 8:09 am

Hi Chaddy,

Thanks for your answer. A pity you finished the project ;). My project will use a battery, so I only want have a Raspberry Pi, sensor and dongle running. But thanks for the suggestion of the scripts. In the mean time I managed to get the dongle in modem mode and to send an sms's (another option for letting me send a message). Sakis3g is talking to it, but can't yet make a connection to internet, yet. With the help of other posts on the internet I think I will manage that in the end.

Thanks!

Bart.



Chaddy HV says:

June 24, 2013 at 4:20 pm

I think now you are facing a routing problem this may help <http://www.unix.com/ip-networking/147246-route-all-traffic-between-two-ethernet-interfaces.html>



Vianney Riotte says:

August 13, 2013 at 9:34 am

I tried to send sms on Mac OS with curl tool. I must provide Http version on my request otherwise i got an "407 Expected Error":

```
curl -X POST -T ./content.xml http://192.168.1.1/api/sms/send-sms -http1.0
```

Best regards,
Vianney.

Reply



Bruno LEGAY says:

October 18, 2013 at 11:37 am

Hi,
Great stuff !!!
Just got it to work on a huawei e5220 (mifi : gsm wifi gateway) 😊

Note : I had an error "100003" which meant It needed a "login" (I guessed that since I haven't got the documentation).

I used also an http snoop to check what was done during the login and bingo :

url : <http://192.168.1.1/api/user/login>

post body :

login
passwordBase64Encoded

Has anybody tried on a equivalent device with ethernet port ?

Best
Bruno

Reply



Linus says:

November 15, 2013 at 9:57 am

Thanks for all the inquiry. I'm very interested in the USSD-messages, but you don't provide the URL, do you have that?

Reply



StarkJohan says:

November 30, 2013 at 3:42 pm

I'm using PHP and cURL and most features work great (I'm using a 3231 but it's the same so far).

However I'm struggling with two things.

1. Unlocking PIN-lock on the sim via the api, is this possible? Been trying with the /api/pin/operate part of the api with no luck.
2. I'd like to get the balance on the sim card using USSD. Not sure on how to get this part of the api to work. What is the "CodeType"? The code I'm using to get my balance is *150#.

Can anyone shed some light on this?

Reply



Alejandro says:

December 24, 2013 at 5:54 pm

Hi,
Great API tricks!

I also use <http://192.168.1.1/api/net/net-mode> to know the configuration about the network mode to be used (00=>Auto, 01=>2G, 02=>3G, 04=>4G) and the frequency/band to be used.

These can be changed simply posting to the same address a modified XML with our needs.

In other terms, I'd like to know if any of you has realized about how to obtain the LacID (Location ID) and Cell ID. I'd really appreciate it!

Best regards and Merry Christmas,
Alejandro

Reply**Chaddy HV** says:April 15, 2014 at 3:56 am

Hi Alejandro , i don't know how to find the LID it will be good to see how !, Sadly the project was canceled, and i don't have the environment to test the things now.

Reply

Solick says:

January 19, 2014 at 3:23 pm

Hi chaddy, there are some mistakes in your api interpretation:

To set a sms as read you need to call api/sms/set-read and use the referer

<http://192.168.1.1/html/smsinbox.html?smsinbox>

For deleting a sms you need to use api/sms/delete-sms

There are some more api commands which i discovered. At the moment i'm writing a c api for the huawei api (which seems to be the general api for all huawei sticks and routers) which makes it more simple to implement into existing c based projects.

Kind regards

solick

Reply**Chaddy HV** says:April 15, 2014 at 3:52 am

Thanks for pointing the mistakes up.

Reply

StarkJohan says:

April 19, 2014 at 2:18 pm

Do you have a link for your project? I'd love to check it out.

Reply

Solick says:

April 27, 2014 at 5:31 am

Hi, i'm sorry, the emails has been lost in my spam folder so i recognized them just know. I would love to share the project, unfortunately i have faced a problem with libcurl under ubuntu, where my code crashes and did not have the time to debug it. On Mac OS X.9 the code works fine. If you are interested i can share the code with you via github and you could help finding out the problem unter ubuntu / raspian. KR Solick



Ralph says:

July 12, 2016 at 12:46 pm

Hi,

Have you finish with your c functions ?

I have not yet succeed a commande with a request.

I am not using , php, or C. But I know c :

Reply

durje says:

February 20, 2014 at 3:22 pm

Hi,
Great article!
Do you have any idea f how to configure profile in profile Management..?

I tried with:

URL : /api/dialup/profiles
Header : Referer: ... /html/profilesmgr.html
Request :

2

1
1
O2
1
payandgo.o2.co.uk
*99#

2
0

0

2

2
1
O2
1
mobile.o2.co.uk
*99#
o2web
password
0
0

0

0

But the RESPONSE is:

100001

Thans in advance

Reply



durje says:

February 20, 2014 at 3:27 pm

URL : /api/dialup/profiles
Header : Referer: ... /html/profilesmgr.html
Request :

2

1
1
O2
1
payandgo.o2.co.uk
*99#

2
0

0

2

2

1

O2

1

mobile.o2.co.uk

*99#

o2web

password

0

0

0

0

Reply



durje says:

February 20, 2014 at 3:33 pm

Hi,

Great article!

Do you have any idea of how to configure profiles in profile Management..?

I tried with:

URL : /api/dialup/profiles

Header : Referer: ... /html/profilesmgr.html

Request :

request

CurrentProfile>211O21payandgo.o2.co.uk*99#200221O21mobile.o2.co.uk*99#o2webpassword2002
code>100001

Reply



durje says:

February 20, 2014 at 3:36 pm

Hi,

Great article!

Do you have any idea of how to configure profiles in profile Management..?

I tried with:

URL : /api/dialup/profiles

Header : Referer: ... /html/profilesmgr.html

Request :

```
request
CurrentProfile 2 CurrentProfile
Profiles
Profile
Index 1 Index
IsValid 1 IsValid
Name O2 Name
ApnIsStatic 1 ApnIsStatic
ApnName payandgo.o2.co.uk ApnName
DailupNum *99# DailupNum
Username
Password
AuthMode 2 AuthMode
IpIsStatic 0 IpIsStatic
IpAddress
DnsIsStatic 0 DnsIsStatic
PrimaryDns
SecondaryDns
ReadOnly 2 ReadOnly
Profile
Profile
Index 2 Index
IsValid 1 IsValid
Name O2 Name
ApnIsStatic 1 ApnIsStatic
ApnName mobile.o2.co.uk ApnName
DailupNum *99# DailupNum
Username o2web Username
Password password Password
AuthMode 2 AuthMode
IpIsStatic 0 IpIsStatic
IpAddress
DnsIsStatic 0 DnsIsStatic
PrimaryDns
SecondaryDns
ReadOnly 2 ReadOnly
Profile
Profiles
request
```

But the RESPONSE is:

```
error
code 100001code
message message
error
```

Reply**BlackyPanther** says:February 28, 2014 at 3:06 pm

Hey,
thanks for your Programming examples!
I put them together and completed them into an PHP Class

For anyone interessted: <https://github.com/BlackyPanther/Huawei-HiLink>

Reply

Dylan says:

March 15, 2014 at 9:48 pm

Hi Chaddy!

great stuff! This has been very useful for me 😊 I was wondering if you could help me out, with the “send USSD” command, how do I actually send the command to the phone? I am using shell scripts + curl to send the xml data to the USB modem, but for the USSD command you have the URL empty – not sure what to do 😞 My script is as below

```
echo ‘*100*1#CodeType’ | curl -X POST -H ‘Content-type: text/xml’ -d @- http://192.168.1.1
```

but this does not work

A testsend.sh script which does work for me is

```
echo ‘-10274124360Hello world1111’ | curl -X POST -H ‘Content-type: text/xml’ -d @-  
http://192.168.1.1/api/sms/send-sms
```

Thanks for your help!

Reply

Dylan says:

March 15, 2014 at 11:35 pm

Hi again,

just noticed the code got bunged up copy/pasting!

The line should read

```
echo ‘*100*1#CodeType’ | curl http://192.168.1.1
```

hopefully that posts correctly

Reply

Solick says:

April 27, 2014 at 5:35 am

Interesting. This woked for you? What sort of reply did you receive from the server?



StarkJohan says:

April 19, 2014 at 2:32 pm

Still wondering if anybody has the USSD codes working...

Reply

Solick says:

April 27, 2014 at 5:33 am

unfortunately huawei seems not to provide access to the USSD codes. I spend some time to reverse engineer this but did not find out anything.

Reply



StarkJohan says:

April 27, 2014 at 5:52 am

Yes, please share on github. I can't say I have too much time at my hands but I'll definitely check it out and have a look.



Ata Fatahi says:

May 21, 2014 at 6:10 am

hi chaddy!

thank you for your great article it is helpful.

and i could send sms with that.

to disconnect i wrote this python script :

```
import requests
```

```
URL = 'http://192.168.8.1/'
```

```
d = "0"
```

```
r = requests.post(URL + 'api/dialup/dial' , data = d)
```

```
print r.status_code
```

```
print r.text
```

although this script return OK but in fact and real connection does not disconnect.

why?

and for check connection status i write this script too:

```
import requests
```

```
URL = 'http://192.168.8.1/'
```

```
d = ""
```

```
r = requests.post(URL + 'api/monitoring/status' , data = d)
```

```
print r.status_code
```

```
print r.text
```

but this script returns Error.

why ? and you said to connection status request must be empty.

what is empty ? d = "" or d = ' ' ?

thank a lot for reply 😊

Reply



Ata Fatahi says:

May 21, 2014 at 6:14 am

excuse me! in first script d = '0'

Reply



Dylan says:

July 22, 2014 at 7:21 pm

Hi Chaddy,

your scripts have helped heaps – thanks! I have deployed a bunch of raspberry pis sending data back via bash/curl and the Huawei E303 3g modem thanks to your help so it is very much appreciated 😊 I have just bought another one, and it seems like the firmware/hilink software has been updated – it now has a 192.168.8.1 address (instead of 192.168.1.1) and the 3g connect string returns an error – the below used to work with my other E303s...

```
# Connect to the internet
```

```
echo "1" | curl -X POST -H "Content-type: text/xml" -d @- http://192.168.8.1/api/dialup/dial
```

(note: at a guess your commenting system might mangle the code a bit?)

now when I try and run the above, the modem returns an error

125001

Error code is 125001

any idea how to fix that? Thanks so much for your help!!!

Reply



Dylan says:

July 22, 2014 at 7:25 pm

The code got mangled!!!

I've replaced all angle-brackets with curly ones below...

```
echo "(request)(Action)1(/Action)(/request)" | curl -X POST -H "Content-type: text/xml" -d @-  
http://192.168.8.1/api/dialup/dial
```

hopefully that posts OK now 😊

The error from the modem was

```
(?xml version="1.0" encoding="UTF-8")  
(error)  
(code)125001(/code)  
(message)(/message)  
(/error)
```

Reply



Chaddy Huussin Vazquez says:

July 23, 2014 at 5:33 am

Hi Dylan, i am glade to see the post helped the project. can you trace the javascript code in the web interface and posted here ? (i have no access now to the dongle)



Dylan says:

July 23, 2014 at 6:23 am

I'm not sure how to trace the code sorry, I installed Firebug and from the console found the headers/post/response from pressing the "connect" button – as below

Headers:

view source

Cache-Control no-cache

Connection close

Content-Length 61

Content-Type text/html

Date Thu, 01 Jan 1970 00:00:00 GMT

Server mini_httpd/1.19 19dec2003

view source

Accept */*

Accept-Encoding gzip, deflate

Accept-Language en-US,en;q=0.5

Content-Length 75

Content-Type application/x-www-form-urlencoded; charset=UTF-8

Host 192.168.8.1

Referer <http://192.168.8.1/html/home.html>

User-Agent Mozilla/5.0 (Windows NT 6.1; WOW64; rv:31.0) Gecko/20100101 Firefox/31.0

X-Requested-With XMLHttpRequest

__RequestVerificationToken... 340528667

Post:

1

Response:

OK

If you can tell me where/what to find to help you further I can post anything you need

Thanks 😊



Chaddy Huussin Vazquez says:

July 24, 2014 at 1:54 am

MMM i Really cant help only with this , go to the button that trigger the action click if you are using chrome inspect ,try check if it triggers a java script function (look for events onclick) if is not inside a form go to the function it calls and pasted it here, if its inside a form and the action is a submit action post the full form here



Chaddy Huussin Vazquez says:

July 24, 2014 at 1:58 am

As there is so many people interested in this subject i will buy soon the dongle and try to find a time to setup the project again then walk through the development of a full RestClient for this Dongle , I am very sorry if there is some posts i didn't answer at that time i got very busy with my BS thesis but as i graduated now i may have a bit of time to help

Reply



Solick says:

July 24, 2014 at 6:45 am

Maybe it would be good to create a community project. I think there are several aspects:

1. general api reverse engineering
2. Implementation with different languages like C, C++, python, java, javascript etc.

I would offer to host a website with wordpress, forum and what else is needed. Code could be hosted at github.

What do you think?

Reply



Chaddy Huussin Vazquez says:

July 25, 2014 at 6:20 pm

Solick, i think its a great idea. lets start



Schureck says:

August 2, 2014 at 1:08 pm

Hi folks,

I have a solution. I made a tcpdump when I send an SMS with the webconsole.

The first time when the website is entered one link is called.

<http://192.168.8.1/api/webserver/token>

I am no script-king but this is my way to handle with this token-thing

```
curl -X GET http://192.168.8.1/api/webserver/token > /home/pi/token_str
token=$(cat /home/pi/token_str | grep "token")
```

```
token=$(echo $token | sed 's/\(.*\)/\1/g' )
```

```
tokenlength=$(expr length "$token")
```

```
token=$(echo $token | cut -c -${tokenlength - 1})
```

Now I have the token in the variable \$token and I can send SMS like this:

```
curl -X POST -d @sms.xml http://192.168.8.1/api/sms/send-sms -header
"__RequestVerificationToken: $token" -header "Content-Type:text/xml"
```

Schureck

Reply



Dylan says:

August 2, 2014 at 8:23 pm

Hi Schureck,

thanks! I should've thought to use wireshark/tcpdump to do the same thing!! Silly me, and well done to you! You've made my day 😊

I have taken your example and made the below to send a text message

(Note: I've replaced all angled brackets with round ones – hopefully it comes through OK – this applies to the “cut” commands on the first line and the echo part of the second line which builds the xml data to send to the phone)

```
token=$(curl -X GET http://192.168.8.1/api/webserver/token | grep token | cut -d ')' -f2 | cut -d
'(' -f1)
echo "(request)(Index)-1(/Index)(Phones)(Phone)$phone(/Phone)(/Phones)(Sca)(/Sca)
(Content)$message(/Content)(Length)140(/Length)(Reserved)1(/Reserved)(Date)1(/Date)
(/request)" | curl -X POST -H "__RequestVerificationToken: $token" -H "Content-type:
text/xml" -d @- http://192.168.8.1/api/sms/send-sms
```

I've also applied the same to connecting/disconnecting from the internet and it works as expected as well

Connecting to the internet:

```
token=$(curl -X GET http://192.168.8.1/api/webserver/token | grep token | cut -d ')' -f2 | cut -d
'(' -f1)
echo "(request)(Action)1(/Action)(/request)" | curl -X POST -H "__RequestVerificationToken:
$token" -H "Content-type: text/xml" -d @- http://192.168.8.1/api/dialup/dial
```

a phone status call (to confirm a WanIPAddress) remains the same

```
curl http://192.168.8.1/api/monitoring/status
```

but a disconnect call requires the \$token variable (like the connect one above)

```
token=$(curl -X GET http://192.168.8.1/api/webserver/token | grep token | cut -d ' ' -f2 | cut -d
'(' -f1)
echo "(request)(Action)0(/Action)(/request)" | curl -X POST -H "__RequestVerificationToken:
$token" -H "Content-type: text/xml" -d @- http://192.168.8.1/api/dialup/dial
p
```

Reply



Derek Nash says:

May 16, 2016 at 9:13 pm

Dylan

I'm trying to implement this by posting xml (as with the previous web ui with the original API). I have to do it this way as I'm using c# – i.e. no curl. Would you be able to explain how I can create the token and attach it as part of the xml to be able to receive / send SMS like before?

Thanks



Ralph says:

January 26, 2017 at 8:42 am

For the c# user, use the http request to solve your problem.. In google, search http request c#



Martin says:

January 31, 2016 at 9:56 pm

Thanks for a good blogpost.

I have been searching google and huawei site to find documents for this api.

Where can I find it?

Reply



Web Programmer says:

September 6, 2016 at 9:25 pm

Hi,

I have a Huawei USB dongle and I need to change IMEI via one of these methods: [AT Command / Diagnostic mode / QCDM Command]

I find a tool.exe to change it but I need to do it manually, also I run Serial Port Monitor to see what's the tool is doing ? I capture codes in HEX in Diag mode

Thanks all

Found Applications port COM4

Found Diagnostics port COM5

Found modem : E303

Model : Huawei E303

IMEI : *****

Serial NR. : E9PBY*****

Firmware : 22.157.79.02.37

Compile date / time : Sep 5 2012 13:57:36

Hardware ver. : CH2E303SM

Dashboard version : HiLink12.012.02.03.37

Web UI version : HiLink12.012.02.03.37

Chipset : HiSilicon

Voice feature : not supported in current firmware

SIM Lock status : Locked (CardLock)

Wrong codes entered : 0 (unlock attempts left : 10)

Reply