

Administrator

User

Custom Program

He command

Dome Web Server

TCP:8999

TCP:9000

Ubuntu SkinOS

SkinOS Layer API

Port Map

TCP:10009

TCP:10010-30010

TCP:10003

HE Control

TCP:10006(SSL)

HTTP:10002

Status Gather

TCP:10000

TCP:10005(SSL)

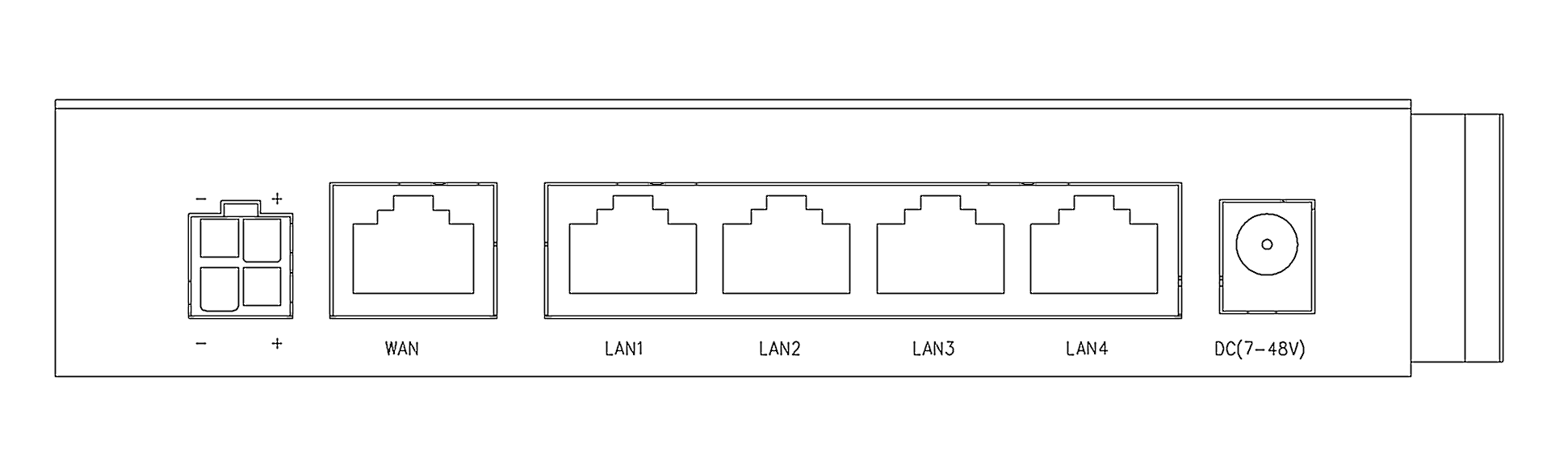
JSON file

Mesh Network

UDP:10005

UDP:10006

UDP:10007



Gateway

**Web Server**

TCP:8999

TCP:9000

HTML

/usr/prj/devms/wui/manage/gwlist.html

/usr/prj/devms/wui/manage/gateway.html

/usr/prj/devms/wui/manage/pport.html

/usr/prj/devms/wui/manage/netlist.html

/usr/prj/devms/wui/manage/network.html

/usr/prj/devms/wui/manage/firmware.html

/usr/prj/devms/wui/manage/upgrade.html

/usr/prj/devms/wui/manage/settings.html

HTML

/usr/prj/devms/webs.html

/usr/prj/devms/user.html

/usr/prj/devms/devport.html

/usr/prj/devms/heport.html

/usr/prj/devms/pport.html



Web Server

TCP:9000

STEP 1, login

HTTP POST /action/login

username=USERNAME&password=PASSWORD

HTTP Return

Cookie

User

STEP 2, get the deivce basic infomation

HTTP POST /action/he

he=Urlencode( Base64( “devms@devapi.device\_listv” ) )



Web Server

TCP:9000

HTTP Return

{

“MAC ID”:{ “key”:”Token”,... }

}

User

HE Control

TCP:10005

HTTP:10002

STEP 3, Send the HE command to gateway

HTTP POST /he

{

“mac”:”MAC ID”,

“key”:”Token”,

“command id”:”he command1”,

“command id2”:”he command2”

}



HTTP Return

{

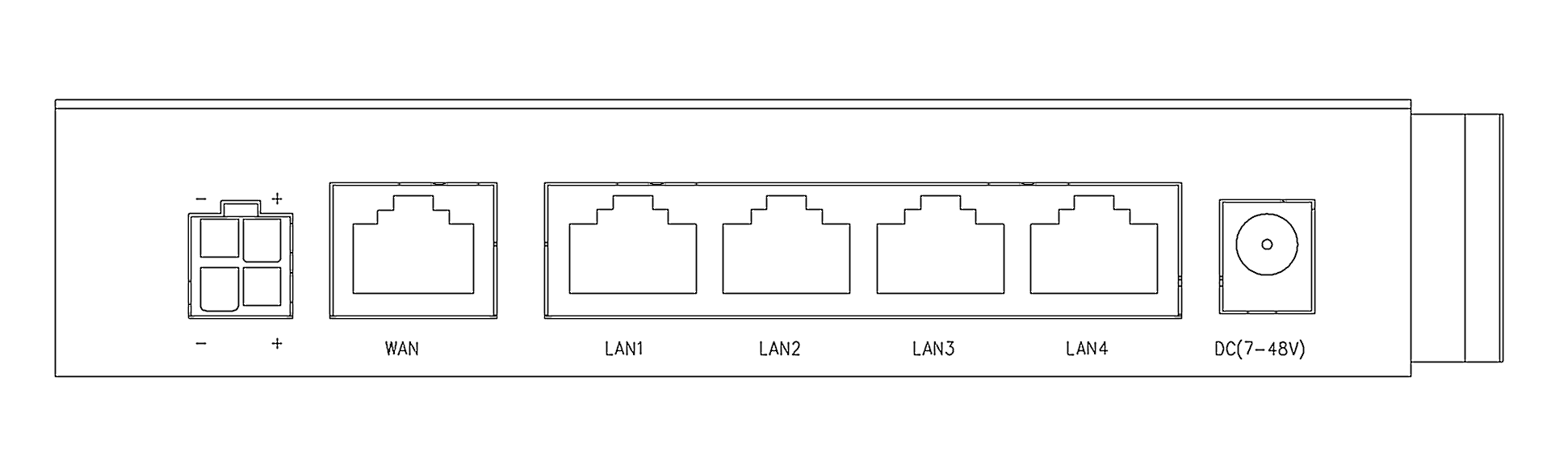
“command id”:{ he command1 return },

“command id2”:{ he command2 return }

}

User

SSL Encryption





STEP 1, login

HTTP POST /action/login

username=USERNAME&password=PASSWORD

Web Server

TCP:9000

HTTP Return

Cookie

User



STEP 2, get the deivce basic infomation

HTTP POST /action/he

&he=Urlencode( Base64( he command1 ) )

&he2=Urlencode( Base64( he command2 ) )

Web Server

TCP:9000

HTTP Return

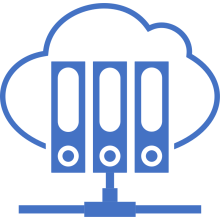
{

“he”:{ he command1 return }

“he2”:{ he command2 return }

}

User



TCP:10010

TCP: 10011

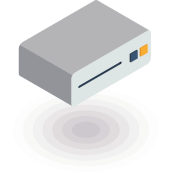


Ubuntu SkinOS

111.221.192.129

TCP: 10026

Internet



Remote Client

LTE/NR

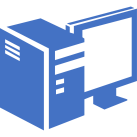




192.168.8.64 TCP:80

192.168.8.100 TCP:502

192.168.31.251 TCP:3389



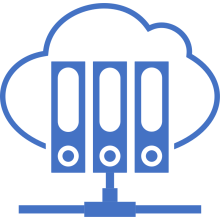
PLC

Camera

Sation



TCP:10027



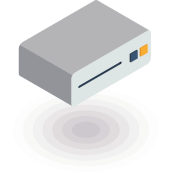
Ubuntu SkinOS

Internet



Remote Access PLC Telnet

LTE/NR





192.168.8.254 TCP:23

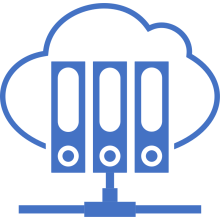


PLC

PLC



TCP:10028



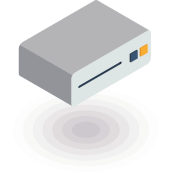
Internet

Ubuntu SkinOS



LTE/NR

Remote Access Camera WEB





192.168.8.64 TCP:80



Camera

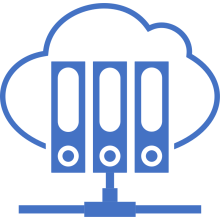
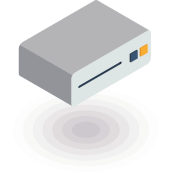
PLC



TCP:10028

Internet

Ubuntu SkinOS





Remote Access PLC SSH

LTE/NR

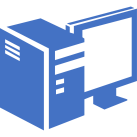


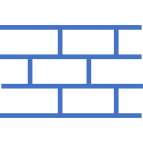
192.168.8.254 TCP:22



PLC

PLC

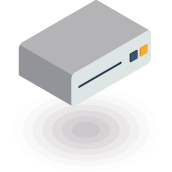
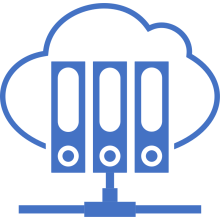
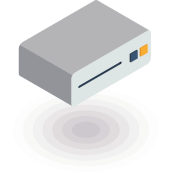
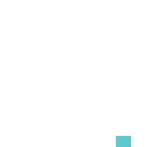




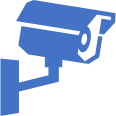
Internet

172.20.0.1

Ubuntu SkinOS





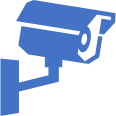


172.20.0.2



LTE/NR

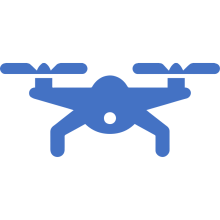
172.20.0.50





172.20.0.100

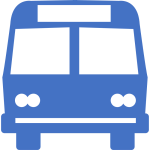
172.20.0.51



172.20.0.54

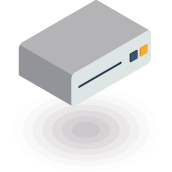
172.20.0.53

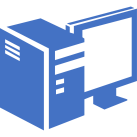
172.20.0.52



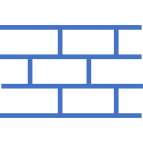


172.20.0.1





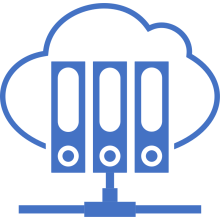
Internet



192.168.31.254/24

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192.168.31.230





LTE/NR

172.20.0.100

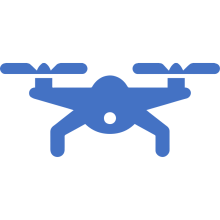




192.168.1.1/24

192.168.1.250

172.20.0.52



192.168.8.1/24

172.20.0.54

192.168.8.100

192.168.8.64

