

2025

C.C.T.V modem



Richard Mangan

U.T.G. Pty Ltd

2/10/2025

Intercel 4G
C.C.T.V
Setup
Instructions

Contents

1.0	Purpose of this document	3
2.0	Configuring Modem	4
2.1	Downloading Config file	5
3.0	Connecting Ethernet cables	8
5.0	Port Forwarding Rules	8
8.0	Checking camera connected	8
9.0	Testing Connection	9
10.	Fault diagnostics.....	10
10.1	All LED's Blank	10
10.2	SIM Slot	10
10.3	Ethernet Connection	11
10.4	No Signal	11
10.5	Cannot find SIM card.....	11
10.6	Poor Signal	12
11.	Document Version table.....	12

1.0 Purpose of this document

This document is to show how to

- Connect PC to Modem
- How to change config file
- Uploading Config file
- Checking modem status
- Check camera connected
-

2.0 Configuring Modem

Suggestion is to configure modems in workshop before attending site.

The easiest and fastest way to configure modem and ensuring all setting are correct is to edit and modify an existing configuration file and only change the Site ID and password, then download into Modem.

- Open the supplied “Cli” file with notepad
- Scroll down to username and change the Username to match Site settings”

```
interface br0
 ip address 192.168.0.1/24
 ipv6 nd suppress-ra
!
interface modem
 ipv6 nd suppress-ra
!
ip route 0.0.0.0/0 modem
!
!
!
line vty
 login-fail-wait 10
!
interface modem cctvCamera
 access-point-name telstra corp
 username cctv18870@cctvcameras.roads.vic.gov.au password 56RY!m8JDt
 band_lock auto
 protocol ipv4
 dail_fun dhcp
 keepalive_switch off
 network-type auto
 ppp advance compress novj novjccomp nopcomp noaccomp noccp
 ppp advance debug
 ppp advance usepeerdns
 ppp advance lcp interval 30 retry 5
!
service icmpcheck rule PINGconnect
 check type icmp
 source interface modem
 primary destination 149.176.218.225
 secondary destination 149 176 218 98
```

- Once number changed save file
- Note file name must remain [cli.conf] to allow program to download

2.1 Downloading Config file

Now login to modem to download config file

- Open Browser on laptop
- Enter IP address 192.168.0.1 for existing camera modem or 192.168.8.1 for new modem
- If unsure on IP address use cmd prompt and type ipconfig

```
Command Prompt
C:\Users\rick>ipconfig

Windows IP Configuration

Wireless LAN adapter Local Area Connection* 1:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . :

Wireless LAN adapter Local Area Connection* 2:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . :

Mobile Broadband adapter Cellular:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . :

Ethernet adapter Ethernet:

    Connection-specific DNS Suffix  . : router
    IPv6 Address. . . . . : 2001:d0b0:3000:3001::caff
    Link-Local IPv6 Address . . . . : fe80::60c9:6ad0:726d:3b84%22
    IPv4 Address. . . . . : 192.168.8.92
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : fe80::288:9aff:fe01:ca4%22
                                192.168.8.1

Wireless LAN adapter Wi-Fi:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . : home

C:\Users\rick>
```

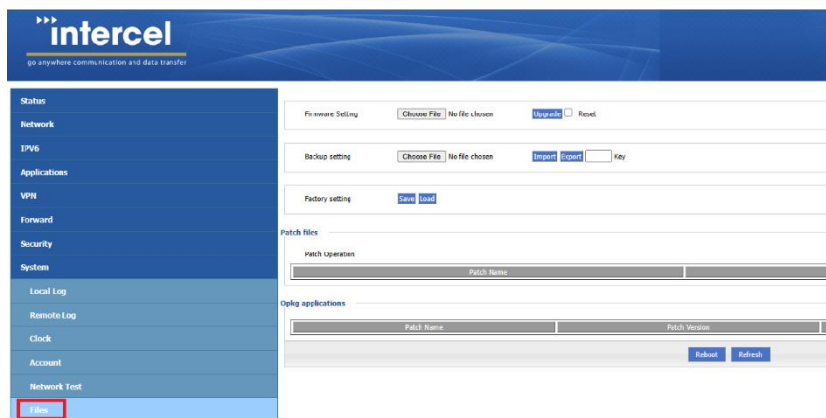
- A login page should appear



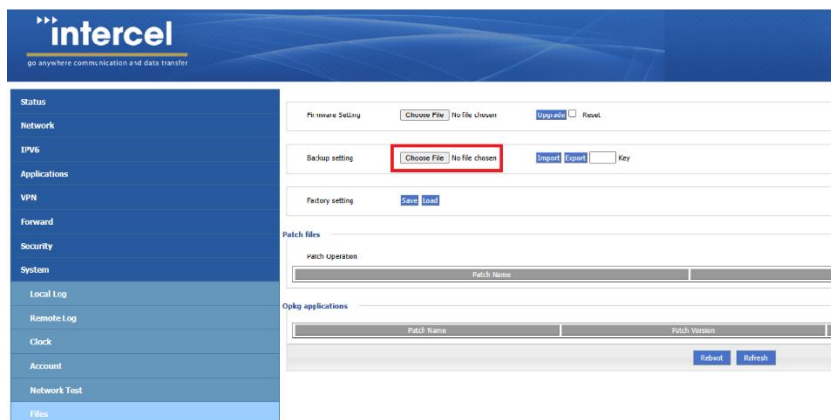
- Username (admin)
- Password (Vtcranmilo3700\$)
- Click Login
- Scroll down to click on [System]



- Now select [Files]



- Click on [Chose file]



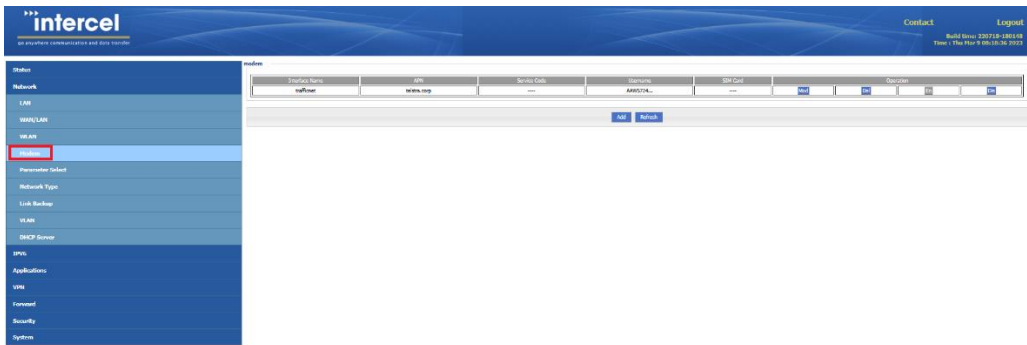
- Select CLI file
Chose file from hard drive location
- Now click Import button

Import Export Key

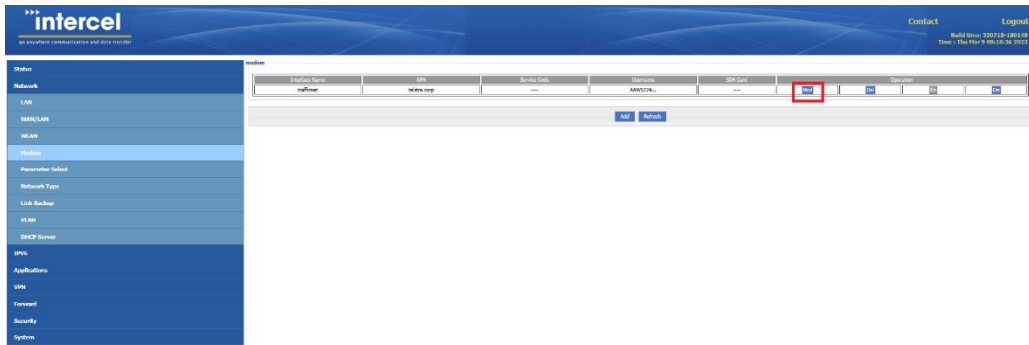
- Wait while file is downloaded and modem will reboot
- Close browser and reopen and re-login to confirm settings
- IP address will now be 192.168.0.1

```
Ethernet adapter Ethernet:  
  
Connection-specific DNS Suffix . : cctv11352  
Link-local IPv6 Address . . . . . : fe80::60c9:6ad0:726d:3b84%22  
IPv4 Address. . . . . : 192.168.0.92  
Subnet Mask . . . . . : 255.255.255.0  
Default Gateway . . . . . : 192.168.0.1
```

- Once logged back in Select [Network] [Modem]



- Now click on [Mod]



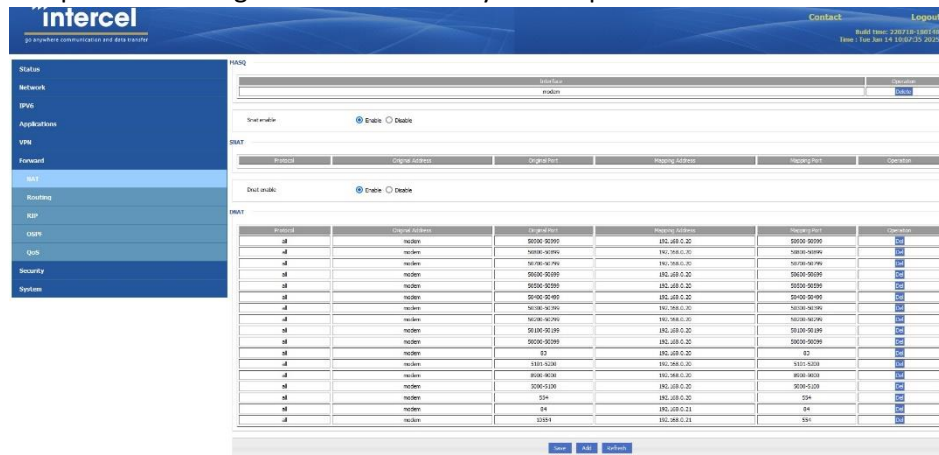
- Information in red box show site settings, confirm site number correct
- Browser can now be closed and modem powered down and ready to be installed

3.0 Connecting Ethernet cables

- Connect camera to LAN port
- Connect Laptop to LANWAN

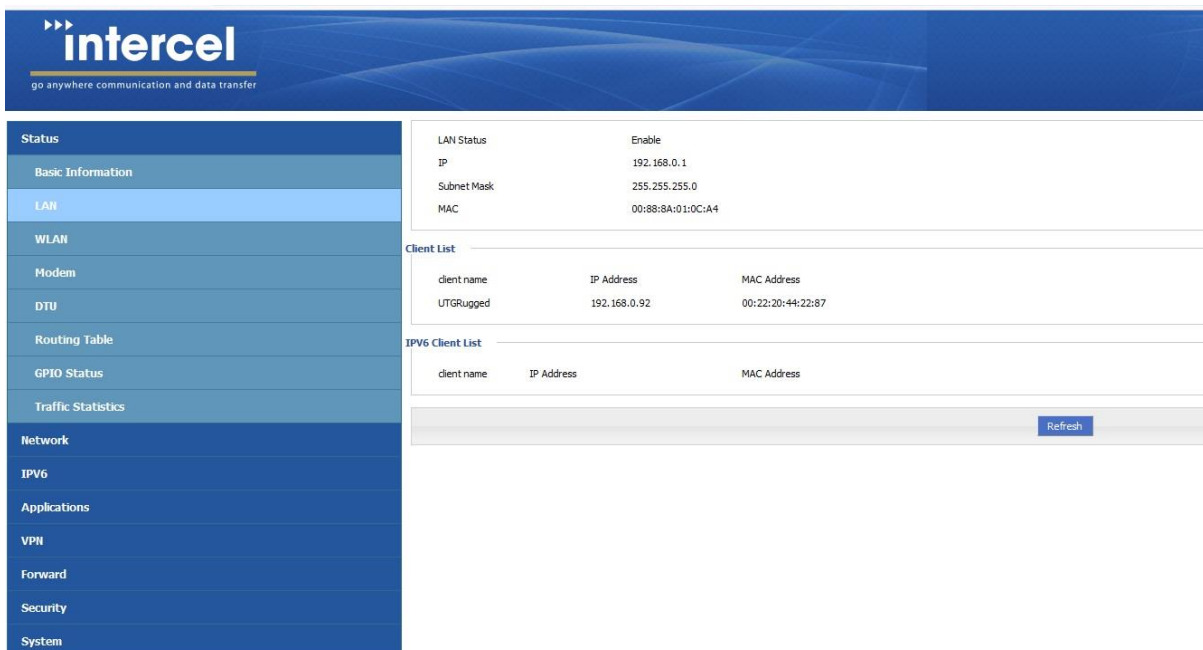
5.0 Port Forwarding Rules

- The port forwarding rules should already be setup to match standard DTP configs



8.0 Checking camera connected

- In the client list you should see camera connected and laptop connected
 - Camera should be 192.168.0.20



9.0 Testing Connection

The screenshot shows the Intercel modem status page. The left sidebar contains a navigation menu with the following items: Status, Basic Information, LAN, WAN, WLAN, Modem (highlighted with a red box), DTU, Routing Table, GPRS Status, Traffic Statistics, Network, IPv6, Applications, VPN, Forward, Security, and System. The main content area displays the following modem status information:

Modem Select:	trafPort
Up Time:	290 seconds
Modem Status:	connected
Network Type:	FDD LTE
Signal:	rs1(Lsq) 15 (-43 dBm)
IP Address:	172.16.31.2
DNS:	
SIM Status:	ready
SIM ICCID:	8961103014791229
SIM IMEI:	8592141344234
LAC:	17403
CELL ID:	136374805
RSCP:	-111 dBm
RSSQ:	-9 dB
SINR:	18 dB
RSSI:	-42 dBm
BAND:	LTE BAND 7
IMEI:	8666905287373
Modem Revision:	EC25ALP903A0094G

- Items to Check
 - Modem Status – connected
 - IP Address - if no IP address, then Credentials incorrect
 - SIM Status - Sim Card ready
 - Network type - FDD LTE indicates connected to 4G network
 - RSSI - in below image (this indicates antenna signal strength)
 - Should be below -100 dBm

This screenshot is identical to the one above, but with a red box highlighting the RSSI value of -42 dBm in the status list.

10. Fault diagnostics

10.1 All LED's Blank

Issue

None of the LED's on the router are flashing or illuminated.

Possible reason

- Power supply is not suitable, it should be 5 ~ 36 VDC
- Power supply off or faulty

Solution

- Check voltage
- Check the power adaptor and cable connection
-

10.2 SIM Slot

Issue

Cannot insert SIM card

Possible reason

- SIM slot or carriage damaged

- SIM card inserted in wrong direction

Solution

- Please contact UTG Pty Ltd or intercel for support
- Check SIM card direction, please make sure gold side facing up.

10.3 Ethernet Connection

Issue

LAN LED is not illuminating and cannot visit router WEB GUI

Possible reason

- Ethernet cable damaged or wrong
- PC network card faulty

Solution

- Remove and Re-connect ethernet cable
 - This can also force windows to detect
- Change ethernet cable
- Check network card settings on PC

10.4 No Signal

Issue

eSAM 3G/4G Router status shows no signal

Possible reason

- Antenna connected wrong
- Modem incorrectly configured
- Modem Damaged

Solution

- Connect suitable antenna
- Check SIM and modem settings
- Check ICMP and other router settings
- Reload config file

10.5 Cannot find SIM card

Issue

eSAM 3G/4G Router cannot find SIM card

Possible reason

- SIM Card damaged

- SIM card has poor contact

Solution

- Replace SIM card
- Re-install SIM card

10.6 Poor Signal

Issue

eSAM 3G/4G Router has no signal or poor signal

Possible reason

- Antenna connected to the wrong connector
- Signals are weak in the area

Solution

- Check antenna, cable and reconnect, make sure SMA nut firm
- Try different antenna configuration (high gain)
- Replace antenna if possible faulty
- Antenna location (relocate if possible)

11. Document Version table

Version	Notes	By	Date
1.0	First version of document	R.J.M.	10/2/25