

ANPR Setup Checklist - Tattile

Initial Setup

Wired	Wireless	Port
192.168.0.21 255.255.0.0	SSID: Anpr-##### 192.168.150.1	1080 or 8081

Initial Access to the Camera

<https://www.youtube.com/embed/rZHMVAMb7yk?wmode=opaque>

Yet another setup trick is to login to the device initially using WIFI.

The device will need to be plugged into a network hub that is connected to a DHCP server

- change the wired IP to Obtain Automatically
 - later in the process we do this anyways
- device will reboot
- reconnect using WIFI and record the wired IP that was assigned to the device
 - generally a device will be assigned the same IP each time it boots
 - you should now be able to connect to the listed wired IP
 - disconnect your wifi connection

This is useful since often your computer will become confused about where to send packets. Using the wifi connection is good for configuration, but accessing other online resources may be problematic with the second connection. Once the wifi is disconnected all configuration can be performed through the wired IP.

Connecting to PL8RDR from tablet or camera

System - Network Settings

Changes on this panel will reboot the device.

This work is usually done by OPS-COM support.

Details are here to help those clients that are doing initial configuration themselves.

* Suggested that WIFI settings be changed last unless you have a local DHCP server setup.

During setup the device reboots several times, any changes to WIFI settings may make it more difficult to connect to complete configuration.

- * connect wireless and setup wired connection first, then connection may be easier
 - device reboots numerous times during setup
 - DHCP server software: <http://www.dhcpserver.de> - [dhcpsrv2.5.2.zip](#) (extract to C:)
 - setup computer with LAN 192.168.8.1 and use that for IP assignment
 - camera will connect to computer to obtain IP address
- Hostname: Mobile-R | Mobile-L (that way we know which is the Right / Left camera)



ANPR MOBILE SYSTEM Advance

Network Settings

Plate Reader

System

NetBiosName

Hostname

Mobile-L

Wi-Fi

Status

ON

Obtain IP address automatically

YES

IP Address

10.42.0.218

Netmask

255.255.255.0

Gateway

10.42.0.1

SSID

pl8rdr.opscom

Passphrase

T0maha3k

Mode

CLIENT

Channel

1

Ethernet

Obtain IP address automatically

YES

IP Address

192.168.8.105

Netmask

255.255.255.0

Gateway

192.168.8.1

Undo Apply

1

connect to factory SSID first and enable wired connection.

once able to connect wired, setup the WIFI to use pl8rdr.opscom

2

use DHCP server for direct wired connection to laptop once wired settings are supplied

<http://www.dhcpserver.de>

for mobiles use a prefix of "-R" or "-L" to signify right and left

R = driver side
L = passenger side

System - Time Sync

Changes on this panel will reboot the device.

- not terribly important as the PL8RDR records the time of the event not the values sent by the camera
- Time Server (use your own or one of these)
 - 0.us.pool.ntp.org
 - 1.us.pool.ntp.org
 - 2.us.pool.ntp.org
 - 3.us.pool.ntp.org

1. set proper time zone and apply changes
2. set time / date

Time zone:

Country:

Advanced info

MS Name/IP address	Stratum	Poll	Reach	LastRx	Last sample
-----	-----	-----	-----	-----	-----
	0	7	0	10y	+0ns[+0ns] +/- 0ns

Reset Apply

Set Local Date Time

DD/MM/YYYY: / /

HH:MM:SS: : :

Plate Reader - General Settings

- should always be the **CLIENT_ID** (no spaces)

◦ eg. OC_TOMA

NOTE: This graphic shows and old implementation. The text in this sample should be only: OC_LIONS

General Settings

Plate Reader

System

Basic settings

Enable Engine:

Acquisition mode:

Site Address:

Advanced settings

Warning: system functionality may be affected if parameters below are changed

Multi-thread action execution:

TCP timeout (ms):

Gateway Interface:

Skip check if oldest then:

Reset Apply

Site address should match client sub-domain plus client ID (colon delimited)


lions:OC_LIONS

On mobile client ID is not required, but for standardization it should be included.

Plate Reader - Plate Reader

Changes on this panel will reboot the device.

- create a buffer around the capture area
- the listed settings are factory defaults (except Locator) and should work with minimal issues
- for mobile bounding region should be set to a lower area since plates will rarely be at the top of the image
 - leave a gutter around the bounding area of at least 30 pixels



ANPR MOBILE SYSTEM Advance

Plate Reader Settings

Plate Reader

System

Plate Locator		Char Size Pixel		Plate Format	
Win MinX Pixel	<input type="text" value="50"/>	Min Width	<input type="text" value="8"/>	Max Jolly Chars	<input type="text" value="0"/>
Win MinY Pixel	<input type="text" value="250"/>	Max Width	<input type="text" value="40"/>	Plate With Separator	<input type="text" value="NO"/>
Win MaxX Pixel	<input type="text" value="1229"/>	Min Height	<input type="text" value="15"/>	Enable UTF8 Encode(*)	<input type="text" value="NO"/>
Win MaxY Pixel	<input type="text" value="1000"/>	Max Height	<input type="text" value="60"/>	(*) : Plate string encoded with UTF8 for image and DB saving (Ä, τ ,↵)	
Sensitivity	<input type="text" value="NORMAL"/>				

Temporal Integration

Max Time Transit ms(*)	<input type="text" value="500"/>
Min Time Same Plate ms(*)	<input type="text" value="2000"/>
Max Plates in Image [1-4]	<input type="text" value="1"/>
Image Selection Mode	<input type="text" value="BEST LUMINANCE"/>
Plate Multi Out Same Plate(*)	<input type="text" value="0"/>
Num Plate Read [1-3](*)	<input type="text" value="2"/>
Min Num Read To(*)	<input type="text" value="READ_NOTREAD"/>
Plate Score for Num Read=1 [50-100](*)	<input type="text" value="65"/>
Num string distance [0-5]	<input type="text" value="2"/>

Advanced Features

Advanced Settings

Add a buffer around the capture area.

Also note that top of the scan window is 250 pixels since most plates are lower in the frame.

This can be update but should always have a buffer.

for the most part, standard default options are fine.

On the context screen we can preview the bounding region.




Plate Reader - Events Actions

- (Mobile) there are 4 options; 2 for wired and 2 for wireless
 - 1 each are READ results; 1 each are NO_READ results (vanity plates)

- %SITE_ADDRESS is not important for Mobile but listed here for standardization

Events/Actions Settings

Plate Reader

System

Actions / Events	Send Image FTP	Save DB FTP	TCP Message	Send Image FTP 2	Save DB FTP 2	TCP Message 2	SD Saving	Save DB SD
Ocr Read								
Ocr Not Read								
Ocr No								
List B								
No Match On List B								
System Alarm								

TCP Message = 192.168.8.1 wired
TCP Message 2 = 10.42.0.1 wifi

This allows the camera to connect wired or through wifi to distribute image data.

Add %SITE_ADDRESS to JPEG header

Other custom TAGS: %SITE_ADDRESS%FIRMWARE_VER%NETBI
BOARD_CODE%BOARD_REV%BOOT_VER%DA
ORE%JPEG_QUALITY%GAIN%SHUTTER%ST
I LEVEL%OCR CF6%PLATE MIN X%PLAT

Shared configuration

JPEG header configuration	Config
Event/Action monitor	Config
SSL configuration	Config

www.tattile.com

During configuration set **wired TCP Message** connection as **Enable=No**

Cameras leaving Tomahawk's office will be setup to use wireless only. Configuring wired settings can help with troubleshooting in the future.

Events - Specific

- 2 x **READ** - wired (192.168.8.1) & wireless (10.42.0.1)
 - %PLATE_STRING%IMAGE_BW%IMAGE_COL%PLATE_MIN_X%PLATE_MIN_Y%PLATE_MAX_X%PLATE_MAX_Y
 - Server IP: 192.168.8.1 Server Port: 32000

%IMAGE_BW sends the thumbnail image (*required*)

%IMAGE_COL sends the context image (*not required*)

Plate Reader

System

Wired connections send data to PL8RDR on the 192.168.8.1 address

WIFI connections send data to PL8RDR on 10.42.01. address.

So this is:
Event -> TCP Message

TCP Message on Ocr Read

Enable: YES

Message format: STANDARD

Message: %PLATE_STRING%IMAGE_COL%IMAGE_BW%PLATE_MIN_X%PLATE_MIN_Y%PLATE_MAX_X%PLATE_MAX_Y

Image Encryption: NO

Jpeg Quality: 75

Crop Image(*): DISABLED

Context Jpeg Quality: 75

Text Position: TOP_LEFT

Text Options: NONE

Text Value: %PLATE%DATE%TIME

Server IP: 192.168.8.1

Server Port: 32000

Reuse Connection: NO

Buffering on SD: NO

TCP Message 2

Enable: YES

Message format: STANDARD

Message: %PLATE_STRING%IMAGE_COL%IMAGE_BW%PLATE_MIN_X%PLATE_MIN_Y%PLATE_MAX_X%PLATE_MAX_Y

Image Encryption: NO

Jpeg Quality: 75

Crop Image(*): DISABLED

Context Jpeg Quality: 75

Text Position: TOP_LEFT

Text Options: NONE

Text Value: %PLATE%DATE%TIME

Server IP: 10.42.0.1

Server Port: 32000

Reuse Connection: NO

Buffering on SD: NO

- 2 x **NO_READ** - wired (192.168.8.1) & wireless (10.42.0.1)
 - %PLATE_NOT_READ%IMAGE_BW%IMAGE_COL%PLATE_MIN_X%PLATE_MIN_Y%PLATE_MAX_X%PLATE_MAX_Y
 - Server IP: 10.42.0.1 Server Port: 32000

Plate Reader

System

Almost exactly the same as TCP Message READ

Only difference is the Message

Same IP designations

TCP Message on Ocr Not Read

Enable: YES

Message format: STANDARD

Message: %PLATE_NOT_READ%IMAGE_BW%IMAGE_COL%PLATE_MIN_X%PLATE_MIN_Y%PLATE_MAX_X%PLATE_MAX_Y

Image Encryption: NO

Jpeg Quality: 75

Crop Image(*): DISABLED

Context Jpeg Quality: 75

Text Position: TOP_LEFT

Text Options: NONE

Text Value: %PLATE%DATE%TIME

Server IP: 192.168.8.1

Server Port: 32000

Reuse Connection: NO

Buffering on SD: NO

10.42.0.1 on second NOT_READ

Wireless Only with Wired Disabled

The final screen should look as shown below. "TCP Message" is setup (disabled) for 192.168.8.1 and "TCP Message 2" is setup (enabled) for 10.42.0.1

We are shipping cameras with wireless configured and wired ready to be enabled; as of spring 2020

Plate Reader

System

Events/Actions Settings

Actions / Events	Send Image FTP	Save DB FTP	TCP Message	Send Image FTP 2	Save DB FTP 2	TCP Message 2	SD Saving	Save DB SD
Ocr Read								
Ocr Not Read								
Ocr No Plate								
Match On List A								
No Match On List A								
Match On List B								
No Match On List B								
System Alarm								

Shared configuration

JPEG header configuration

Config

Event/Action monitor

Config

Camera Context

- likely not necessary to make changes in this area
 - adjust; iris, gain, shutter

Sample Device Info

Organization name

VERSION

Firmware version = ANPR Mobile Ver.3.12.19 CAN-ON Dec 20 2019 13:41:34
OCR lib version = Tattile Plate Reader Ver.3.156.000
Traffic Interface lib = 1.112
TOS version = 4.34.73
TatExt OCR lib = TatExt 2.8 TatExt OCR 2.13.16 - Pr 2.1 - Lib 6.0.29805 - May 7 2020
BOOTLOADER version = 3.0
KERNEL version = 3.0.35-tattile #1 SMP PREEMPT Wed Oct 23 17:25:48 CEST 2019
DRIVER version = 2.2.2
FILESYSTEM version = 3.13
UPDATE version = 3.13
FPGA Version = 2045

DEVICE STATUS

Image Sensor OCR = CMOS_1280x1024_BW (151) (50)
Image Sensor CTX = CMOS_1280x1024_COL (154)
Board Serial Number = 4294967295
Board code = 696
Board revision = 2
MAC Address = 0x00C008934BB5
Hostname = Mobile-L
GMT Time & Date = 17.44.14, 02/07/2020, GMT offset: -300min, DST status: OFF
LOCAL Time & Date = 13.44.14, 02/07/2020
Application time = 00:00:47
Device uptime = 00:01:32
CPU Temperature = 27.0 °C
Temperature = 35.2 °C
Humidity = 6.6 %
Pointing Angles = Tilt: -0.1° Roll: 0.1°
Current = 904mA
Voltage = 10.0V
Flash file system size = 3442040 KByte

DIAGNOSTIC STATUS

Status = WARNING
Internal parameters = M:0x09bf8f C:0x09bf8f A:0x000000 W:0x001000 R:0x000000
Last check time = 02/07/2020 13:43:40,978
Boot time = 02/07/2020 13:43:40,978
Status Temperature = OK
Status Humidity = OK
Status Secure Digital = OK
Status Current Consumption = OK
Status Time Synchro = DISABLED
Status OCR Camera = OK
Status Context Camera = OK
Status Plate Reader = OK
Status WiFi = OK
Status Crypto = OK
Status GPS = WARNING
Status TatExt = OK

DEVICE DESCRIPTION

Device serial number = 1910033218
Device type = F01710
Number of heads = 2
Channel 0 lens = T18523 - 6.0mm
Channel 0 best focus = 3.00m
Channel 0 F number = 4.0
Channel 1 lens = T18523 - 6.0mm
Channel 1 best focus = 3.00m
Channel 1 F number = 2.8

Plate Reading Quick Test

You should now be able to go to **Plate Reader - Text Result** and hold a plate in front of the camera to confirm operation.

Further testing is suggested with a PL8RDR system.

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