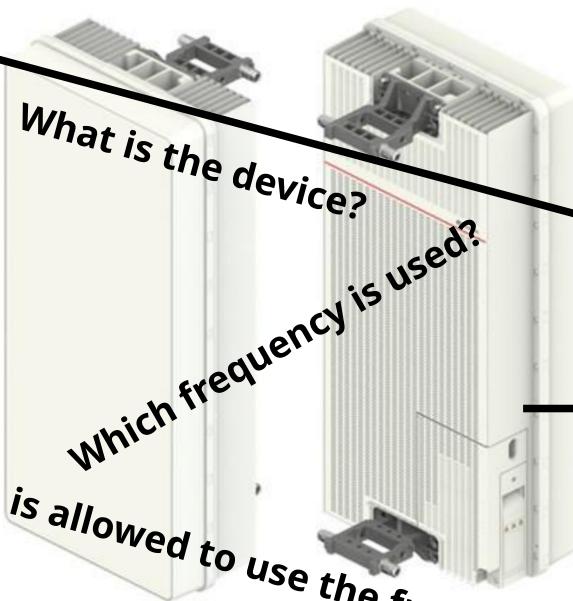


## Site 1: FLOWS

In front of Johan Cruyf Arena - Entrance H  
2.1.1. 5G base station



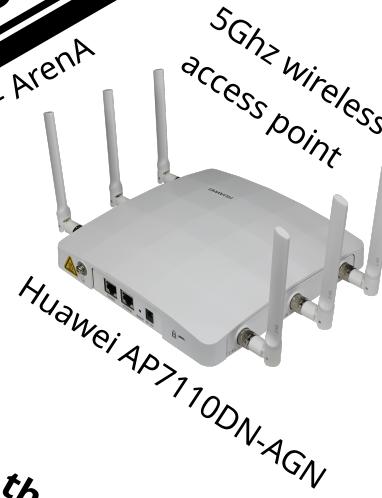
Who is allowed to use the frequency?

Huawei Active Antenna Unit (AAU) 5613

Technical standard	3GPP Release 15
Frequency Band	3400Mhz - 3800Mhz
TX RX channel	64T64R
Polarization	+45, -45°
Gain (dBi)	24
Horizontal sweep range (°)	-60 - 60
Vertical sweep range (°)	-15 - 15

## Site 2: LAYERS

Inside Entrance P1 - ArenA



Who gave them the right to use the frequency? Is the allocation national or international?

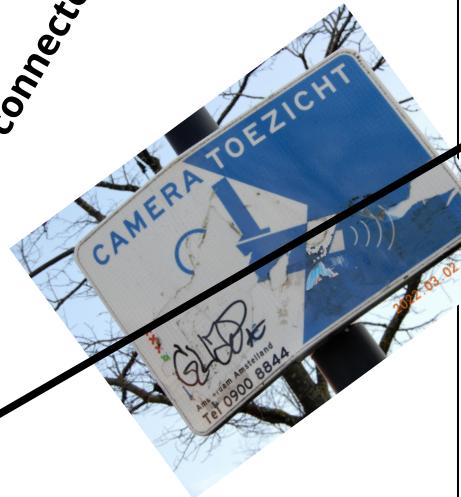
What service does it implement?

What is the protocol that is used?

What is the use case for the protocols?

## Site 3: VISIBILITY

At the map, across Perry Sport



How is the device connected to other devices?  
What regulations are impacted?  
Is the situation different per EU Member State?

# Resources

# 5G Infrastructure Walk

## Smartphone apps:

\* WiFi Analyzer

Google



\* Architecture of Radio

Google



Apple



## Current Dutch frequency map:

<https://www.rdi.nl/binaries/rdi/documenten/brochures/2017/juli/21/overzicht-van-het-nederlandse-frequentiespectrum/Poster+het+Nederlandse+frequentiespectrum+2024.pdf>



## Websites:

\* Sensoren register

<https://sensorenregister.amsterdam.nl/>



\* Antennekaart

<https://antennekaart.nl/>



\* Antenneregister

<https://antenneregister.nl/>



## Frequencies

4G → 800 + 2600 MHz

5G → 700 MHz 3500 MHz

C2000 → 380 MHz

DECT → 1880-1900 MHz

GSM → 880-960

1710-1780

1805-1875 MHz

WiFi → 2412-2472 MHz

5180-5320 / 5500-5700 MHz

Bluetooth → 2402-2480 MHz

The 5G Infrastructure Walk is brought to you by the **critical infrastructure lab** for the Building a Digital Europe course (University of Amsterdam). We research power and contestation in communication infrastructures. One way of doing this is mapping how the electro-magnetic spectrum is utilised, and asking critical questions such as...

"How is the shaping and usage of the electro-magnetic spectrum, through material technologies, companies, states, and regulations, changing society and everyday life?"

The **critical infrastructure lab** aims to co-develop alternative infrastructural futures that center people and planet over capital and control. We produce research insights, policy recommendations, and build community around three overlapping areas: geopolitics — standards — environment.

More information about the lab:  
<https://criticalinfralab.net/>

