

TinyGS

LoRA Yer Kontrol İstasyonu

Kurulumu ve Ayarlari



Baris DINC
TA7W / OH2UDS
Eylul 2021

Icerik

- LoRA nedir ?
- Serbest Uzay Kaybi Hesabi
- dBm - watt cevrimleri
- Nedir bu TinyGS ?
- Malzemeleri nereden temin edebilirim ?
- Kurulum Adimlari
- Ayarlar
- Yonetim Paneli
- Nasil bir yere koymaliyim ? Nasil bir anten kullanmaliyim ?

Büyük sözü dinlemek

TA2T : LoRA diye birşey varmış, çok başarılı olmuş, bunu uyduda kullansak ya...!

TA7W: Olmaz Tahir Bey, LoRA'nın bilgileri kapalıymış, amatör olarak kullanamayız kurallar gereği

TA2T : Gavur yapınca oluyor da biz yapınca mı olmuyor, pöhhhh, nerde yazdırmuş kullanılamaz diye, aç bakayım...

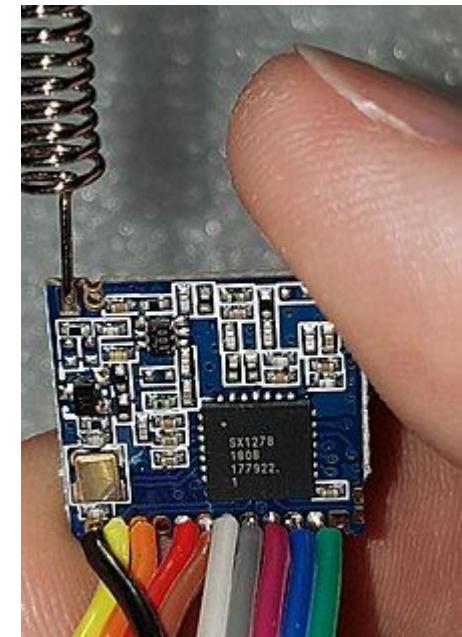


A.Tahir DENGİZ, TA2T (S.K.)

LoRA Nedir ?

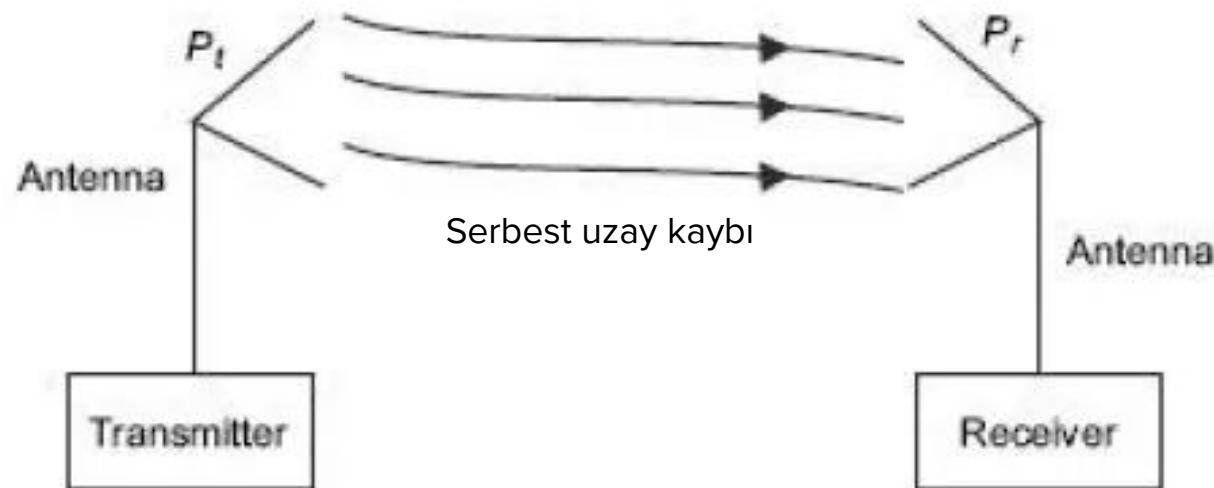
Long Range : Uzun Mesafe

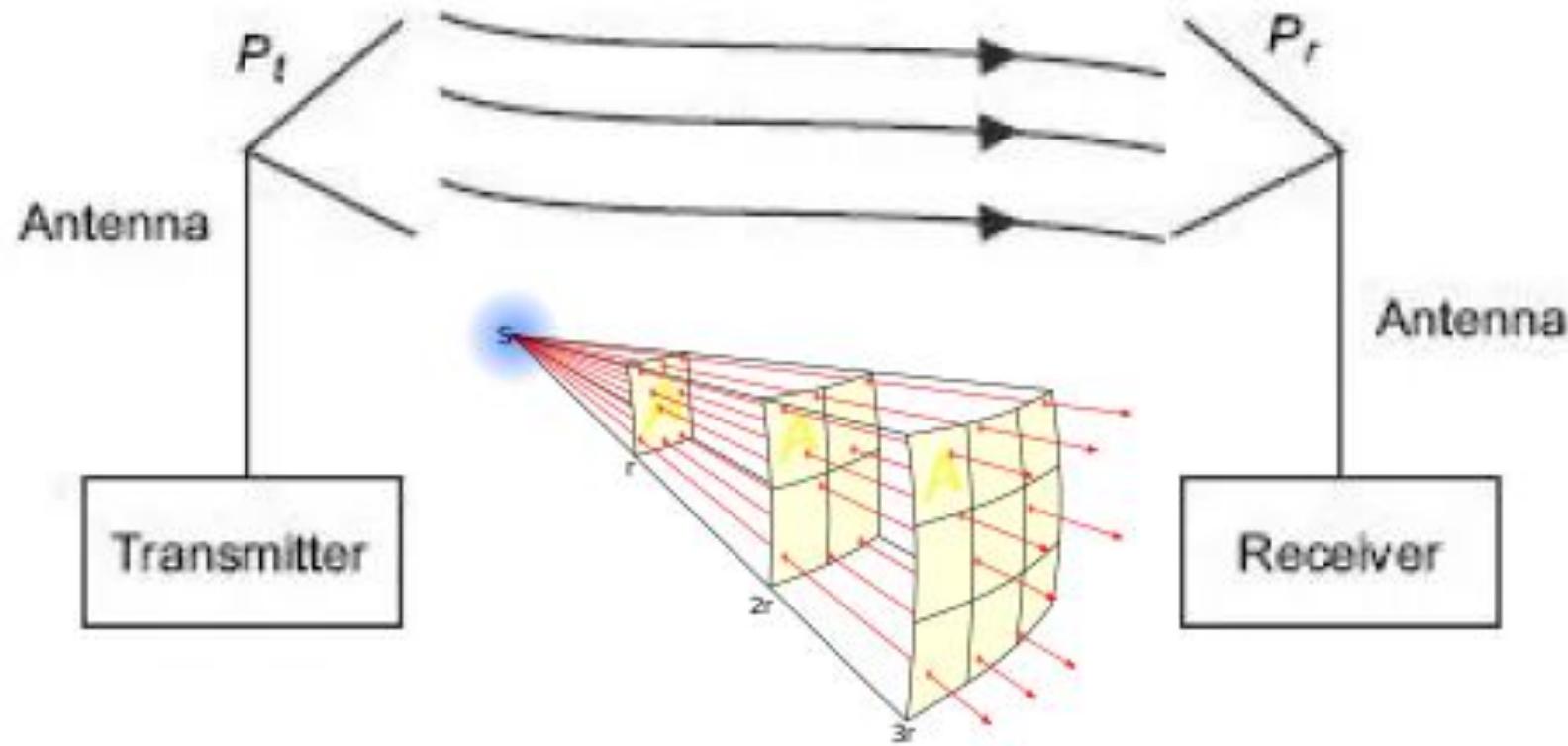
- Yeni bir modülasyon tekniğidir
- **Patentlidir**
- Fransız Grenoble firmasının ürünüdür, Semtech tarafından satın alınmıştır
- Spread Spectrum modülasyonuna benzeyen Chirp Spread Spectrum modülasyonu gibidir
- 433, 868, 915 MHz bandlarında kullanılmaktadır
- 0.3 Kbit/s - 27Kbit/s hızlarında çalışabilmektedir
- Özel bir FEC kullanır
- 5-15 Kilometre mesafeye kolaylıkla ulaşabilir
- 160-170 dB link bütçesi vardır

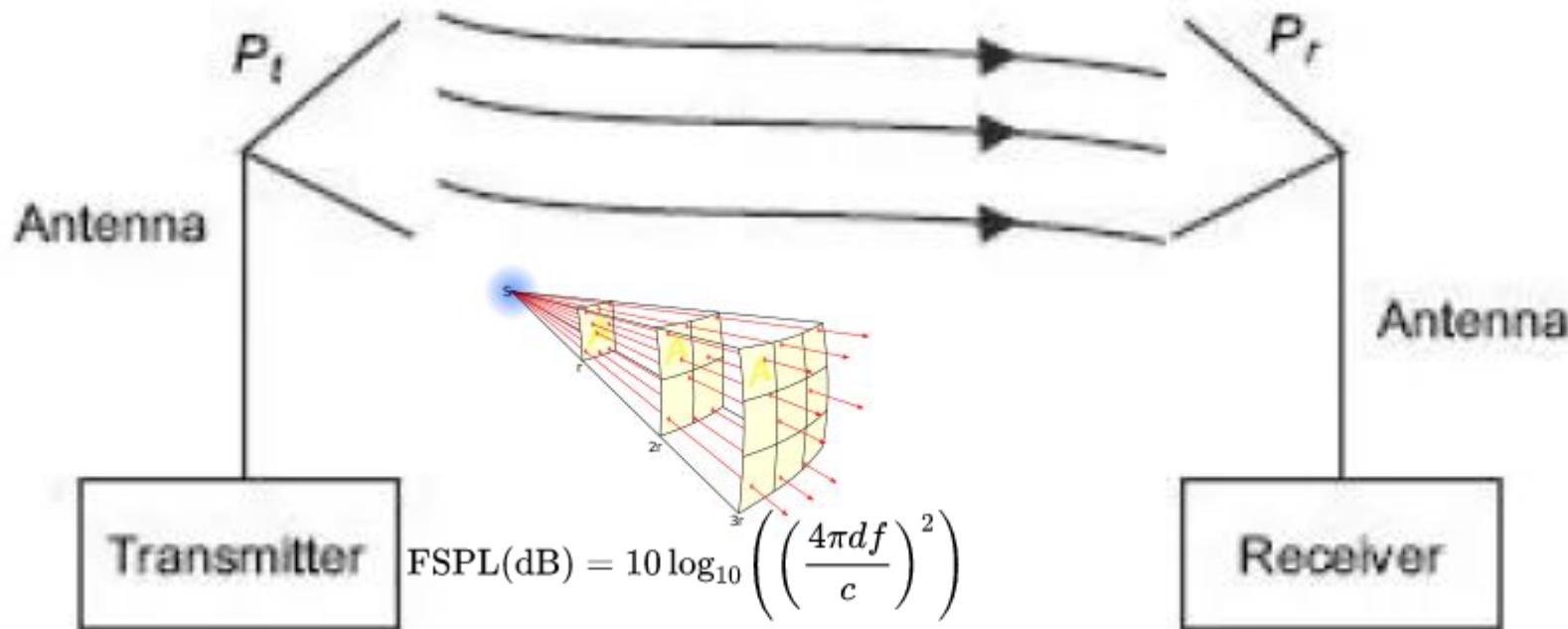


Link Bütçesi Nedir ?

Vericinin alıcı tarafından duyulabildiği etkin mesafe, ya da belirli bir mesafede duyulabilirlik durumu olarak özetleyebiliriz.





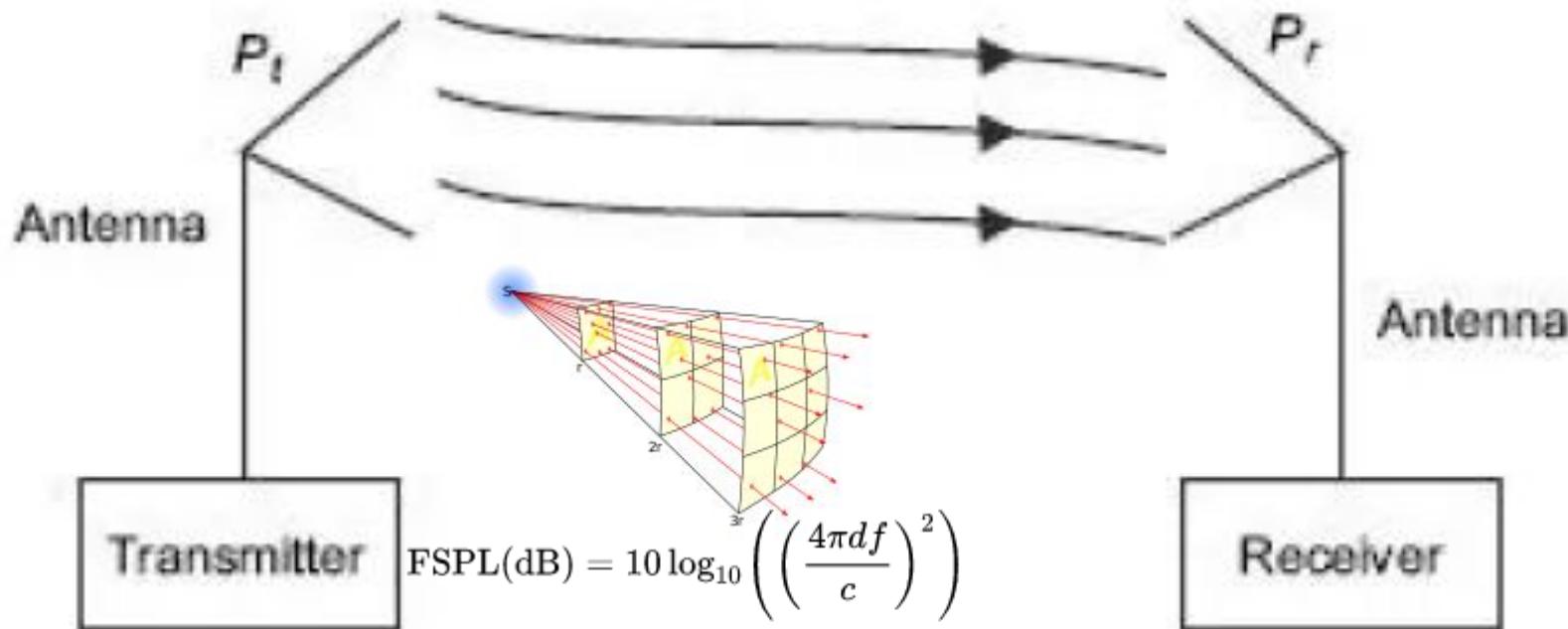


$$\text{FSPL(dB)} = 10 \log_{10} \left(\left(\frac{4\pi d f}{c} \right)^2 \right)$$

$$= 20 \log_{10} \left(\frac{4\pi d f}{c} \right)$$

$$= 20 \log_{10}(d) + 20 \log_{10}(f) + 20 \log_{10} \left(\frac{4\pi}{c} \right)$$

$$= 20 \log_{10}(d) + 20 \log_{10}(f) - 147.55,$$



$$\text{FSPL(dB)} = 10 \log_{10} \left(\left(\frac{4\pi d f}{c} \right)^2 \right)$$

$$= 20 \log_{10} \left(\frac{4\pi d f}{c} \right)$$

Mesafe

$$= 20 \log_{10}(d) + 20 \log_{10}(f) + 20 \log_{10} \left(\frac{4\pi}{c} \right)$$

Frekans

$$= 20 \log_{10}(d) + 20 \log_{10}(f) - 147.55,$$

- 1) <https://www.everythingrf.com/rf-calculators/free-space-path-loss-calculator>
- 2) <https://www.pasternack.com/t-calculator-fspl.aspx>

Calculate the Signal Lost in Free Space

Distance (d)

 km

Frequency (f)

 MHz

Transmitting Antenna Gain (G_{Tx})

 dB

Receiving Antenna Gain (G_{Rx})

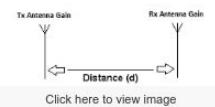
 dB

Calculate **Reset**

Result

Free Space Path Loss

115.60724984 dB



Calculation

Distance:

 Kilometers

Frequency:

 MHz

Transmitter Gain (dB):

Receiver Gain (dB):

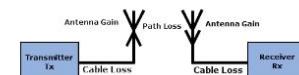
CALCULATE

Result:
Free Space Path Loss: 115.6 dB

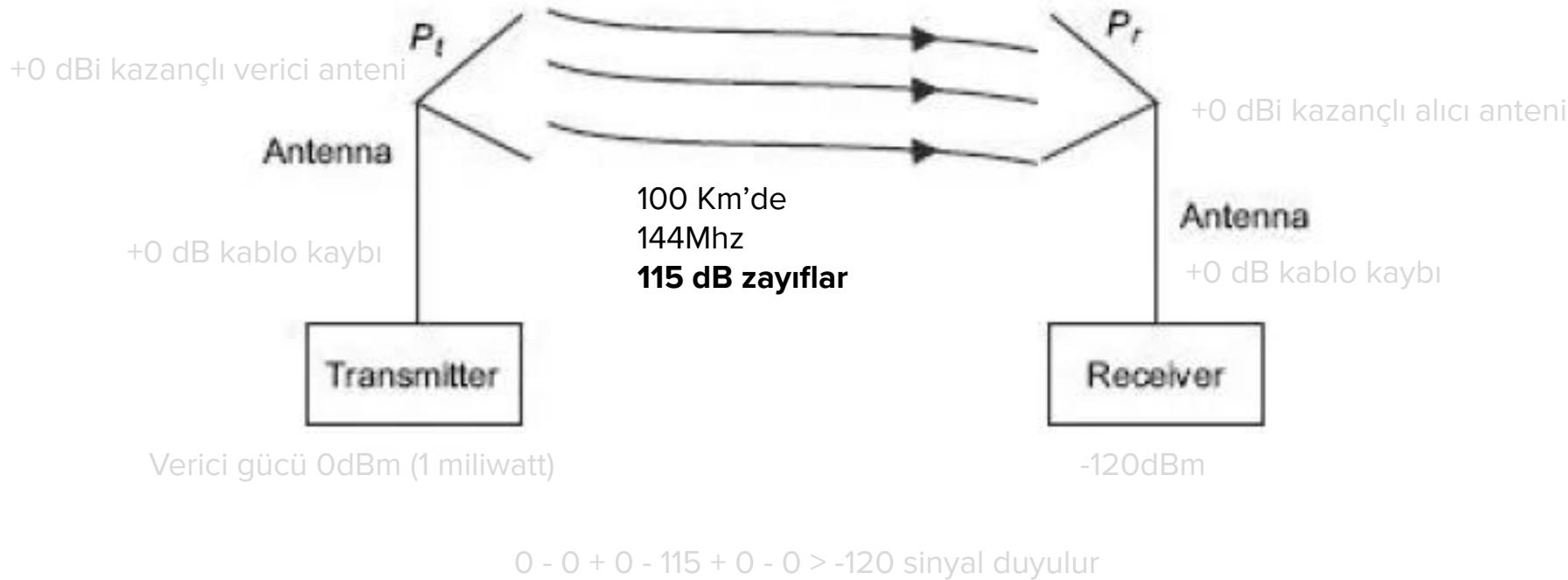
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$$FSPL = 20 \log_{10}(d) + 20 \log_{10}(f) + 20 \log_{10}\left(\frac{4\pi}{c}\right) - G_{Tx} - G_{Rx}$$

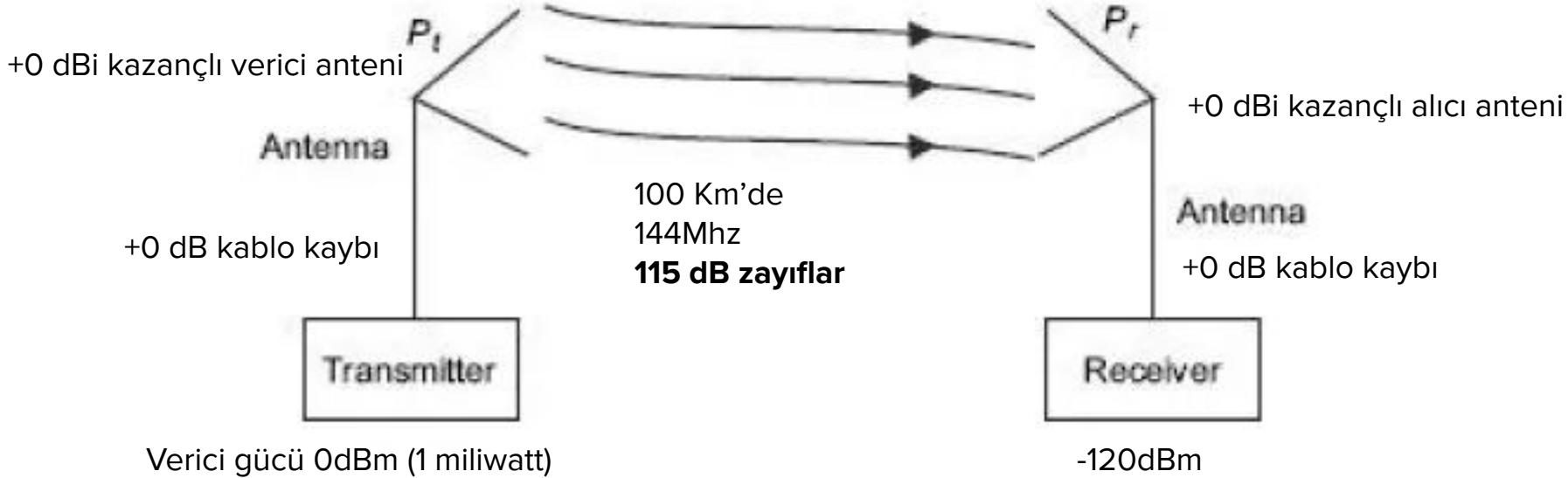
$$FSPL = 20 \log_{10}(d) + 20 \log_{10}(f) + 20 \log_{10}\left(\frac{4\pi}{c}\right) - G_t - G_r$$



Link Bütçesi Nedir ?

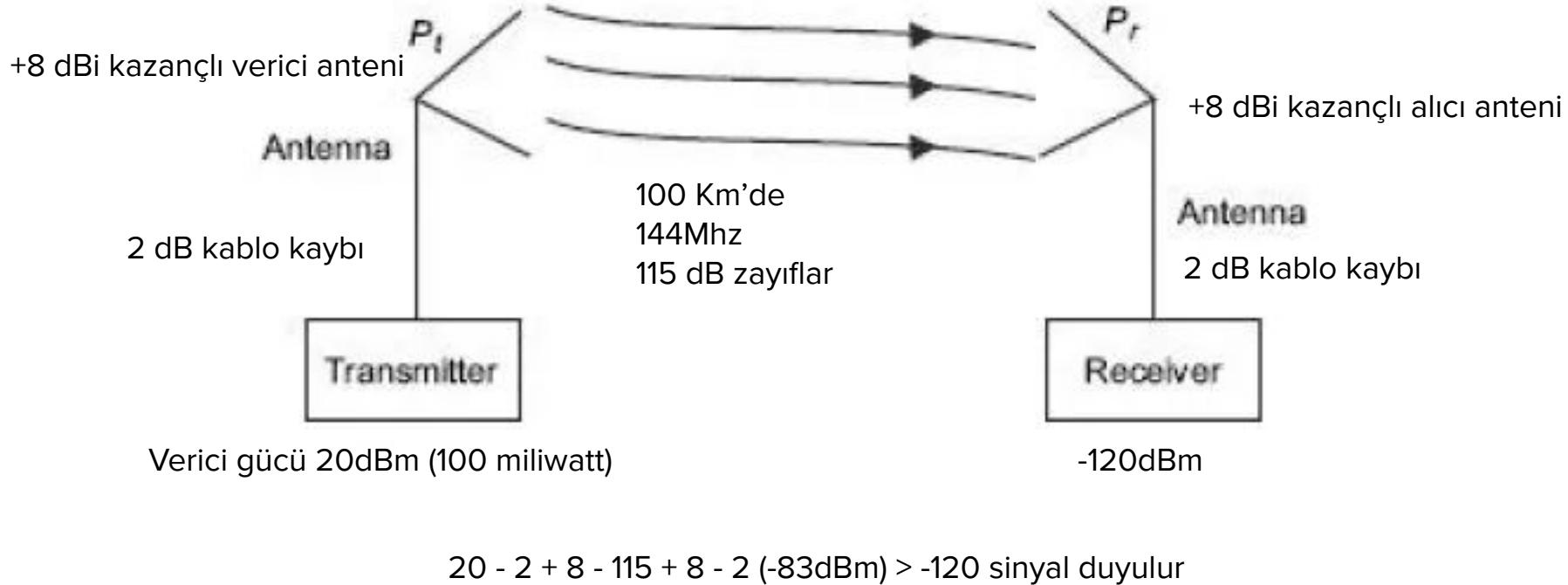


Link Bütçesi Nedir ?

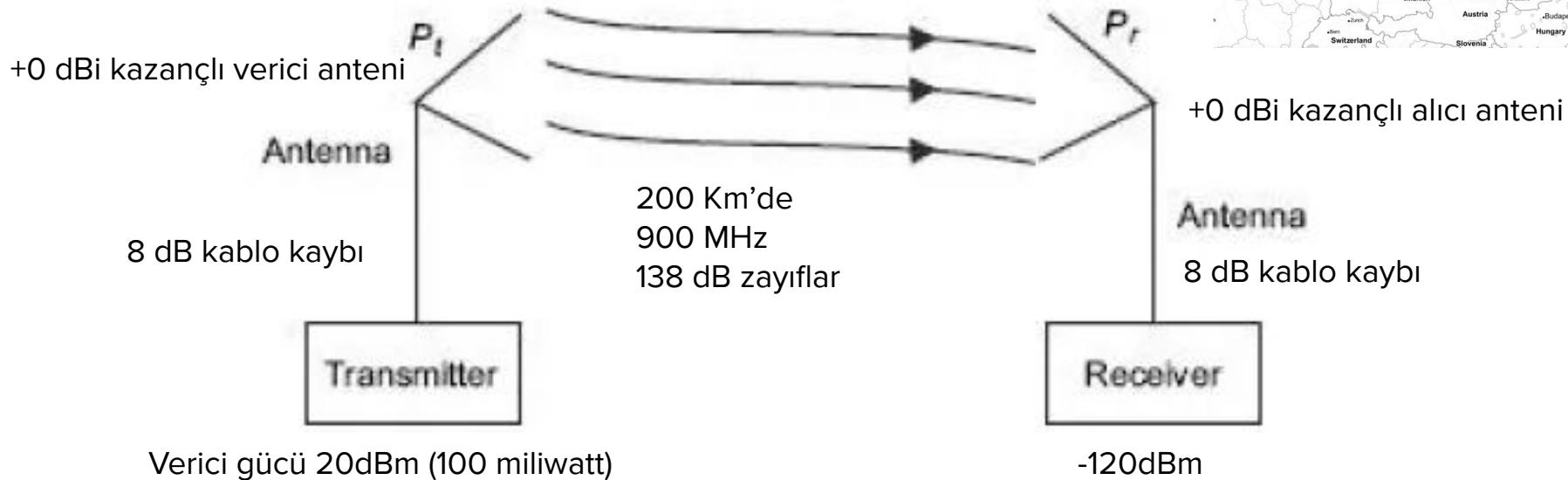


$$0 - 0 + 0 - 115 + 0 - 0 > -120 \text{ sinyal duyulur}$$

Link Bütçesi Nedir ?

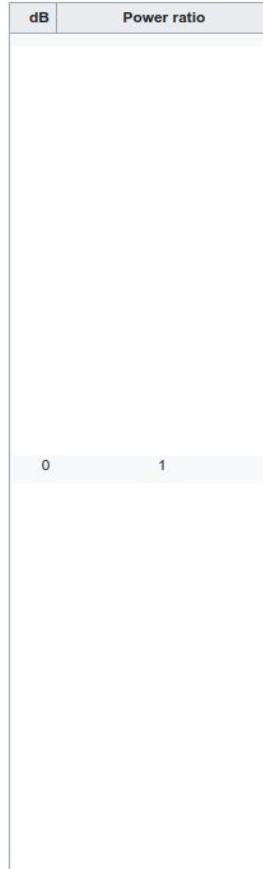


-140 dBm alici ile LoRA nereye gider ?



$$20 - 8 + 0 - 138 + 0 - 8 (-124 \text{dBm}) > -140 \text{ sinyal duyulur}$$

Nedir bu dB, dBm, dBi.... ?



Nedir bu dB, dBm, dBi.... ?

dB	Power ratio
3	2
0	1

Nedir bu dB, dBm, dBi.... ?

dB	Power ratio
3	$1.995 \approx 2$
0	1

Nedir bu dB, dBm, dBi.... ?

dB	Power ratio
6	$3.981 \approx 4$
3	$1.995 \approx 2$
0	1

Nedir bu dB, dBm, dBi.... ?

dB	Power ratio
10	10
6	$3.981 \approx 4$
3	$1.995 \approx 2$
0	1

Nedir bu dB, dBm, dBi.... ?

dB	Power ratio
20	100
10	10
6	3.981 ≈ 4
3	1.995 ≈ 2
0	1

Nedir bu dB, dBm, dBi.... ?

dB	Power ratio
100	10 000 000 000
90	1 000 000 000
80	100 000 000
70	10 000 000
60	1 000 000
50	100 000
40	10 000
30	1 000
20	100
10	10
6	3.981 ≈ 4
3	1.995 ≈ 2
0	1

Nedir bu dB, dBm, dBi.... ?

dB	Power ratio
100	10 000 000 000
90	1 000 000 000
80	100 000 000
70	10 000 000
60	1 000 000
50	100 000
40	10 000
30	1 000
20	100
10	10
6	3.981 ≈ 4
3	1.995 ≈ 2
0	1
-1	0.794
-3	0.501 ≈ $\frac{1}{2}$
-6	0.251 ≈ $\frac{1}{4}$
-10	0.1
-20	0.01
-30	0.001
-40	0.000 1
-50	0.000 01
-60	0.000 001
-70	0.000 000 1
-80	0.000 000 01
-90	0.000 000 001
-100	0.000 000 000 1

Nedir bu dB, **dBm**, dBi.... ?

Miliwatt

dBm



Nedir bu dB, **dBm**, dBi.... ?

Miliwatt

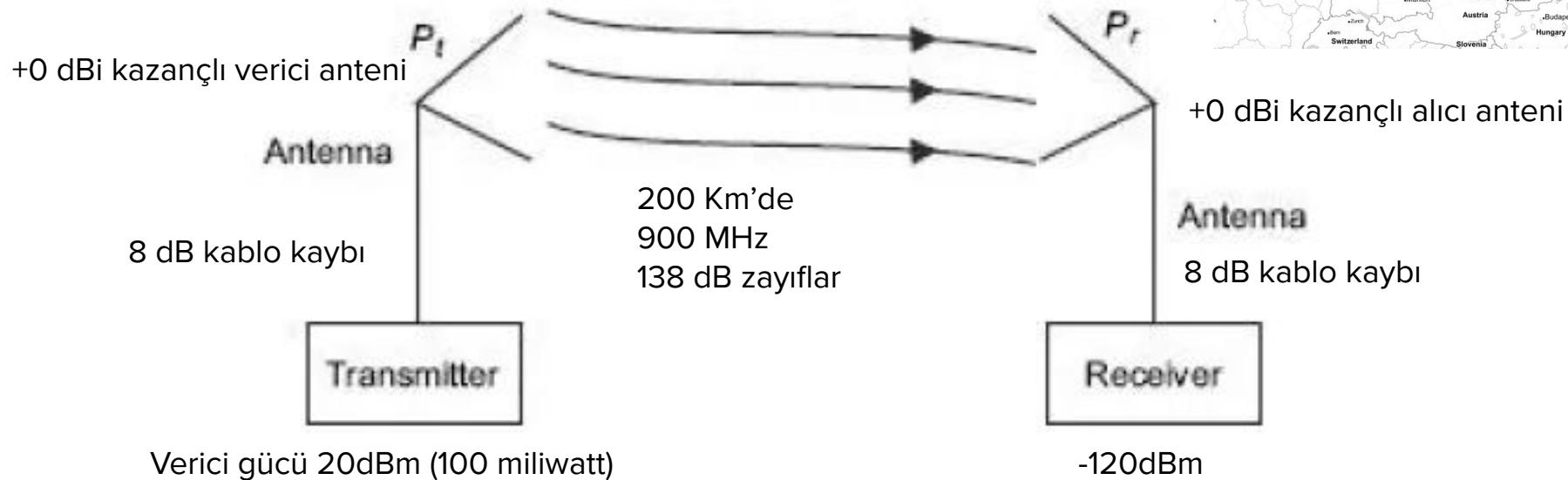
dBm



Basit bir kural 2 kat guc artisi 3 dBm artis demektir

1	0
2	3
4	6
20	13
40	16
2000 (2 watt)	33
80000 (80 watt)	49

-140 dBm alici ile LoRA nereye gider ?



$$20 - 8 + 0 - 138 + 0 - 8 (-124 \text{dBm}) > -140 \text{ sinyal duyulur}$$

TinyGS nedir ?

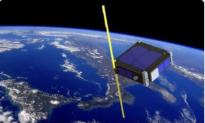
TINY GS BETA

Find Status Frequency



Norby
Norby, a 6U CubeSat of NGU (Novosibirsk State University), Russia. The device got its name in honor of the unique little robot Norby from the cycle of stories for children of the same name by Isaac Asimov.

LoRa@436.703 Supported



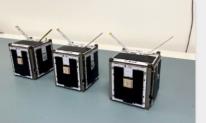
Flexible Experimental Embedded Satellite
FEES is a 6U CubeSat ($10 \times 10 \times 3$ cm) by the Italian GP Advanced Projects aimed at developing a low cost platform for In-Orbit Testing and Validation of Electronics components.

LoRa@437.2 Supported



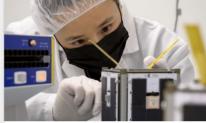
Satish Dhawan Satellite
Satish Dhawan SAT is a 3U cubeSat built by students at Space Kiddz India, an NGO working towards promoting Space Education among Children and Youth. The satellite carries a Radiation counter also LiU Utsa.

LoRa@435.5 Supported



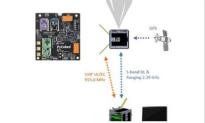
VR3X-A Littlefoot
VR3x is a NASA Ames, Stanford, and Carnegie Mellon mission demonstrating on-orbit topology recovery and distributed navigation measurements. 1U spacecraft built using PyCubed hardware.

LoRa@915.6 Supported



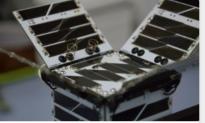
VR3X-B Petri
VR3x is a NASA Ames, Stanford, and Carnegie Mellon mission demonstrating on-orbit topology recovery and distributed navigation measurements. 1U spacecraft built using PyCubed hardware.

LoRa@915.6 Supported



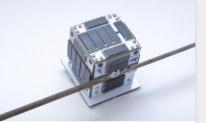
VR3X-C Cera
The V-R3x tech demo will demonstrate low-cost and low-SWaP autonomous high-speed cross-linking, reeling, coordinated reeling/measuring, and topology recovery utilizing three (3) 1U CubeSats.

LoRa@915.6 Supported



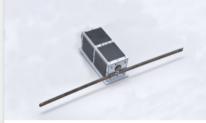
FossaSat-1
Main mission of the satellite is the testing of a new experimental RF chip modulation called LoRa. Features deployable solar panels and share educational data from space to the masses.

LoRa@436.7 Inactive



FossaSat-1B
Copy of the FossaSat-1 satellite already licensed and launching in November of 2019, it differs in the use of CW instead of RTTY and new solar panels.

LoRa@436.7 Inactive



FossaSat-2
The first is the general development of miniaturized and inexpensive satellite systems for space applications using off the shelf components. As amateurs, it is a huge step forward to demonstrate that amateurs can successfully design, manufacture & deploy a satellite in orbit for amateur investigation and use with a limited budget.

LoRa@436.7 Inactive



FossaSat-2B
Carrying an innovative new propulsion system, in partnership with tech start-up porcupine, LAIKA will be using their structurally-embedded electric propulsion system to demonstrate the viability of amateur built amateur FOSSASAT1, 1B and 2 amateur satellite, it will be launched into a LEO orbit with a short orbital life.

Launch Date: Dec 31, 2021 5:16 PM
LoRa@436.7 Future



PyCubed-1
Demonstrate smallest-ever spacecraft with full 3-axis attitude determination and control. Design, build, and launch a 50mm3 spacecraft to demonstrate the capability of 3-axis attitude determination and control. The spacecraft will be equipped with a camera, and LoRa radios for communication and ranging.

Launch Date: Dec 31, 2021 5:16 PM
LoRa@437.29 Future



SATILLA-2
The satellite's mission is an educational one. The aim is for the satellite to introduce the students to the "new-space" frontier - with a hands-on practice. The cubesat's LEDs will flash bright colors, and it will have a small integrated telescope. As the SATILLA-2 passes across the night sky.

Launch Date: Dec 31, 2021 5:16 PM
LoRa@437.25 LoRa@2401 Future

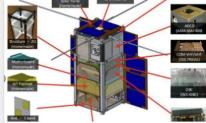


Diagram illustrating the internal components of a satellite, including the Bus, Propulsion, Power, and Payload sections.



Image showing a close-up view of a satellite's electronic circuit board.

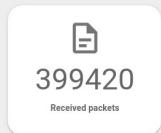
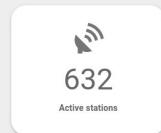
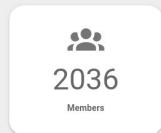
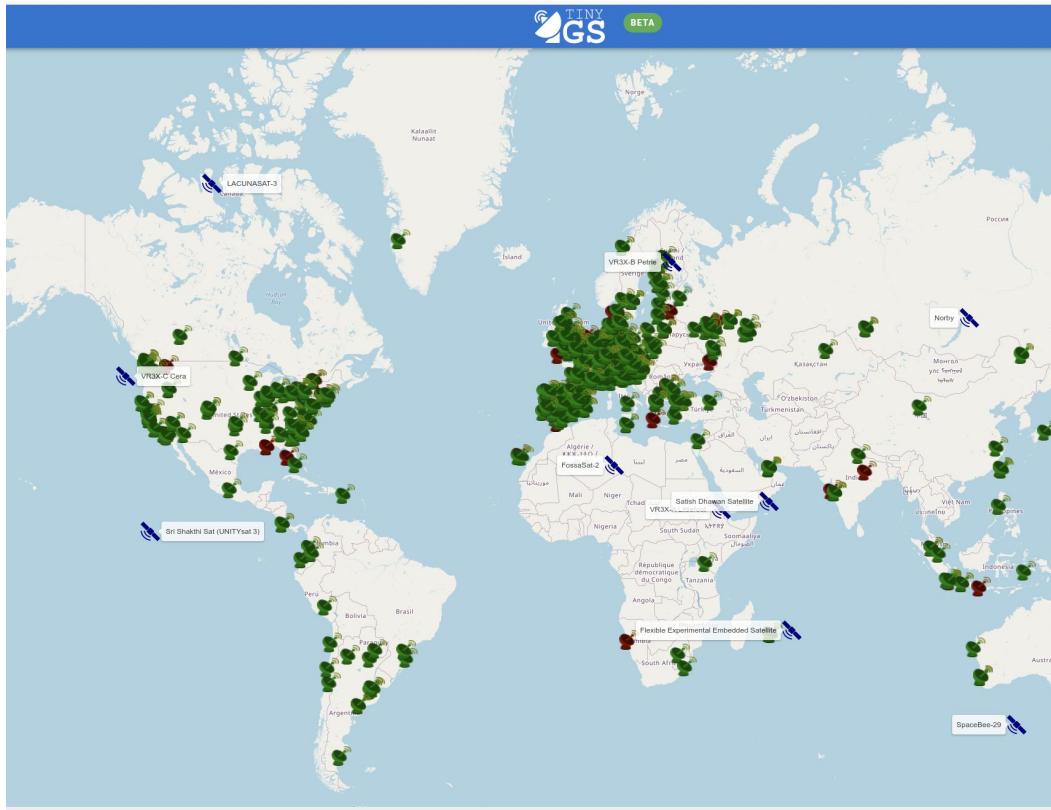


Image showing a satellite in orbit, with Earth visible in the background.



Image showing a close-up view of a satellite's exterior panel or thermal insulation.

TinyGS nedir ?



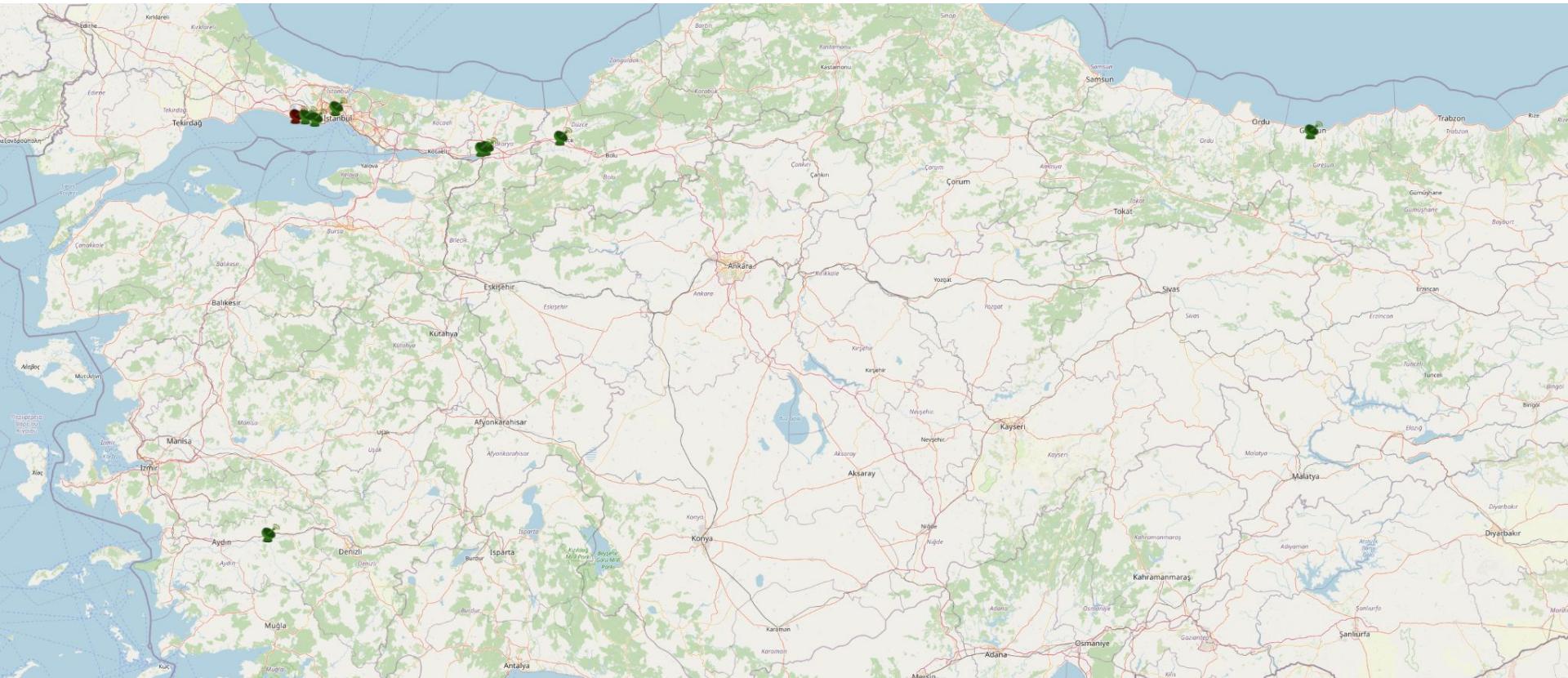
TinyGS istasyonları

Station Name	Listening	Version	Last packet	Auto tune	Test mode	Telemetry packets	Confirmed packets	
P2AGP	Norbi	2105260	5 hours ago	ON	OFF	3391	5242	
R1LB_WS	Listening	Norbi	2105260	Last packet 7 hours ago	Auto tune ON	Test mode OFF	Telemetry packets 2896	Confirmed packets 18124
D87FS_3	Listening	Norbi	2105260	Last packet 5 hours ago	Auto tune ON	Test mode OFF	Telemetry packets 2355	Confirmed packets 3434
wrkpTinyGS	Listening	Norbi	2105260	Last packet 5 hours ago	Auto tune ON	Test mode OFF	Telemetry packets 2236	Confirmed packets 2610
DK3WN	Listening	Norbi	2105260	Last packet 5 hours ago	Auto tune ON	Test mode OFF	Telemetry packets 2091	Confirmed packets 2686
MALAOANE	Listening	Norbi	2105260	Last packet 5 hours ago	Auto tune ON	Test mode OFF	Telemetry packets 2015	Confirmed packets 2383
Burguillos_GS2	Listening	Norbi	2105260	Last packet 5 hours ago	Auto tune ON	Test mode OFF	Telemetry packets 1908	Confirmed packets 2407
SM5RBJ_4	Listening	Norbi	2105260	Last packet 7 hours ago	Auto tune ON	Test mode OFF	Telemetry packets 1904	Confirmed packets 2299
PD1TOM	Listening	Norbi	2105260	Last packet 5 hours ago	Auto tune ON	Test mode OFF	Telemetry packets 1867	Confirmed packets 2178
DOSMO	Listening	Norbi	2105260	Last packet 5 hours ago	Auto tune ON	Test mode OFF	Telemetry packets 1722	Confirmed packets 2073
PA1SDB	Listening	Norbi	2105260	Last packet a day ago	Auto tune ON	Test mode OFF	Telemetry packets 1653	Confirmed packets 2159
M7BOR_TinyGS_433MHz	Listening	Norbi	2105260	Last packet 5 hours ago	Auto tune ON	Test mode OFF	Telemetry packets 1651	Confirmed packets 1995
PD7HW_01	Listening	Norbi	2105260	Last packet 5 hours ago	Auto tune ON	Test mode OFF	Telemetry packets 1640	Confirmed packets 1958
Seawiew	Listening	Norbi	2105260	Last packet 5 hours ago	Auto tune ON	Test mode OFF	Telemetry packets 1593	Confirmed packets 2034
DF1VB_2	Listening	Norbi	2105260	Last packet 5 hours ago	Auto tune ON	Test mode OFF	Telemetry packets 1421	Confirmed packets 1745
GroundStation_RIOJA	Listening	Norbi	2105260	Last packet 5 hours ago	Auto tune ON	Test mode OFF	Telemetry packets 1391	Confirmed packets 1733
EA1JK	Listening	Norbi	2105260	Last packet 5 hours ago	Auto tune ON	Test mode OFF	Telemetry packets 1366	Confirmed packets 1578
Q4APB	Listening	Norbi	2105260	Last packet 8 hours ago	Auto tune ON	Test mode OFF	Telemetry packets 1357	Confirmed packets 1733
ve3gto_TinyGS	Listening	Norbi	2105260	Last packet 20 minutes ago	Auto tune ON	Test mode OFF	Telemetry packets 1355	Confirmed packets 1355
I21ERR_70cm	Listening	Norbi	2105260	Last packet 5 hours ago	Auto tune ON	Test mode OFF	Telemetry packets 1327	Confirmed packets 1704
Rockenhausen_DK5WT	Listening	Norbi	2105260	Last packet 5 hours ago	Auto tune ON	Test mode OFF	Telemetry packets 1316	Confirmed packets 1781
PrydweinGS	Listening	SDSat	2105260	Last packet 5 hours ago	Auto tune ON	Test mode OFF	Telemetry packets 1264	Confirmed packets 1726
DH2SN	Listening	Norbi	2105260	Last packet 5 hours ago	Auto tune ON	Test mode OFF	Telemetry packets 1239	Confirmed packets 1472
CBRPAC	Listening	Norbi	2105260	Last packet 3 hours ago	Auto tune ON	Test mode OFF	Telemetry packets 1168	Confirmed packets 1168

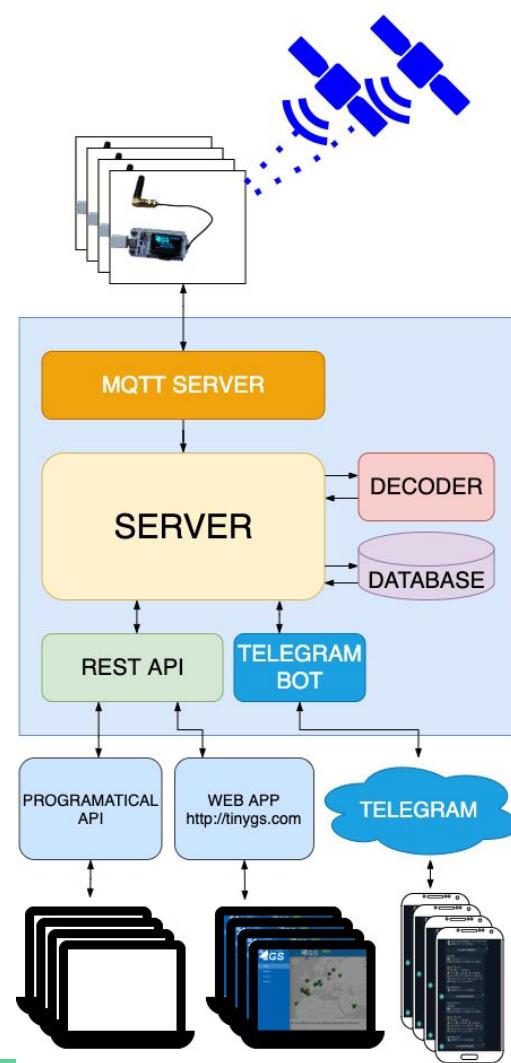
TinyGS verileri

⚡ Norby	Mode	Received by	2000mW 18°C 8335mV 1621mW 18°C 4075mWh 14042mAh 2574mW Board PMM: 12°C PAM: 16°C	↳ Solar Array X- 39°C Solar Array X+: 2°C BRK Reset: 2939 Frame: 29350
⚡ Norby	Mode	Received by	2000mW 16°C 8337mV 1634mW 16°C 4662mWh 14030mAh 3148mW Board PMM: 11°C PAM: 16°C	↳ Solar Array X- 36°C Solar Array X+: 3°C BRK Reset: 2939 Frame: 29348
⚡ Norby	Mode	Received by	2000mW 16°C 8335mV 1633mW 16°C 4695mWh 14016mAh 3324mW Board PMM: 10°C PAM: 14°C	↳ Solar Array X- 29°C Solar Array X+: 0°C BRK Reset: 2939 Frame: 29346
⚡ Norby	Mode	Received by	2000mW 15°C 8315mV 1651mW 15°C 4847mWh 14004mAh 2971mW Board PMM: 9°C PAM: 12°C	↳ Solar Array X- 21°C Solar Array X+: 0°C BRK Reset: 2939 Frame: 29344
⚡ Norby	Mode	Received by	2000mW 14°C 8328mV 1684mW 14°C 4927mWh 13989mAh 3638mW Board PMM: 8°C PAM: 11°C	↳ Solar Array X- 14°C Solar Array X+: 2°C BRK Reset: 2939 Frame: 29338
⚡ Norby	Mode	Received by	2000mW 16°C 8330mV 1659mW 16°C 5395mWh 13973mAh 4229mW Board PMM: 7°C PAM: 11°C	↳ Solar Array X- 9°C Solar Array X+: 3°C BRK Reset: 2939 Frame: 29336
⚡ Norby	Mode	Received by	2000mW 15°C 8300mV 1636mW 15°C 4264mWh 13916mAh 2961mW Board PMM: 3°C PAM: 6°C	↳ Solar Array X- 3°C Solar Array X+: 19°C BRK Reset: 2939 Frame: 29324
⚡ Norby	Mode	Received by	2000mW 16°C 8322mV 1841mW 16°C 6927mWh 13891mAh 6366mW Board PMM: 3°C PAM: 6°C	↳ Solar Array X- 3°C Solar Array X+: 4°C BRK Reset: 2939 Frame: 29322
⚡ Norby	Mode	Received by	2000mW 15°C 8291mV 1612mW 15°C 6502mWh 13835mAh 5770mW Board PMM: 2°C PAM: 6°C	↳ Solar Array X- 3°C Solar Array X+: -12°C BRK Reset: 2939 Frame: 29318
⚡ Norby	Mode	Received by	2000mW 9°C 8255mV 1642mW 9°C 3722mWh 13819mAh 1889mW Board PMM: 2°C PAM: 4°C	↳ Solar Array X- 7°C Solar Array X+: -10°C BRK Reset: 2939 Frame: 29316
⚡ Norby	Mode	Received by	2000mW 17°C 8226mV 1612mW 17°C 0mWh 13905mAh 2191mW Board PMM: 5°C PAM: 5°C	↳ Solar Array X- 9°C Solar Array X+: -17°C BRK Reset: 2939 Frame: 29276
⚡ Norby	Mode	Received by	2000mW 19°C 8228mV 1608mW 19°C 0mWh 13914mAh 2175mW Board PMM: 6°C PAM: 6°C	↳ Solar Array X- 8°C Solar Array X+: -16°C BRK Reset: 2939 Frame: 29274
⚡ Norby	Mode	Received by	2000mW 18°C 8232mV 1624mW 18°C 0mWh 13923mAh 2183mW Board PMM: 7°C PAM: 7°C	↳ Solar Array X- 4°C Solar Array X+: -15°C BRK Reset: 2939 Frame: 29268
⚡ Norby	Mode	Received by	2000mW 19°C 8245mV 1634mW 19°C 0mWh 13960mAh 2227mW Board PMM: 11°C PAM: 11°C	↳ Solar Array X- 5°C Solar Array X+: -10°C BRK Reset: 2939 Frame: 29260
⚡ Norby	Mode	Received by	2000mW 23°C 8248mV 1645mW 23°C 0mWh 13967mAh 2228mW Board PMM: 12°C PAM: 12°C	↳ Solar Array X- 2°C Solar Array X+: -10°C BRK Reset: 2939 Frame: 29254
⚡ Norby	Mode	Received by	2000mW 21°C 8252mV 1640mW 21°C 0mWh 13978mAh 2205mW Board PMM: 13°C PAM: 13°C	↳ Solar Array X- 0°C Solar Array X+: 0°C BRK Reset: 2939 Frame: 29252
⚡ Norby	Mode	Received by	2000mW 23°C 8256mV 1638mW 23°C 0mWh 13988mAh 2213mW Board PMM: 13°C PAM: 13°C	↳ Solar Array X- 2°C Solar Array X+: -7°C BRK Reset: 2939 Frame: 29250
⚡ Norby	Mode	Received by	2000mW 20°C 8297mV 1636mW 20°C 3194mWh 13960mAh 1110mW Board PMM: 12°C PAM: 15°C	↳ Solar Array X- 7°C Solar Array X+: 4°C BRK Reset: 2939 Frame: 29214
⚡ Norby	Mode	Received by	2000mW 19°C 8297mV 1637mW 19°C 3149mWh 13951mAh 927mW Board PMM: 11°C PAM: 14°C	↳ Solar Array X- 11°C Solar Array X+: 0°C BRK Reset: 2939 Frame: 29210
⚡ Norby	Mode	Received by	2000mW 16°C 8273mV 1631mW 16°C 3543mWh 13846mAh 1554mW Board PMM: 5°C PAM: 6°C	↳ Solar Array X- 5°C Solar Array X+: 1°C BRK Reset: 2939 Frame: 29192
⚡ Norby	Mode	Received by	2000mW 13°C 8321mV 1628mW 13°C 8035mWh 13809mAh 7027mW Board PMM: 3°C PAM: 6°C	↳ Solar Array X- 15°C Solar Array X+: 26°C BRK Reset: 2939 Frame: 29182

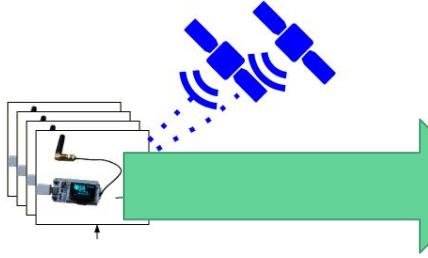
Türkiye'de TinyGS



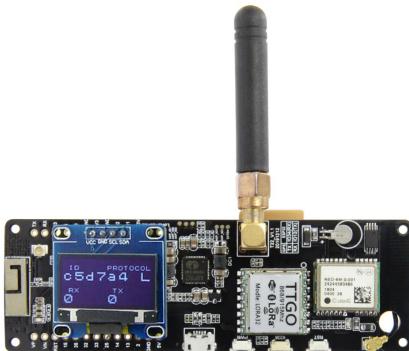
Nasıl çalışıyor ?



Donanımlar



- Heltec WiFi LoRa 32 V1 (433MHz & 863-928MHz versions)
- Heltec WiFi LoRa 32 V2 (433MHz & 863-928MHz versions)
- TTGO LoRa32 V1 (433MHz & 868-915MHz versions)
- TTGO LoRa32 V2 (433MHz & 868-915MHz versions)
- TTGO LoRa32 V2 (Manually swapped SX1267 to SX1278)
- T-BEAM + OLED (433MHz & 868-915MHz versions)
- T-BEAM V1.0 + OLED
- FOSSA 1W Ground Station (433MHz & 868-915MHz versions)
- ESP32 dev board + SX126X with crystal (Custom build, OLED optional)
- ESP32 dev board + SX126X with TCXO (Custom build, OLED optional)
- ESP32 dev board + SX127X (Custom build, OLED optional)



Biz ne satın aldık ?

<https://www.aliexpress.com/item/32845688586.html?spm=2114.13010708.0.0.6dd04c4dyaUU3P>



Seatechnology Store
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+ Follow
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Quantity:



-

1



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Money back guarantee



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€ 14,75



€ 15,17

DİKKAT !!!

433MHz modelini almalısınız

Kurulum Adımları

<https://github.com/G4lile0/tinyGS/releases>

Adresinden kurulum programını indirin ve çalıştırın

- You can follow the Quick Install guide here: <https://github.com/G4lile0/tinyGS/wiki/Quick-Start>
- You can follow the Platformio Guide here: <https://github.com/G4lile0/tinyGS/wiki/Platformio>
- You can follow the Arduino IDE Guide here: <https://github.com/G4lile0/tinyGS/wiki/Arduino-IDE>

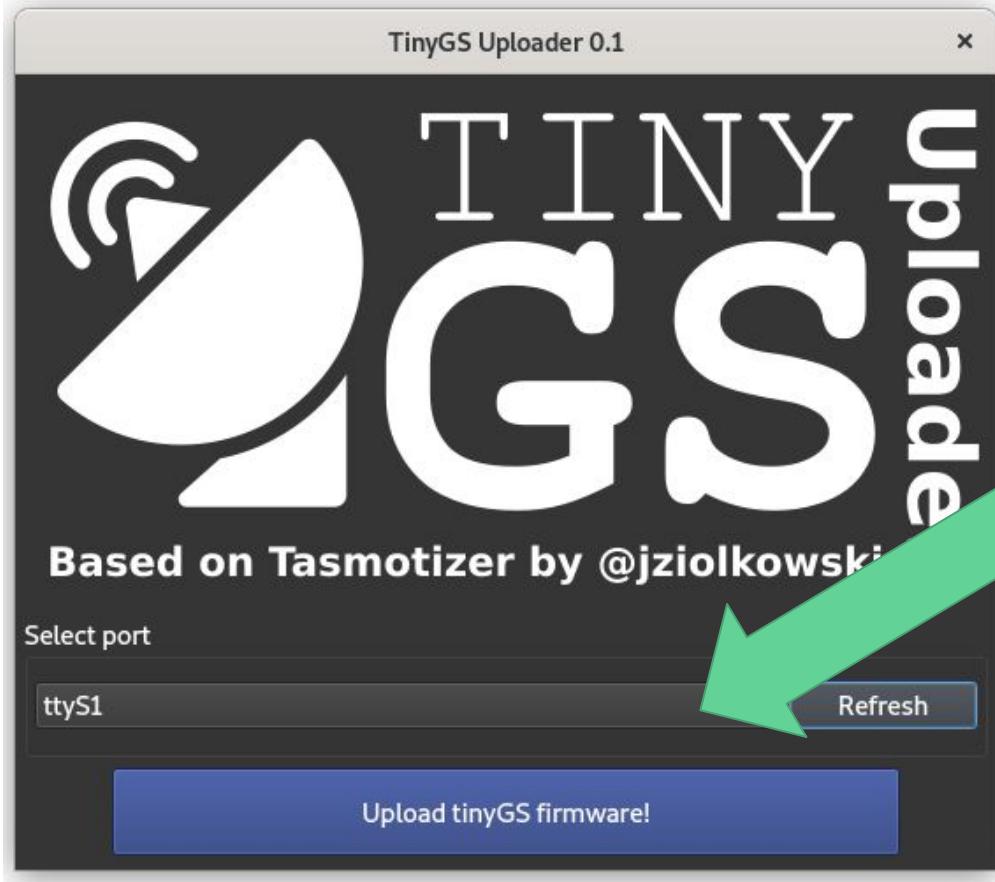
▼ Assets 4

 Firmware_21021701.OTA.bin	1.18 MB
 TinyGSUploader_LINUX	48.2 MB
 TinyGSUploader_MAC.zip	25.4 MB
 TinyGSUploader_WINDOWS.exe	29.8 MB

M\$ Windows uyarı mesajı



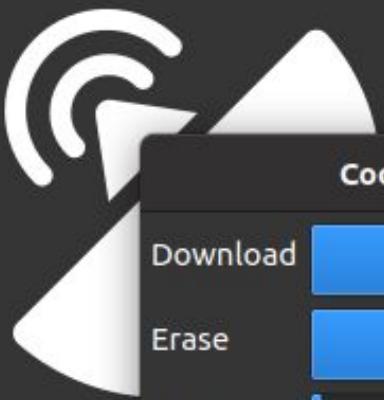
Seri portu tespit edin ve seçin



Denetim
masasında hangi
seri portun aktif
olduğunu bulun

COM1... COM12
vb....

TinyGS Uploader 0.1



TINY

Cooking your TinyGS station...



Download 100%

Erase 100%

Write 2%

Abort

Connected to ESP32-PICO-D4 (revision 1) [MAC: 50:02:...]

Select port

ttyUSB0

Refresh

Upload tinyGS firmware!

TinyGS Uploader 0.1



TINY GS Uploader

Done



Process successful!
Your station is now booting, it might take around 40
seconds the first time.

✓ OK

Based on Tasmotizer by @jziolkowski

Select port

ttyUSB0

Refresh

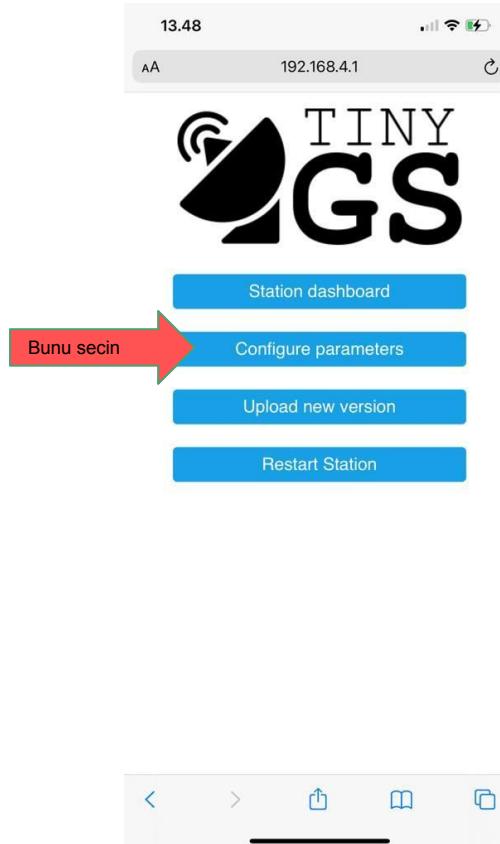
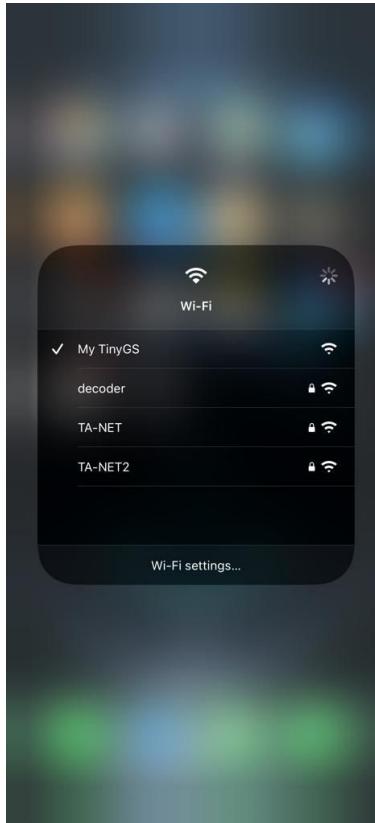
Upload tinyGS firmware!

ilk ayarlar



İlk ayarlar

- My TinyGS isimli WiFi ağına bağlanın
- Bilgisayarınızın adres çubuğuına 192.168.4.1 yazın



13.54

AA 192.168.4.1

TINY GS

System configuration

GroundStation Name (will be seen on the map)
OH2UDS

Password for this dashboard (user is **admin**)

WiFi SSID
TA-NET

WiFi password

Latitude (3 decimals, will be public)
60.

Longitude (3 decimals, will be public)
24.

Time Zone
Europe/Helsinki

NOTE: Groundstation can have many names

< >   

13.54

192.168.4.1

Time Zone
Europe/Helsinki

MQTT credentials (get them [here](#))

Server address
mqtt.tinygs.com

Server Port
8883

MQTT Username
171334

MQTT Password
5Kbu6

Board config

Board type
433 Mhz TTGO LoRa 32 v2

OLED Bright
100

Enable TX (HAM licence/ no preamp)

Allow Automatic Tuning

Allow sending telemetry to third party

Test mode

Automatic Firmware Update

Advanced Config (do not modify unless you know what you are doing)

Modem startup
{"mode": "LoRa", "freq": 436.703, "bw": 250.0, "sf": 10}

Advanced parameters

13.54

192.168.4.1

Board config

Board type
433 Mhz TTGO LoRa 32 v2

OLED Bright
100

Enable TX (HAM licence/ no preamp)

Allow Automatic Tuning

Allow sending telemetry to third party

Test mode

Automatic Firmware Update

Advanced Config (do not modify unless you know what you are doing)

Board Template (requires manual restart)

Modem startup
 {"mode": "LoRa", "freq": 436.703, "bw": 250.0, "sf": 10}

Advanced parameters

Apply

Firmware update

Firmware config version '0.05'

TELEGRAM botundan kullanıcı adı ve şifre almak

<https://t.me/joinchat/DmYSEIZahiJGwHX6jCzB3Q>



TinyGS Personal Bot
bot

The screenshot shows a Telegram message thread between a user and the 'TinyGS Personal Bot'. The bot has a green profile picture with 'GS BOT' and a blue status bubble. The user's messages are in light blue bubbles, and the bot's responses are in light green bubbles. The timestamp for all messages is '10:15 PM' except for the last one which is '10:18 PM'. The bot starts by welcoming the user and explaining its privacy policy. It then lists available commands: /mqtt, /stations, /delete, and /weblogin. When the user types '/mqtt', the bot provides private MQTT credentials. Finally, when the user types '/weblogin', the bot generates a passwordless login link.

Welcome to the tinyGS bot.

We do not store your phone, email or any personal information. However in order to connect to the MQTT server we have to generate some credentials that will be linked to your telegram account. If you continue using this bot, you accept that we store that data.

Also the information related to your stations will be publicly available on the [tinyGS web](#). You may at any time request access to your personal data, its correction, deletion or limitation contacting with the admins via telegram.

I hope you have a good time. And thanks for joining the TinyGS community.

These are the currently available commands:

/mqtt - Creates or edits your MQTT account
/stations - Shows the status of your stations
/delete - Deletes one station from the database.
/weblogin - Generates a login link for the web.

This are your own credentials for MQTT (These are private, do not share them!):
User: 1713343 [REDACTED]
Pass: 5Kbu6Gu [REDACTED]

Here is your passwordless login link. Do not share it!

<https://tinygs.com?loginToken=af904aeb2fdd13f76c44aff15&userId=1776317183>

13.54

AA 192.168.4.1

TINY GS

System configuration

GroundStation Name (will be seen on the map)
OH2UDS

Password for this dashboard (user is **admin**)

WiFi SSID
TA-NET

WiFi password

Latitude (3 decimals, will be public)
60.

Longitude (3 decimals, will be public)
24.

Time Zone
Europe/Helsinki

NOTE: coordinates can be changed later

< >   

13.54

192.168.4.1

Time Zone
Europe/Helsinki

MQTT credentials (get them [here](#))

Server address
mqtt.tinygs.com

Server Port
8883

MQTT Username
171334

MQTT Password
5Kbu6

Board config

Board type
433 Mhz TTGO LoRa 32 v2

OLED Bright
100

Enable TX (HAM licence/ no preamp)

Allow Automatic Tuning

Allow sending telemetry to third party

Test mode

Automatic Firmware Update

Advanced Config (do not modify unless you know what you are doing)

Board Template (requires manual restart)

Modem startup
 {"mode": "LoRa", "freq": 436.703, "bw": 250.0, "sf": 10}

Advanced parameters

13.54

192.168.4.1

Board config

Board type
433 Mhz TTGO LoRa 32 v2

OLED Bright
100

Enable TX (HAM licence/ no preamp)

Allow Automatic Tuning

Allow sending telemetry to third party

Test mode

Automatic Firmware Update

Advanced Config (do not modify unless you know what you are doing)

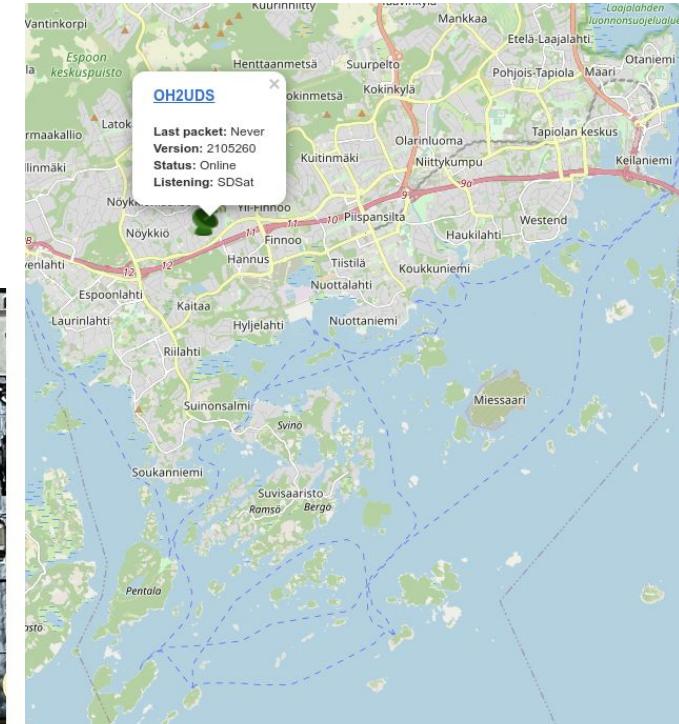
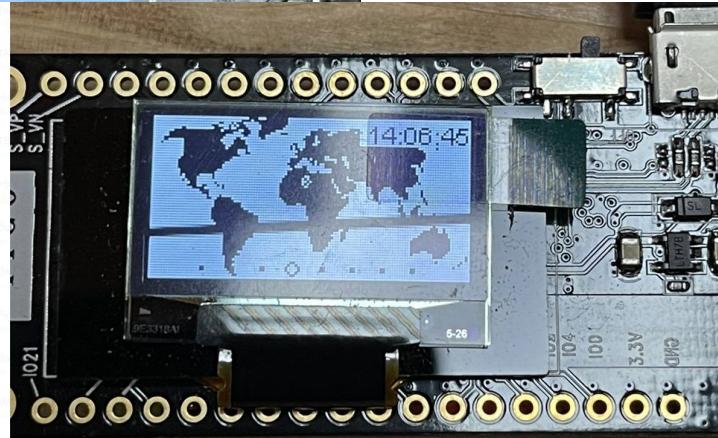
Board Template (requires manual restart)

Modem startup
 {"mode": "LoRa", "freq": 436.703, "bw": 250.0, "sf": 10}

Advanced parameters

 **Apply**

Firmware update
Firmware config version '0.05'



Web Yönetim Arayüzüünüz

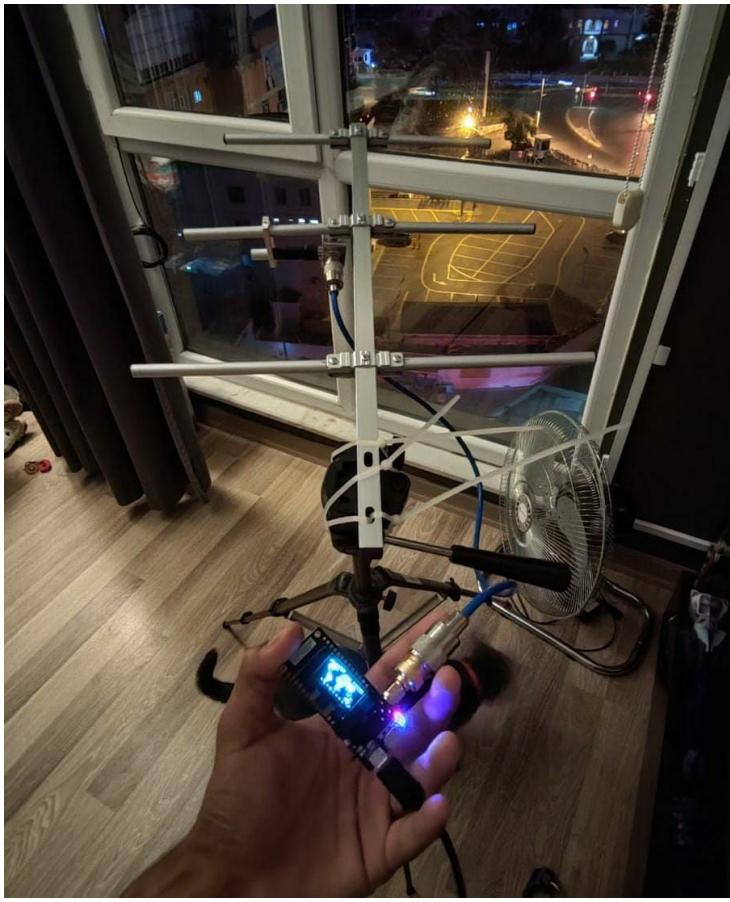


User Console

We are still working on this component ;)

We are still working on this component ;)

Station Name	Listening	Version	Last seen	Auto tune	Test mode	Telemetry packets	Confirmed packets
MarsOnEarthProject_OH2UDS	FEES	2103210	20 days ago	ON	OFF	0	1



TA1KEB Erdogan Bilgici



TESEKKURLER

**73's DE TA7W / OH2UDS
Baris**

