

Starlink Mini Dish, (Rev1)

MPN: UTA-231

Description

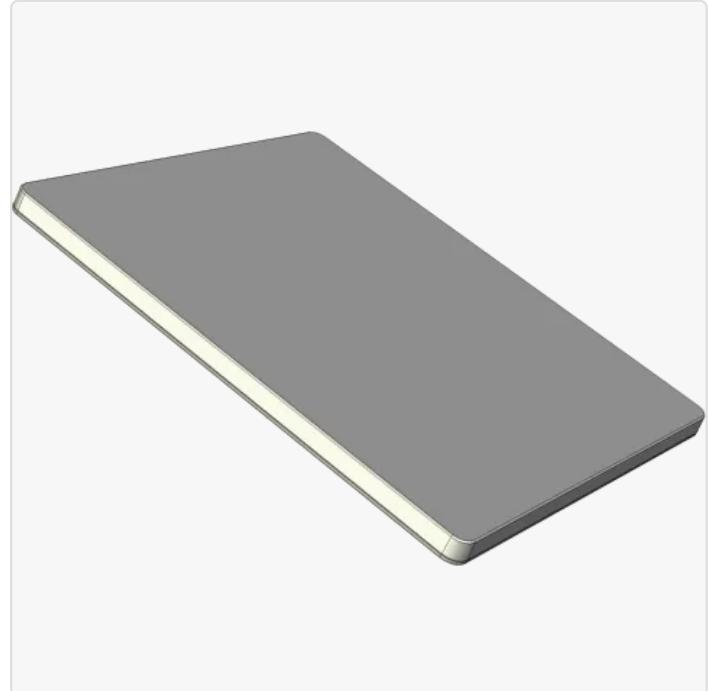
Starlink's Mini User Terminal, known simply as "Starlink Mini" is an all-in-one portable satellite terminal and WiFi, designed to fit in a backpack or small carry case for easy transport.

Like its predecessors, Starlink Mini is a satellite transceiver which uses digital beamformers and an Electronic Steerable Antenna to track and maintain connectivity with LEO satellites as they move overhead. Mini has a kick-stand, requiring the user to rotate the unit to the optimal position guided by the Starlink app. The unit is highly weather resistant, achieving an IP67 rating when using the supplied SPX connector (standard RJ45 ethernet reduces the weather rating).

A major advantage of Starlink Mini is the significantly reduced power consumption, averaging 25 to 40 W, along with its conventional DC power connector making connection from solar or battery simple. Being physically smaller the unit has a smaller phased array resulting in lower data ...

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Starlink UTs communicate using the X and Ku bands, receiving a 240 MHz channel between 10.7 and 12.7 GHz, and transmitting a 60 MHz channel back to the satellite between 14.0 and 14.5 GHz. While the UT should be theoretically capable of up to 720 Mbps downlink (64QAM), it realistically achieves data rates to a maximum of about 100 Mbps due to the smaller antenna used in the Mini.



Starlink

Starlink, initiated by US company SpaceX in January 2015, is a satellite network project aimed at providing satellite internet connectivity. The project's primary objective is to deliver broadband services globally, particularly to underserviced areas of the planet. Starlink's constellation comprises thousands of mass-produced small satellites, orbiting in low Earth orbit (LEO), working in ...

Network Interfaces

Wireless Interfaces

| | | | |
|------------------|--------------------------------|--------------------------|---------|
| Topology: | Multipoint Terminal/Subscriber | Max. Clients: | 1 |
| Max. Throughput: | 720 Mb/s | Latency: | 30 ms |
| Encryption: | AES-256 | Aggregate Channel Width: | 240 MHz |
| Beamforming: | 3DBF | | |

| Wireless Bands | Path Mode | Start Frequency | Stop Frequency | MIMO | Channel Width | Modulation | Max. Data Rate |
|----------------|-----------|-----------------|----------------|----------|---------------|------------|----------------|
| X Band | Receive | 10700 MHz | 12700 MHz | 1x1 SISO | 240 MHz | 64QAM | 720 Mb/s |
| Ku Band | Transmit | 14000 MHz | 14500 MHz | 1x1 SISO | 60 MHz | 64QAM | 180 Mb/s |

WiFi Module

| | | | |
|------------------|-----------------|---------------|-----|
| WiFi Chipset: | Mediatek MT7629 | Max. Clients: | 128 |
| No. Radios: | 2 | No. Antennas: | 6 |
| Max. Throughput: | 1300 Mb/s | | |

WiFi Radios

| Radio Name (Optional) | WiFi Standard | Frequency Bands | MIMO | Transmit Power | Beamforming |
|-----------------------|-----------------|-----------------|----------|----------------|-------------|
| Radio 1 | 802.11n | 2.4 GHz | 3x3 MIMO | 30 dBm | 2DBF |
| Radio 2 | 802.11ac Wave 1 | 5 GHz | 3x3 MIMO | 30 dBm | 2DBF |

Ethernet Interfaces

| Interface | Quantity | Function | Signalling |
|-------------|----------|----------|-----------------------|
| RJ45 Copper | 1 | LAN | 100BASE-T, 1000BASE-T |

Antenna Specifications

| | | | |
|------------------|-----------|------------------|---|
| Start Frequency: | 10700 MHz | Polarisation: | Left Hand Circular (LHCP), Right Hand Circular (RHCP) |
| Stop Frequency: | 14500 MHz | Input Impedance: | 50 |

Physical Specification

| | | | |
|-----------------------------|--------------------|-------------|--------------------------|
| Subtype: | Satellite Terminal | Dimensions: | 259 x 38.5 x 298.5 mm |
| Min. Operating Temperature: | -30 °C | Weight: | 1.16 kg |
| Max. Operating Temperature: | 50 °C | Mounting: | Starlink Mini Receptacle |
| Ingress Protection: | IP67 | | |

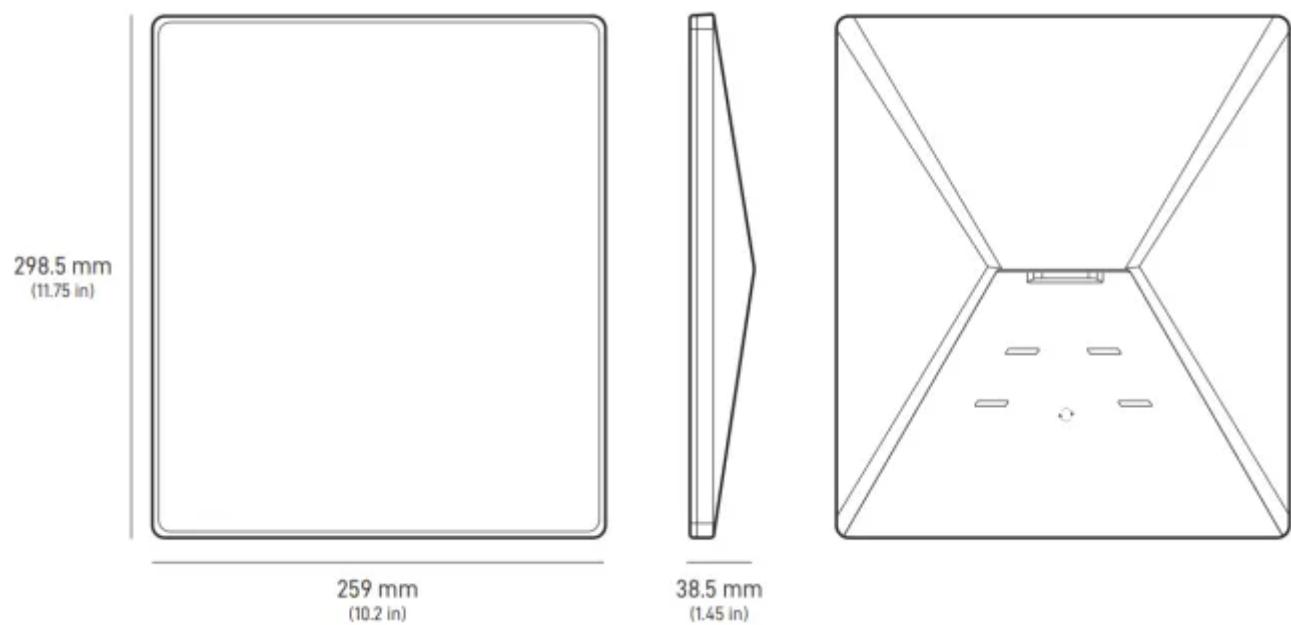
Power Specifications

| | | | |
|-------------------|----------------|----------------------|------|
| Max. Consumption: | 60 W | Typical Consumption: | 27 W |
| Power Options: | DC Power Input | | |

Power Interface

| Power Connector | Min. Input Voltage | Max. Input Voltage | Voltage Type |
|---|--------------------|--------------------|--------------|
| DC Coaxial, Type A, Female 5.5 x 2.1 mm | 12 V | 48 V | DC |

Drawing



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