Powertec Wireless Technology
ABN: 42 082 948 463
PO Box 1034, Ashmore City
Queensland, Australia, 4214
sales@powertec.com.au
1300 769 378

# Starlink Mini Dish, (Rev1)

MPN
UTA-231

**Description**

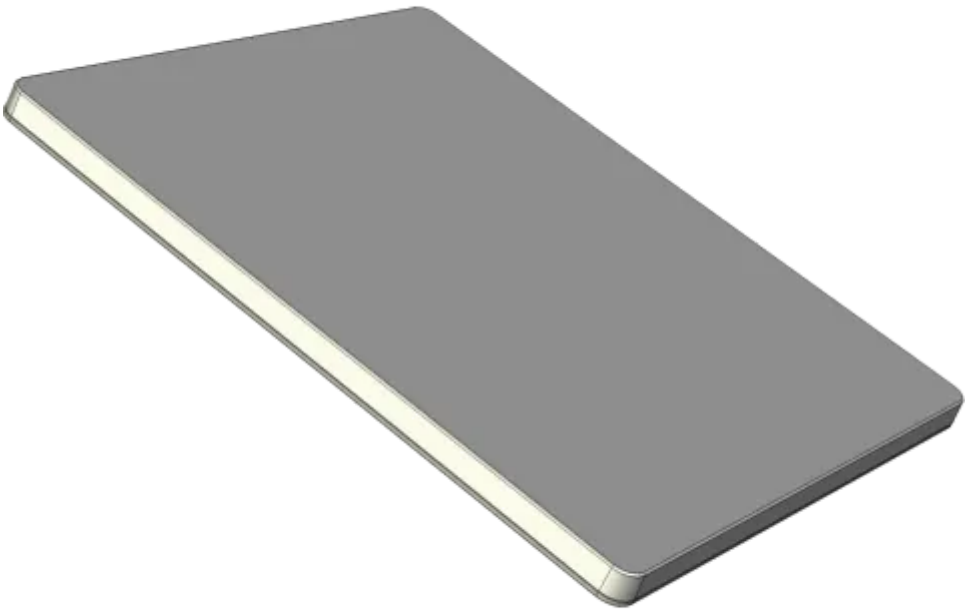
Starlink's Mini User Terminal, known simply as "Starlink Mini" is an all-in-one portable satellite terminal and WiFi, designed to fit in a backpack or small carry case for easy transport.

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 ...

Read More

Starlink UTs communicate using the X and Ku bands, receiving a 240 MHz channel between 10.7 and 12.7 GHz, and transmiting 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. Throughput
720 Mb/s
Encryption
AES-256
Max. Clients
1
Latency
30 ms
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

No. Radios

2

Max. Throughput

1300 Mb/s

Max. Clients

128

No. Antennas

6

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

Stop Frequency

14500 MHz

Polarisation

Left Hand Circular (LHCP), Right Hand Circular (RHCP)

Input Impedance

50 Ω

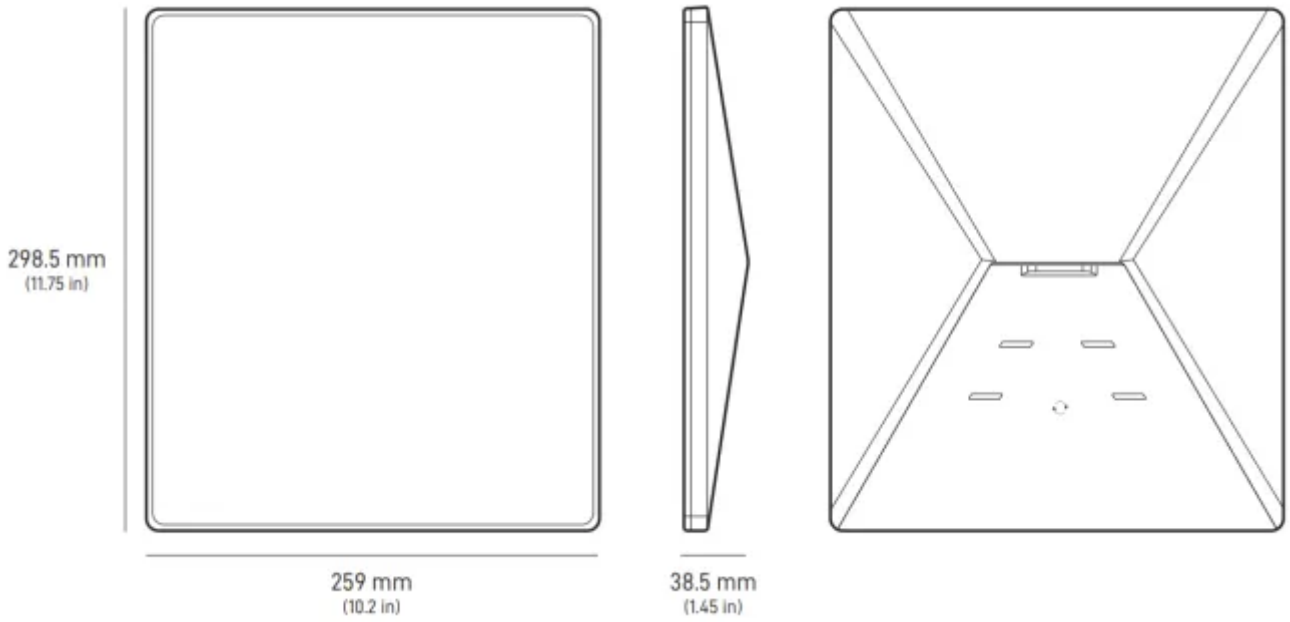
# Physical Specification

Subtype
Satellite Terminal
Min. Operating Temperature
-30 °C
Max. Operating Temperature
50 °C
Ingress Protection
IP67
Dimensions
259 × 38.5 × 298.5 mm
Weight
1.16 kg
Mounting
Starlink Mini Receptacle
Power Specifications
Max. Consumption
60 W
Power Options
DC Power Input
Typical Consumption
27 W

**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




Disclaimer: Although care has been taken to ensure the accuracy, completeness and reliability of the information provided, Powertec assumes no responsibility therefore. The user of the information agrees that the information is subject to change without notice. Powertec assumes no responsibility for the consequences of use of such information, nor for any infringement of third party intellectual property rights which may result from its use. IN NO EVENT SHALL POWERTEC BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, OR INCIDENTAL DAMAGE RESULTING FROM, ARISING OUT OF OR IN CONNECTION WITH THE USE OF THE INFORMATION.