

Fixed IoT Ka Terminal



ST Engineering iDirect's Fixed IoT terminal is part of a unique line of satellite terminals that brings together innovative technology to enable low data rate IoT with highly competitive services for existing and new markets. The Fixed IoT terminal is a low cost, compact satellite device based on a state-of-the-art design, ideal for mounting on objects such as buildings, poles or other fixed mounting positions with a clear view to the satellite. Designed for outdoor applications, the Fixed IoT Ka Terminal features an integrated satellite modem with a low profile patch antenna, no moving mechanical parts, fast synchronization, and low power consumption. The device supports Power-over-Ethernet (PoE) for remote powering or adaptation to solar power configurations. The Fixed IoT Ka terminal is intended for deployment in extremely remote regions for LDR applications in Utilities, Pipeline and other Energy markets as well as Mining or Agricultural sensor backhaul applications with low data rates communication services over Ka-GEO satellites.

The terminal features manual pointing and acquisition of signals using an intuitive smartphone app and provide versatile connectivity options using Wi-Fi, Bluetooth Low Energy (BLE) for phone, tablets and sensors as well as wired options for IoT device and sensor gateways such as LoRaWAN.

Markets

Utilities
Energy
Mining
Agriculture
Government

Main Features

- Ka-Band terminal including modem and flat panel antenna design
- Ideal for low data rates: 10 -100kbps
- Outdoor housing IP67 compliant
- PoE powered
- Versatile connectivity options Wi-Fi, BLE
- Compact and lightweight design
- Low power consumption
- Easy installation via smartphone app
- Can be installed by non-professionals
- Fast rain fade recovery



Fixed Modem Specification

Modulation*	BPSK, QPSK, 8PSK
Data Burst Rates	10Kbps - 100Kbps
FEC Type, Rates	Turbo, 1/3, 5/12, 1/2, 2/3
Ka Transmit Range	27.5GHz to 30GHz
Ka Receive Range	17.7GHz to 20.2GHz
Receiver Lock Time	50msec

*For LDR only BPSK is used

Antenna Specifications

Type	Patch
EIRP	21 dBW
G/T	-4 dB/K
Polarization	R-L or L-R
Beam width	7°
Receiver Eb/No	1.5db with FEC 1/3

Interfaces

Data	Wi-Fi
	BLE
	Ethernet

Mechanical and Environmental

Dimensions	D 24.2 x W 17.4 x H 5.51 cm (D 9.53 in x W 6.85 in x H 2.17 in)
Weight	2.2 kg (4.13 lbs)
Mounting	VESA compliant
Operating Temp.:	-20 to +55°C (-4 ° to + 131 °F)
Water Resistance	IP67

Power Supply

Power	PoE
Power Consumption	Idle 7W Rx only - 13W Full Rx/Tx mode - 40W