Fixed IoT Ka Terminal

ST Engineering iDirect's Fixed IoT Ka 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 Ka 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 devices 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/MDR applications in Utilities, Pipeline and other Energy markets as well as Mining or Agricultural sensor backhaul applications with low data rates communication a services over Ka-GEO satellites.

The terminal features manual pointing and acquisition of signals using an intuitive smartphone app and provide versatile connectivity option using Wi-Fi for phone, tablets and sensors as well as wired PoE Ethernet for connecting to remote IoT aggregation, Edge Computing, or an IoT Sensor.

Markets

Utilities
Energy
Mining
Agriculture
Government

Main Features

- Ka-Band terminal with integrated modem and flat panel antenna design
- Ideal for low data rates: 7.33 -200Kbps
- Outdoor housing IP67 compliant
- Versatile Ethernet and WiFi interfaces
- Compact and lightweight design
- Low power consumption with PoE++
- Easy installation via smartphone app
- Can be installed by non-professionals
- Fast rain fade recovery

iDIRECT

Fixed Modem Specification

Modulation	BPSK
Data Burst Rates	7.33Kbps - 200Kbps
FEC Type, Rates	Turbo 1/3
Ka Transmit Range	27.5GHz to 30Ghz
Ka Receive Range	17.7Ghz to 20.2Ghz
Receiver Lock Time	50msec
Frequency Switching Time	1msec
Chip Rate	110 - 3125 Kcps
Spreading Factor	5 - 64 (7dB - 18dB)
Eb/n0 Threshold	1.5dB

Antenna Specifications

Type	Patch
EIRP	51.8 dBW
G/T	-3.2 dB/K
Gain	20.8 dBi
Noise	3.2 dB
Beam WIdth	12°
Receiver Eb/No	1.5db

Interfaces

WiFi	802.11 b/g/n 2.4Ghz
Ethernet	Ethernet with PoE 802.11bt / PoE++

Mechanical and Environmental

Dimensions	D 24 x W 17 x H 5.0 cm (D 9.44 in x W 6.69 in x H 1.96 in)
Weight	2.0 kg (4.40 lbs)
Mounting	VESA compliant
Operating Temp.:	-20° to +55°C (-4 ° to + 131 °F)
Water Resistance	IP67

Power Supply

Power	PoE++ / 802.3bt
Power Consumption	56 VDC @ 0.9A POE
	16.5 Watts Nominal (Rx only)
	38 Watts Max Full Rx/Tx mode
	>50 Watts Power Supply Mandatory (to allow for TX spikes)