

# Dynamic IoT Ka Terminal



The ST Engineering iDirect's Dynamic IoT terminal is part of a unique line of satellite terminals that features innovative technology to enable low data rate IoT with highly competitive services for existing and new markets. The Dynamic IoT terminal is a low cost, compact satellite device based on a state-of-the-art design that enables portable itinerant operations, or fully mobile uses cases with low data rates communication services over Ka-GEO satellites.

Featuring an integrated satellite modem with a low profile patch antenna, no moving mechanical parts, fast synchronization, and low power consumption the Dynamic IoT terminal is optimized for mobile LDR use cases.

The Dynamic IoT Ka terminal features Wi-Fi and Bluetooth interfaces to connect to the user's end devices and/or sensors and also includes an embedded Lithium-ion rechargeable battery to enable satellite connection from any remote location without requiring an external power source, making the terminal fully versatile for remote operations.

The Dynamic IoT Ka terminal is ideal for Comms-on-the-Pause (COTP) portable or itinerant First-Responders and NGO use-cases that require quick deployment with sensor and IoT device connectivity. Optional mobility add-on license enables fully mobile Comms-on-the-Move (COTM) use cases such as Vehicle and Fleet Tracking/Management, Agriculture/Construction sensor aggregation application and Fishing Fleet applications such as vessel tracking and catch reporting.

## Markets and Applications

First Responder  
COTM/COTP  
Agriculture/ Construction  
Vehicle/Fleet Tracking  
Maritime/ Fishing  
Cargo Tracking

## Main Features

- Ka-Band terminal with integrated flat panel antenna design
- Ideal for low data rates: 10 -100kbps
- Compact and lightweight design
- Wi-Fi, Bluetooth, Ethernet, and Serial interfaces
- Low power consumption
- Easy installation via smartphone app
- Can be installed by non-professionals
- Fast blockage recovery



## Dynamic Modem Specifications

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	50 msec
Frequency Switching Time	1 msec

\*For LDR only BPSK is used

## Antenna Specifications

Type	Active Phased Array
EIRP	21 dBW @ 0° scan 18 dBW @ 60° scan
G/T	-3 dB/K @ 0° scan -6 dB/K @ 60° scan
Polarization	-R-L / L-R, Switchable on the fly
Beam width	13° @ 0° scan
Receiver Eb/No	1.5dB with FEC 1/3
Angle Coverage	AZ: 360°
Elevation Coverage relative to terminal surface	EL: 0° (Relative to Zenith) to 60°

## Interfaces

Data	Wi-Fi BLE Ethernet Serial (future)
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## Mechanical and Environmental

Dimensions	D 29.1 x W 18.7 x H 4.2 cm (D 11.45 in x W 7.36 in x H 1.65 in)
Weight	2.3kg (5.07 lbs)
Mounting	VESA compliant
Operating Temp.:	-40 to +55°C ( -40 ° to + 131°F)
Shock:	MIL-STD 810, Method 516
Vibration:	SAE J1455
Water Resistance	IP67

## Power Supply

Power	12-24 VDC input range Wake Up on LAN
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Specifications subject to change without notice