LLF021427

specification

product name	LLF021427
version number	3.0
date	2025.5.1

major function：

The LLF021427 utilizes a software-defined radio (SDR) architecture to establish a mesh network, with power amplifiers of varying capacities enabling flexible range adjustment.

Supports MESH networking with up to 10MHz bandwidth and 20Mbps throughput. Features smart frequency selection, AES256 encryption, and range-extended mode. Additionally supports smart frequency selection, heterogeneous frequency networking, and signal gun interference avoidance, ensuring true interference resistance.

parameter valve：

definition	parameter	definition	parameter
transmission distance	Ground-to-air 20 km (line of sight)	interface type	Network port*1\\232*2\\TTL*1 (default is the above interface, it can also be reused as 485/422 interface, the two interfaces cannot coexist)
service frequency	1.4GHz (customizable)	bandwidth of transmission	Single node maximum 2 0Mbps
transmitting power	0 - 27 dBm±2	Configuration Tools	Web interface
channel bandwidth	1.25MHz/2.5MHz/5MHz/10MHz	service voltage	24V
receiving sensitivity	10MHz -103dBm	maximum current	1A
	5MHz -104dBm	maximum power	10±2W
temperature range	Storage: -40˚C to +85˚C	size	87.9 x 50 x 26.6 mm
	Operating temperature: -40˚C to +55˚C	weight	

Devices in the 0.7-2.7GHz frequency band can be customized to meet customer requirements and on-site conditions.

*Supports up to 3 nodes and 1 or 2 hops.

Typical application:

Typical Application of 3-node 2-hop Mesh Ad-hoc Network

Interface parameters and indicator lights:

The LLF021427 indicator light faces upward, with the following components arranged from bottom to top:

Dual-color indicator light: Green indicates normal power supply (light on), while red signals FPGA program completion (light off).

Dual-color light 2: 10M network port indicator.

Dual-color light 3: 100Mbps network port indicator.

Dual-color indicator 4: The light remains on after network connection establishment. Bright green indicates strong signal, yellow indicates moderate signal, and red indicates weak signal. It turns off when no connection is established.

Dual-color indicator 5: Connection indicator (green): The green light illuminates upon connection establishment and turns off otherwise. A blinking red light signals system anomaly requiring automatic reboot.   Dual-color indicator 4: The light remains on after network connection establishment. Bright green indicates strong signal, yellow indicates moderate signal, and red indicates weak signal. It turns off when no connection is established. Dual-color indicator 5: Connection indicator (green): The green light illuminates upon connection establishment and turns off otherwise. A blinking red light signals system anomaly requiring automatic reboot.

The LLF021427 indicator light faces upward, with the following components from left to right:
Radio frequency port 2: MMCX-KWE bent-pin female connector package.
Radio frequency port 1: MMCX-KWE bent-pin female connector package.

LLF021427 features a J21-pin aviation connector at its base, including power supply, 1 Ethernet port, and 3 serial ports.

Structure diagram (unit: mm):

Accessory information:

name	specifications and models	quantity	remarks
J21 tail line	J21	1	interface line