

## 60mJ Laser Target Designator with Rangefinder

Model:JIO-D60M



JIO-D60M Laser Target Designator with Rangefinder is an airborne equipment that provides sufficient guidance reflection energy for laser semi-active guided bombs and missiles, continuously tracking and implementing laser irradiation on targets. Communication is achieved through the RS422 communication interface, which has the characteristics of outstanding performance and simple operation. It has a wide range of application scenarios and the following advantages: small size, light weight, low power consumption, suitable for various platform environments such as airborne, vehicular, and shipborne. Laser wavelength: 1064nm, direct contact with the human eye is prohibited.

### Product Functions

Laser ranging function and real-time reporting distance value;

Power polarity reverse protection, over current and over voltage circuit protection;

Can be laser irradiated at the built-in set frequency of 20Hz;

Can be triggered by external synchronization signal for Laser Target Designator and Rangefinder (laser irradiation (external synchronization) state);

Overtemperature alarm function: When the working temperature of the Laser Target Designator and Rangefinder is too high to continue emitting laser, it can send the overtemperature alarm status information to the upper computer and protect the safety of the Laser Target Designator and Rangefinder.

laser output times reporting function;

Laser software version features

### Product features:

1. Wide temperature non-thermal system design, strong anti-tuning ability, good optical axis stability, can achieve a wide temperature range of work;

2.Using unique pulse detection and automatic compensation technology, high energy stability;

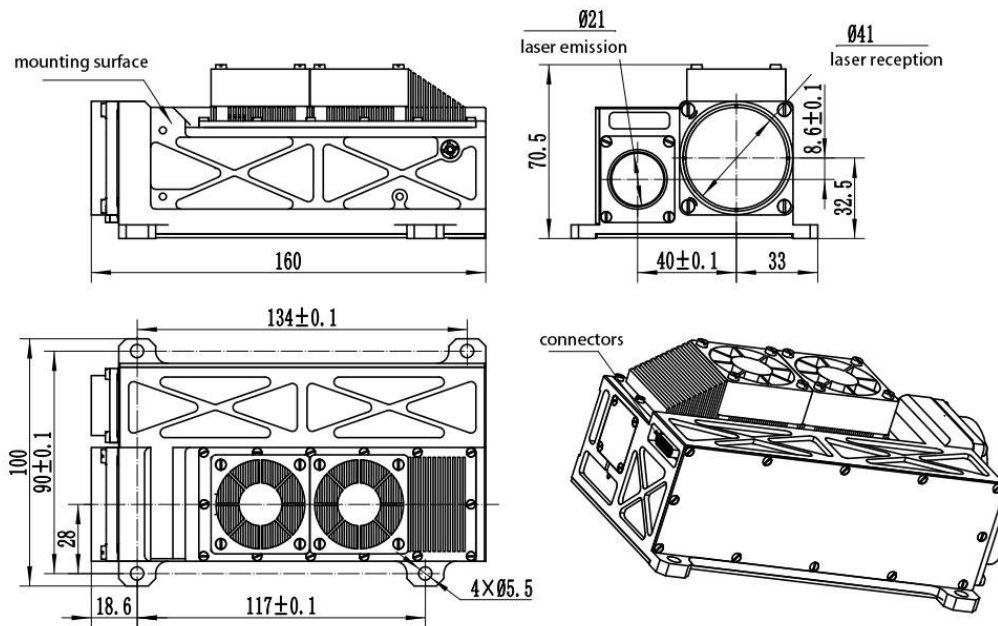
3.Choose active Q-switching pump mode, fine adjustment step, high coding precision.

## Product performance indicators

Item	Index data
Model	JIO-D60M
Wavelength	1064nm±10nm
Ranging capability	≥8000m
Ranging Blind Zone	≤200m
Ranging accuracy	±2m
Accuracy rate	≥98%
Distance Resolution	≤50m
Distance Selection	≥200m
Operating Frequency	Once、1Hz、5Hz、20Hz
Laser continuous ranging time	≥30min(1Hz)、≥10min(5Hz)
Laser continuous irradiation time	Short cycle irradiation: light output 35s rest 30s Long cycle irradiation: light output 60s rest 60s
Weight	≤1000g
Dimension	≤160mm×100mm×71mm
Voltage	18V ~ 32V
Power Consumption	Standby power consumption: ≤10W Average power consumption: ≤60W
Environmental adaptability	Working Temperature: -40℃ ~ 60℃ Storage temperature: -55℃ ~ 70℃
Average energy	≥60mJ
Energy Stability	≤8%(Statistics after 2 seconds of light output)
Angle of divergence	≤0.4mrad
Pulse width	15ns±5ns

Irradiation distance	≥5100m
Encoding mode	Precise frequency encoding, external synchronization
Encoding frequency	45ms~65ms
Encoding precision	≤±2.5μs

## Mechanical and optical interfaces



## Electrical interface

Bus: RS422, baud rate 115200bps;

Power supply: 28V, power supply normal operating range 18V ~ 36V;

Power consumption: average power consumption ≤ 60W, standby power consumption: ≤ 10W;

Laser Target Designator and Rangefinder end connector model J30J-21ZKP, the upper computer end connector model J30J-21TJL, Laser Target Designator and Rangefinder end power supply and communication port pin definition is shown in Table 1;

Table 1 Laser Target Designator and Rangefinder side power supply and communication port pin definition

Serial number	Name	Description	Remarks
1-5	+28V		
12-16	+28V_GND		
6	T+	Laser Illuminator Send	RS422 communication
7	T-		

Serial number	Name	Description	Remarks
8	R-	Laser Illuminator Reception	
9	R+		
10	GND	Communication ground	
17	SYNC_IN+	Laser Illuminator Reception	Sync signal input
18	SYNC_IN-		
19	SYNC_GND	Laser Illuminator Output	External synchronization output reserved
20	SYNC_OUT+		
11	control signal+	Power-up control	Power-on control reserved
21	control signal_GND		