



#### Item specifics

Brand Name: RCmall

Drones Accessories Type: Drone Boxes

Package: Yes Model Number: FZ3000 FZ3065 DR1683 FZ0972

**Product Description** 

# RCmall TFmini/TF02 Lidar Range Finder Sensor Module OR Ublox NEO M8N GPS Compass Module for Pixhawk4 Flight-Controller OR UNO R3 FZ3000 FZ3065 DR1683 FZ0972

#### Description

#### **TFmini Lidar Range Finder Sensor Module**

TFmini is a single-point micro ranging module and could be widely used in the integrated application of various drones, UAVs, Robots and industrial equipments. It is based on ToF (Time of Flight) principle and integrated with unique optical and electrical designs, so as to achieve stable, precise, high sensitivity and high-speed distance detection.

#### Features:

Operating Range: 0.3-12m

Maximum operating range at 10% reflectivity: 5m

Applicable voltage range: 4.5-6V

Average power consumption: 0.12W

Acceptance angle: 2.3°



Parity bit:0

Minimum resolution ratio: 5mm

Light sensitivity: 70,000lux

Accuracy: 1% (less than 6m), 2% (6m-12m)

Size: 42mm \* 15mm \* 16mm

Weight: 6.1g

Main applications: Drone altitude holding and terrain following Machine control and safety sensor Robot distance

detection

Certification:CE,FCC,ROHS

#### Ublox NEO M8N GPS Compass Module for Pixhawk4 Flight-Controller

Features:

NEO-M8N GPS Module

Receiver type 72-channel u-blox M8 engine

GPS/QZSS L1 C/A, GLONASS L10F, BeiDou B1

SBAS L1 C/A: WAAS, EGNOS, MSAS Galileo-ready E1B/C (NEO-M8N)

Nav. update rate1 Single GNSS: up to 18 HZ

Concurrent GNSS: up to 10 Hz Position accuracy2 2.0 m CEP

Acquisition2 Cold starts: 26 s

Aided starts: 2 s

Reacquisition: 1.5 s

Sensitivity2 Tracking & Nav: -167 dBm

Cold starts: -148 dBm

Hot starts: -156 dBm

Assistance AssistNow GNSS Online

AssistNow GNSS Offline (up to 35 days)3

AssistNow Autonomous (up to 6 days)

OMA SUPL & 3GPP compliant

Oscillator TCXO (NEO-M8N/Q),

Crystal (NEO-M8M)

RTC crystal Built-In

Noise figure On-chip LNA (NEO-M8M). Extra LNA for lowest noise figure (NEO-M8N/Q)

Anti jamming Active CW detection and removal.

Extra onboard SAW band pass filter (NEO-M8N/Q)

Memory ROM (NEO-M8M/Q) or Flash (NEO-M8N)

Supported antennas Active and passive

Odometer Travelled distance

Data-logger For position, velocity, and time (NEO-M8N)

Specifications:

GPS line order:

black wire: GND

Green line: TX Yellow Line: RX

Red Line: + 5V

White Line: SDA

Orange Line: SCL

Diameter: 53mm/2.1 inch

Delivery size: 93 x 132mm/3.7 x 5.2 inch

Net weight: 31g

#### TF02 LIDAR LED Rangefinder Single Point Ranging IP65 22M Benewake for Arduino Pixhawk Drone

TF02 is a newly developed product based on the widespread application

experience of TF01. It possesses a higher performance and is applicable to more fields. On the basis of preserving multiple advantages from the last generation,





stem, product structure, fusion algorithm, a 22-meter-long range and a more stable n innovative production process and multiple

software and hardware optimizations, Benewake upgrades LiDAR truly to a consumer level and makes it applicable in numerous fields.

Feature:

Protection grade reaches IP65 Anti-corrosive against pesticide Small in size and light

Major Applications:

Drone altitude holding and terrain following Machine control and safety sensors Distance measuring instrument

### UNO R3 ATmega328P ATmega16U2 with USB Cable Compatible for Arduino

Description:

Microcontroller: ATmega328P

Operating Voltage: 5V

Input Voltage (recommended): 7-12V

Digital I/O Pins: 14 (of which 14 provide PWM output)

Analog Input Pins: 6

DC Current per I/O Pin: 40 mA

DC Current for 3.3V Pin: 50 mA

Flash Memory: 32 KB (ATmega328) of which 0.5 KB used by bootloader

SRAM: 2 KB EEPROM: 1 KB Clock Speed: 16 MHz

#### Package Includes:

#### **TFmini**

1 X TFmini Lidar Range Finder Module

1 X Cable

#### TFminiX2

2 X TFmini Lidar Range Finder Module

2 X Cable

#### **TFmini and GPS Module**

1 x NEO-M8N GPS Module

1 x Two-sided sticker

1 X TFmini Lidar Range Finder Module

1 X Cable

#### **GPS Module**

1 x NEO-M8N GPS Module

1 x Two-sided sticker

#### TF02

1 X Benewake TF02 LIDAR LED Rangefinder Single Point Ranging IP65 22M

#### TFmini and UNO R3

1 X TFmini Lidar Range Finder Module

1 X Cable

1 X UNO R3 ATmega328P

1 X USB Cable

#### UNO R3

1 X UNO R3 ATmega328P

1 X USB Cable

#### **Product Pictures**

#### **TFmini Lidar Range Finder Sensor Module**









# TFmini Micro Lidar Module















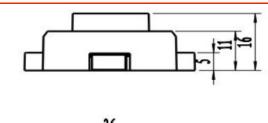












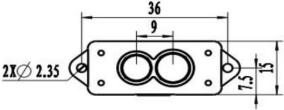


Fig. 6 TF\_mini left module size drawing (unit: mm)

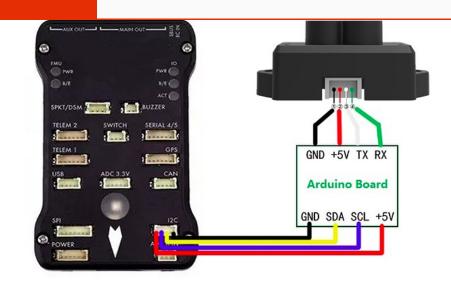


















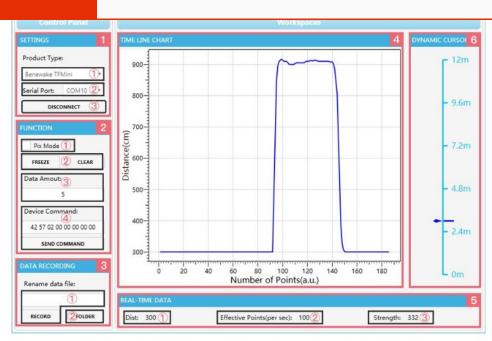
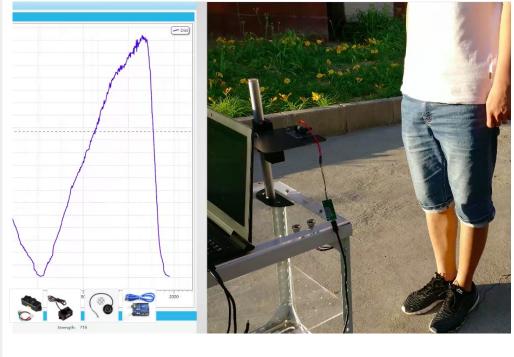


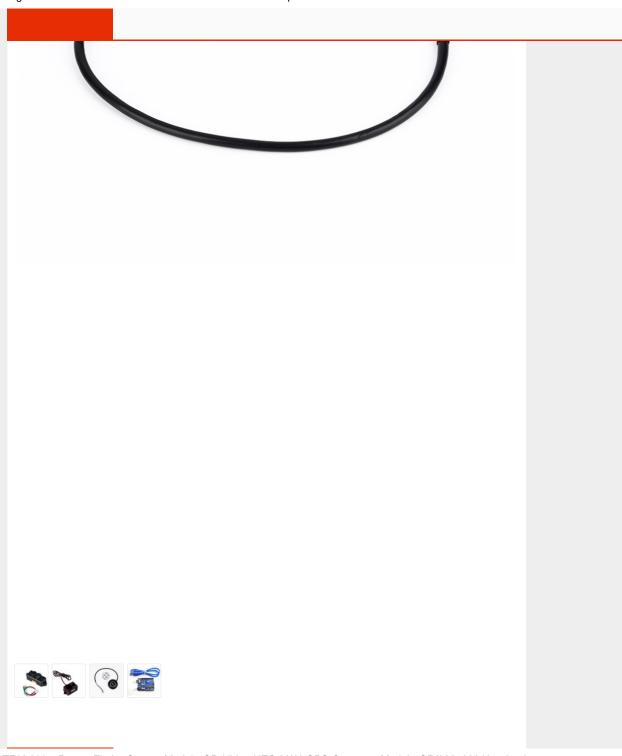
Fig. 5 Client Interface of Distance Measurement Demonstration in Windows



Ublox NEO M8N GPS Compass Module for Pixhawk4 Flight-Controller







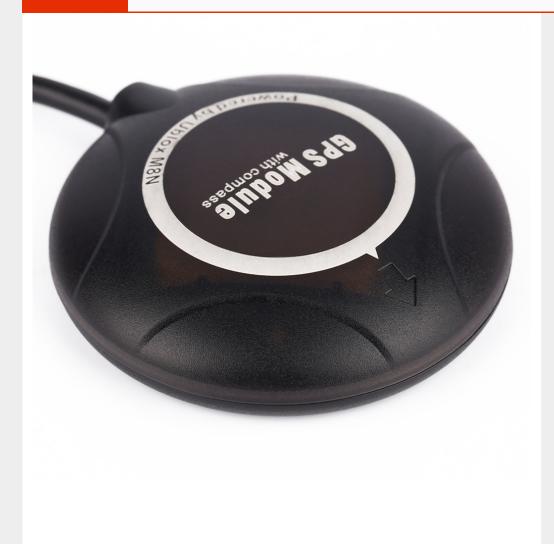




























TF02 LIDAR LED Rangefinder Single Point Ranging IP65 22M Benewake for Arduino Pixhawk Drone





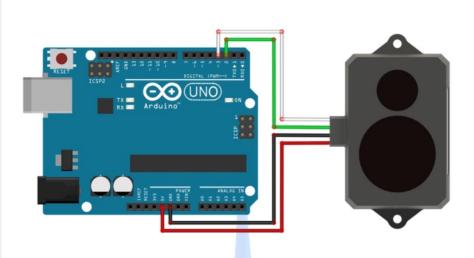


Figure 1. Wiring Diagram for TF02 and UNO Board

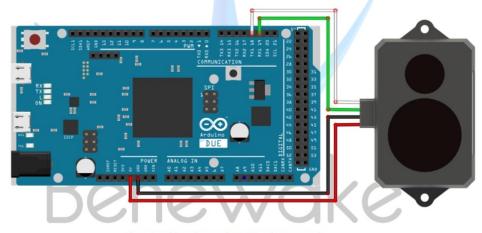


Figure 2. Wiring Diagram for TF02 and DUE Board



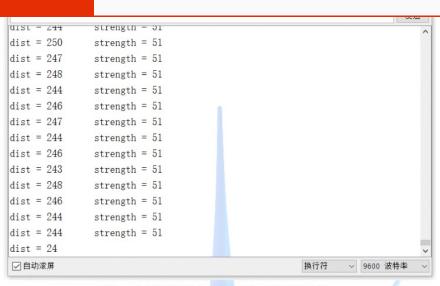
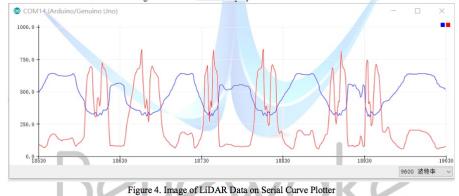


Figure 3. LiDAR Data Displayed on Serial Monitor



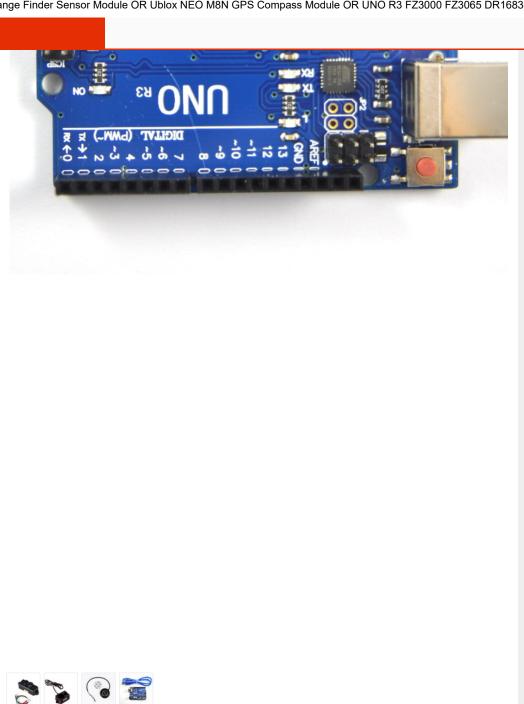
UNO R3 ATmega328P

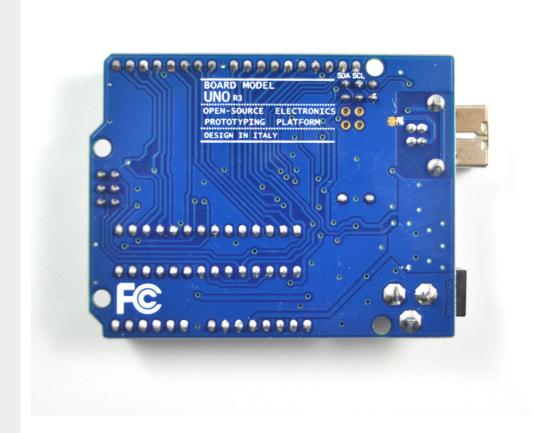




















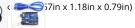
# Packaging Details

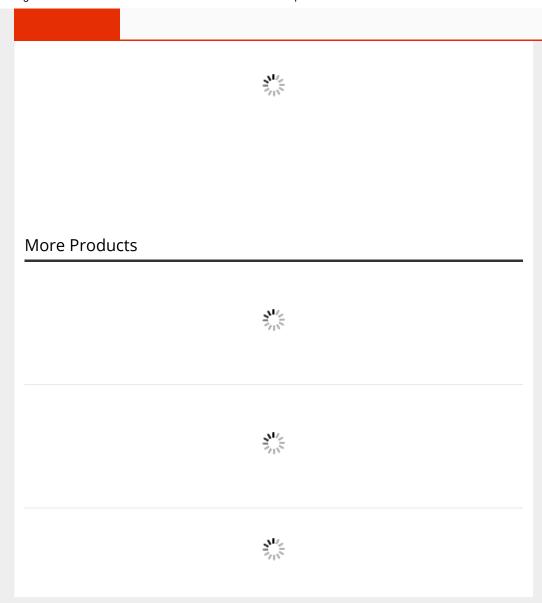
Unit Type: piece

Package Weight: 0.025kg (0.06lb.)









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