

## CE30-D Solid-State Array Lidar

### Interface Protocol

V1.1



## Table of Contents

1.1. Get the version number .....	3
1.2. Get radar ID .....	3
1.3. Synchronize time stamp .....	3
1.4. Start ranging.....	3
1.5. Stop ranging.....	4
2. Interface of program auxiliary function module .....	5
2.1. Network interface.....	5
2.2. Modify IP.....	5
2.3. Shutdown.....	5
2.4 Reset.....	5

## 1. Interface of range finder function module

CE30-D uses the UDP communication mode. CE30-D is the server terminal. IP: 192.168.1.80 (default), port number: 2368 (default).

Data stream: Please refer to the section *Communication Protocol* in the product specification.

Command stream: The length of each command is fixed to be 50 bytes. If the actual length of the command is less than 50 bytes, it will be followed by 0x00 until the length has reached 50 bytes. If the actual command stream is less than 50 bytes, CE30-D will wrongly return 0xaaaaaaaa (4 bytes).

Note: Both ip and port can be configured and the factory configurations are default ones.

### 1.1. Get the version number

cmd: "version"

return: Return a 6-byte-long version number, for example "v9.3.2".

### 1.2. Get radar ID

cmd: "getLidarID"

return: Return a 14-byte-long radar ID.

### 1.3. Synchronize time stamp

The timestamp period is 3600.000000s.

If no timestamp has been Synchronized to CE30-D before the ranging is started, then it will the timestamp zero when CE30-D receives the ranging start instruction.

cmd: "updateTimeStamp arg1 arg2 arg3 arg4"

return: The system has not yet started ranging: return 4-byte data; 0 for success; -1 for failure.

The system has started ranging: none

Note 1: Arg1: timestamp -high 0 bits; Arg2: timestamp – high 8 bits; Arg3: timestamp – high 16 bits; Arg4: timestamp -high 24 bits; use hexadecimal to represent parameters.

### 1.4. Start ranging

cmd: "getDistanceAndAmplitudeSorted"

Return: data packet for normal ranging

## 1.5. Stop ranging

cmd: "join"

return: none

## 2. Interface of program auxiliary function module

This program uses the TCP communication mode. CE30-D is the server terminal. IP: 192.168.1.80 (default), monitoring port: 50661. Data stream: None

Command stream: The length of each command is fixed to be 50 bytes. If the actual length of the command is less than 50 bytes, it will be followed by 0x00 until the length has reached 50 bytes. If the actual command stream is less than 50 bytes, CE30-D will wrongly return 0xaaaaaaaa (4 bytes).

Note: Both ip and port can be configured and the factory configurations are default ones.

### 2.1. Network interface

cmd: "configIfType if\_type if\_port\_low if\_port\_high"

return: Return 4-byte data; 0 for success and others for failures

Note 1: if\_type is the interface type: 2-UDP.

### 2.2. Modify IP

cmd: "ifconfig X X X X"

return: 0 for success and others for failures

The default ip is 192.168.1.80, each digit of which can be modified from this interface.

Note: In the process of the interface design, X is an integer between 0-254, where the first and fourth digits can not be 0. This function only supports the radar software versions of V 9.7.5 and above.

### 2.3. Shutdown

cmd: "shutdown"

return: none

Perform shutdown operation.

### 2.4 Reset

cmd: "reset"

return: none



Perform reset operation.

