

greenerthumb ICD

- Timestamps are 8-byte unix timestamps.
- Checksums are cyclic sums of all of a message's bytes excluding the checksum.
- Multi-byte fields are big-endian.

Air Status Message

Byte	Name	Type
1	ID (0x00)	Byte
2	Timestamp	Long
10	Temperature	Float
14	Checksum	Byte

- Temperature is in degrees fahrenheit.

Soil Status Message

Byte	Name	Type
1	ID (0x01)	Byte
2	Timestamp	Long
10	Moisture	Float
14	Checksum	Byte

- Moisture is the ratio of water to soil.

Disclosure Message

Byte	Name	Type
1	ID (0x02)	Byte
2	Timestamp	Long
3	Package Name Length (l)	Byte
4	Package Name	Byte Sequence
4 + l	Publish Host Length (m)	Byte
4 + l + 1	Publish Host	Byte Sequence
4 + l + 1 + m	Command Host Length (n)	Byte
4 + l + 1 + m + 1	Command Host	Byte Sequence

Byte	Name	Type
4 + l + 1 + m + 1 + n	Checksum	Byte

- Package name is the name of the package.
- Publish host is the host the package publishes to.
- Command host is the host the package receives commands from.

JSON

JSON is used for internal messaging. Every message has a corresponding JSON format with the structure:

```
{
  "name": <message_name>,
  "timestamp": <timestamp>,
  <name>: <value>, ...
}
```

IDs are swapped with names for friendlier use in applications. Checksums are excluded since the messages don't need to be sent over a network. Names and values correspond to the non-ID, non-time, and non-checksum fields in the messages.