DROID.FARM
Precision Agriculture

Technical Documentation: Text Protocol for UART Data Transmission $SEED

Introduction

This document provides technical details for the control unit responsible for managing sections on agricultural machinery. The controller notifies the system of the number of sections supported and the total number of seeds planted in the ground for each opener since the device was turned on.

UART Parameters

- Baud Rate: 115200 bits/s
- Data Bits: 8 bits
- Parity: None
- Stop Bits: 1 (1 stop bit)

Message Format

Each message starts with a preamble consisting of a one-byte '$' symbol. Following the preamble is the message identifier, which is a four-byte character string "SEED". The DataField containing information about liquid flow regulation comes next. The message is concluded with a checksum and the CR (carriage return) and LF (line feed) symbols.

Example Message

Here is an example message string:

$SEED,8,5344,2345,2278,2389,2461,2337,2361,2230,2459*2D

DataField Structure

The DataField includes the following fields:

- **Data 1**: Represents the maximum number of supported sections (e.g., 8 in the example).
- **Data 2**: The number of seconds since the device was turned on (e.g., 5344 in the example).
- **Data (3-10)**: The total number of seeds for each section in order.

Checksum

After the DataField, a ''*" symbol, represented by a two-byte string CHK1 and CHK2.

End of Message

The message concludes with the CR (carriage return) and LF (line feed) symbols, indicating the end of the packet.