Integration Command for AD131

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1. Introduction

This command allows a user to set the integration time in microseconds (μs) instead of using two gain commands.

- L-Set the integration variable (gain)
  < L > (1 - 255) < 1 - 255 >
- X-Extension to gain range. [1-255] (x-gain)
  < X > (present extended gain value) < new extended gain value: 1 - 255 >

This command is used the same purpose as the gain and x-gain commands that are to increase or decrease the exposure time of the detector.

2. Command Structure

To AD131: < B >
From AD131: (High Byte)(Middle Byte)(Low Byte)
To AD131: <High Byte><Middle Byte><Low Byte>

This command is in effect when the integration time sets to 88μs or longer time. Otherwise, the gain and x-gain will be in effect. The default integration is 88μs.

- Example 1:
  i. if a user sets the integration to 2005μs, then the integration time is 2005μs.
  ii. If a user sets the integration to 23μs, the default gain and x-gain is in effect.
- Example 2:
  The current integration is 23μs, and a user wants to set the integration to 2005μs. Then the user does the followings:
  To AD131: B
  From AD131: 0, 0, 23
  To AD131: 0, 7, 213

  Notes:
  - $2005_{10} = 7D5_{16} = 00\ 07\ D5_{16}$
  - $07_{16} = 7_{10}$
  - $D5_{16} = 213_{10}$