## **Pixel Download Program**

Data ordering conversion for High Speed Buddy module

For every column data:

## 1. Raw data from CSV file

١	_		_	_		
	0	1	2	3	   1086	1087
ı					ı	

Each pixel data is 10bit amplitude level.

If CSV file is absent, or some pixel data is missing in the CSV file, amplitude and/or Vposition value will be zero.



## 2. Calibrated data

0	1	2	3	 1086	1087	

Each pixel value is converted to calibrated 10bit-DAC value. Calibrated DAC value is provided by calibration CSV file.



## 3. Transfer data

0 1 544 545 2 3 546 547 4 5 548 549 6 7 550 551 542 543 1086 1087	
---	--

HS-Buddy: 10bit data \* 1088pixels

(16bit 4KByte 4KByte

Each pixel value is 2-byte DAC value. Upper 6bits are zeroes.

Pixel ordering will be changed as shown above.

Append 1920byte NULL data to each column data.

Total data size for each column will be 4096byte.

Total transfer data size is 4KB\*(Number of columns).