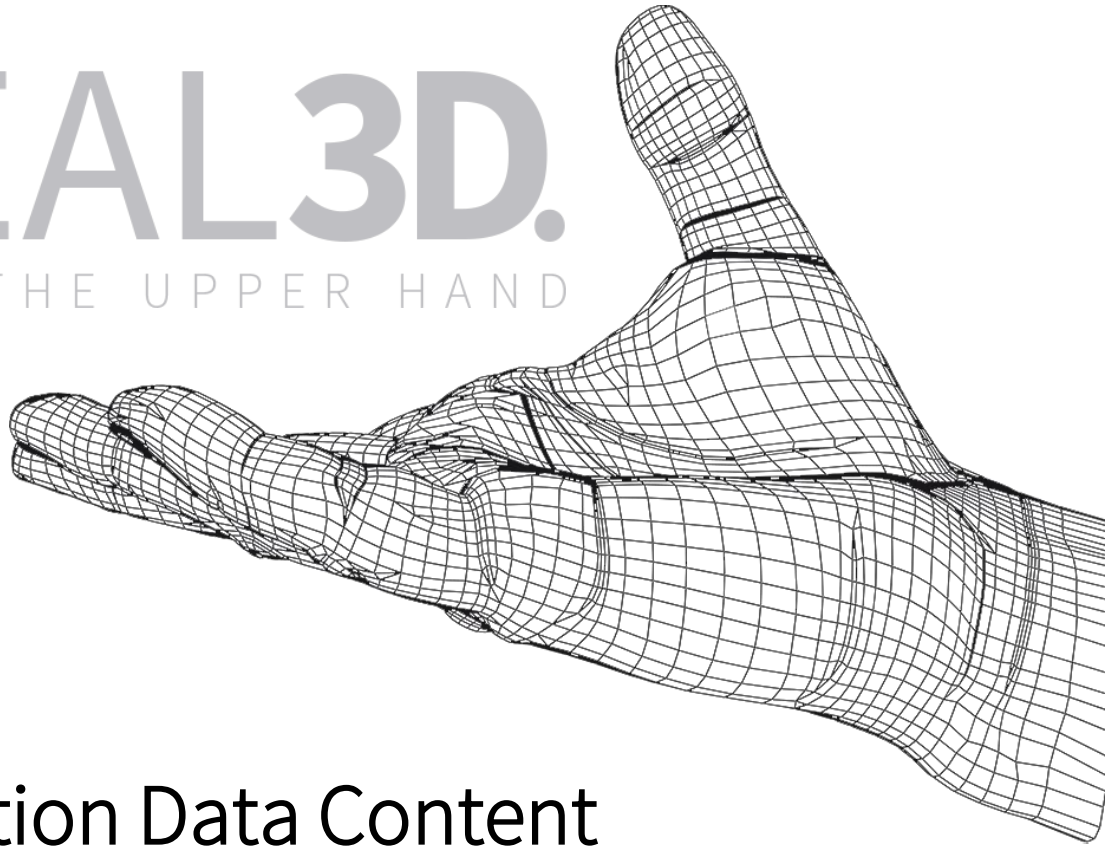
REAL3D.

GAIN THE UPPER HAND



Calibration Data Content

pmdtechnologies – 2015-11-13

Calibration data content – today 2 MBit

Name	Data Type	Byte Count	Comment
Type/Version	1x 32 bit integer	4	container identifier
Date	1x string	19	time/date of calibration
Serial	1x string	19	sensor ID string
Sensor ROI	4x 32 bit integer	16	ROI of generic 38k IRS chip
Lens Parameters	9x 32 bit float	36	lens model parameters
Temperature	1x 32 bit float per frequency[1]	8	temperature drift
Noise Parameters	4x 32 bit float per frequency[1]	32	camera performance parameters (needed for advanced pmd algorithms)
Wiggling	100 bytes per frequency[1]	200	wiggling compensation parameters
FPN/Mask	8 bit per pixel[2]	38528	7 bits for FPN, 1 bit for valid pixel mask
FPPN	16 bit per pixel[2] and frequency[1]	154112	
Reserved	n/a	74	reserved for future extensions
Total		**193048**	**[1]two modulation frequencies [2]224x172 = 38528 pixels**

Calibration data content – proposal 1 MBit (*)

Name	Data Type	Byte Count	Comment
Type/Version	1x 32 bit integer	4	container identifier
Date	1x string	19	time/date of calibration
Serial	1x string	19	sensor ID string
Sensor ROI	4x 32 bit integer	16	ROI of generic 38k IRS chip
Lens Parameters	9x 32 bit float	36	lens model parameters
Temperature	1x 32 bit float per frequency[1]	8	temperature drift
Noise Parameters	4x 32 bit float per frequency[1]	32	camera performance parameters (needed for advanced pmd algorithms)
Wiggling	100 bytes per frequency[1]	200	wiggling compensation parameters
FPN/Mask	4 bit per pixel[2]	19264	3 bits for FPN, 1 bit for valid pixel mask
FPPN	10 bit per pixel[2] and frequency[1]	96320	
~~Reserved~~	~~n/a~~	~~74~~	~~reserved for future extensions~~
Total		**115918**	**[1]two modulation frequencies [2]224x172 = 38528 pixels**

(*) educated guess, proof of concept is open

Calibration data content – w/o FPN/FPPN (*)

Name	Data Type	Byte Count	Comment
Type/Version	1x 32 bit integer	4	container identifier
~~Date~~	~~1x string~~	~~19~~	~~time/date of calibration~~
Serial	1x string	19	sensor ID string
Sensor ROI	4x 32 bit integer	16	ROI of generic 38k IRS chip
Lens Parameters	9x 32 bit float	36	lens model parameters
Temperature	1x 32 bit float per frequency[1]	8	temperature drift
Noise Parameters	4x 32 bit float per frequency[1]	32	camera performance parameters (needed for advanced pmd algorithms)
Wiggling	100 bytes per frequency[1]	200	wiggling compensation parameters
~~FPN/Mask~~	~~8 bit per pixel[2]~~	~~38528~~	~~7 bits for FPN, 1 bit for valid pixel mask~~
~~FPPN~~	~~16 bit per pixel[2] and frequency[1]~~	~~154112~~	
~~Reserved~~	~~n/a~~	~~74~~	~~reserved for future extensions~~
Total		**315**	**[1]two modulation frequencies** ~~[2]224x172 = 38528 pixels~~

(*) pixelindividual calibration (FPN and FPPN) has to be done after system integration, using AP memory