

Product Change Note (PCN)

Notice Number: PFPCN000006			
1. Affected Product			
Product Name:	MV4-D1280U-H01-GT		
Article Number:	609030.011		
Product Revision:	2.0		
Notice Date:	08.09.2025		
Change Date:	26.08.2025		
2. Change Level			
Level 1, High: Need customer approval	x	Level 2, Middle: Need to notify customers	Level 3, Low: Internal information
3. Reason for Change			
The firmware architecture has been redesigned to improve compliance with the GenICam standard and to introduce a more modular internal structure. This modularization enhances maintainability, simplifies future feature extensions, and enables more efficient calibration processes.			
4. Change Description			
This section outlines the modifications that may affect the customer's application. The changes are organized by feature categories. Customers are advised to review their implementation to determine whether any of the listed features are used in their application and may require adjustments.			
Category "ImageFormatControl"			
Feature	FW Rev 1.0 & 1.1	FW Rev 2.0	Comment
BinningHorizontal	Limit always set to 8 and did not consider Width configuration	Limit is 8 or less depending on Width	Improved binning limit visibility
BinningVertical			
Category "AcquisitionControl"			
FW Rev 1.0 & 1.1	FW Rev 2.0	Comment	
AcquisitionFrameRateMode	n.a.	Not yet transferred to FW rev 2.0. Please contact Photonfocus, if you use this feature.	
Category "AnalogControl"			
Feature	FW Rev 1.0 & 1.1	FW Rev 2.0	Comment
BlackLevel	Limit was always at 4095. Ended up in an overflow condition, when sensor bit depth is set to 10 bit and values higher than 1023 are configured.	Limit is 1023 when sensor bit depth is set to 10bit and 4095 when sensor bit depth is set to 12 bit.	Avoids overflow of the sensor register.
Category "UserSetControl"			
FW Rev 1.0 & 1.1	FW Rev 2.0	Comment	
CameraHeadFactoryReset	CameraFactoryReset	Feature renaming only; No change in functionality.	
Category "EncoderControl"			
Feature	FW Rev 1.0 & 1.1	FW Rev 2.0	
EncoderTimeout	1000000 µs	136.534 µs	Factory default value modified.

Form Template	Form Revision	Document Name	Version
FB-PM-FO-90007-ProductChangeNote_PFPCNxxxxxx_ID01.docx	01	PM-FO-90007-ProductChangeNote_PFPCN000006_MV4-D1280U-H01-GT_V1.0.docx	1.0

Category “EncoderControl”		
FW Rev 1.0 & 1.1	FW Rev 2.0	Comment
EncoderAlarmMode	Feature removed from firmware.	The encoder alarm signal, which is routed through ISO_IN3 of the camera, can be configured as a counter source. This allows tracking the number of alarm events that have occurred.
EncoderAlarmStatus	Feature removed from firmware	
EncoderAlarmUpdate	Feature removed from firmware	
EncoderAlarmAcknowledge	Feature removed from firmware	

FPN and Bad Pixel Correction

In the previous camera revision, the Fixed Pattern Noise (FPN) and Defect Pixel correction functionalities were combined into a single processing block.

With the latest firmware release, these two correction mechanisms have been separated into distinct blocks:

- **Photonfocus → PixelFPNCorrection**
- **Photonfocus → BadPixelCorrection**

This architectural change allows for independent recalibration of sensor defect pixels and FPN correction, improving flexibility and simplifying maintenance procedures.

Category “Photonfocus → PixelFPNCorrection”

Category has been renamed from “Correction” to “PixelFPNCorrection” in the camera firmware revision 2.0.

FW Rev 1.0 & 1.1	FW Rev 2.0	Comments
Correction_Mode	PixelFPNCorrectionMode	Feature renamed and enumeration list modified. Defect pixel related modes removed from the enumeration. See camera manual for more information.
Correction_AutoThreshold	n.a.	Feature removed
n.a.	PixelFPNCorrectionReferenceImage	New parameter to output the acquired Black/GreyRef image.
Correction_SetBlackRef	PixelFPNCorrectionSetBlackRef	Feature renamed
Correction_SetGreyRef	PixelFPNCorrectionSetGreyRef	Feature renamed
Correction_Calculate	PixelFPNCorrectionCalculate	Feature renamed
Correction_SaveToFlash	PixelFPNCorrectionSaveToFlash	Feature renamed
Correction_HotPixelThreshold	n.a.	Feature shifted to the “BadPixelCorrection” Category
Correction_ColdPixelThreshold	n.a.	Feature shifted to the “BadPixelCorrection” Category

Category “Photonfocus → BadPixelCorrection”

New category has been created for the defect pixel correction in the camera firmware revision 2.0.

FW Rev 1.0 & 1.1	FW Rev 2.0	Comment
n.a.	BadPixelCorrection_Enable	New feature, see camera manual
n.a.	BadPixelCorrection_Calculate	
n.a.	BadPixelCorrection_LowThreshold	
n.a.	BadPixelCorrection_HighThreshold	
n.a.	BadPixelCorrection_SaveToFlash	
n.a.	BadPixelCorrection_Address	
n.a.	BadPixelCorrection_PosX	
n.a.	BadPixelCorrection_PosY	

Form Template	Form Revision	Document Name	Version
FB-PM-FO-90007-ProductChangeNote_PFCPCxxxxxx_ID01.docx	01	PM-FO-90007-ProductChangeNote_PFCPCN000006_MV4-D1280U-H01-GT_V1.0.docx	1.0

Category "Photonfocus → FrameCombine"			
Feature	FW Rev 1.0 & 1.1	FW Rev 2.0	Comment
FrameCombine_Timeout	10000 µs	100000 µs	Factory default value modified.

Category "Photonfocus → DataOutput"		
FW Rev 1.0 & 1.1	FW Rev 2.0	Comment
DigitalGain	Feature removed from firmware	Feature was obsolete and removed. Feature "Gain" in the category "AnalogControl" can be used instead.
AnalogGain	Feature removed from firmware	Feature removed, since it hadn't any functionality in the older camera firmware revisions.

Category "Photonfocus → UserDataStorage"			
The previous category "UserStorage" has been renamed to "UserDataStorage" and moved to the section "Photonfocus"			
FW Rev 1.0	FW Rev 1.1	FW Rev 2.0	Comment
n.a.	UserStorage_Address1B	n.a.	One byte access feature has been removed.
n.a.	UserStorage_Data1B	n.a.	
n.a.	UserStorage_Address4B	UserStorageAddress	Four bytes access feature has been renamed
n.a.	UserStorage_Data4B	UserStorageData	

Category "LUTControl"		
FW Rev 1.0 & 1.1	FW Rev 2.0	Comment
LUT_EnRegionLUT	LUTEnRegionLUT	Feature renaming only. No change in functionality.

5. Disclaimer

Contact at Photonfocus AG for this change:

Customer Service Team	E-mail: support@photonfocus.com
Phone: +41 55 451 00 00	

6. Customer Fill-in Area

PCN Change Level 1: Customer's approval

☐ Agree	☐ Disagree
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Reasons of disagreement if needed:

Enterprise:	Signature:
Name:	Date:
E-mail:	Phone:

PCN Change Level 2: Customer's acknowledgement of receipt

Enterprise:	Signature:
Name:	Date:
E-mail:	Phone:

Form Template	Form Revision	Document Name	Version
FB-PM-FO-90007-ProductChangeNote_PFPCNxxxxxx_ID01.docx	01	PM-FO-90007-ProductChangeNote_PFPCN000006_MV4-D1280U-H01-GT_V1.0.docx	1.0