

PhantomS991_RegisterMap_phfw167.xlsx

Name	Description	Type	Parent Name	Parent Type	Addr	Length	Access Mode	Sign	Endian	LSB	MSB	Enum Names:Values
DeviceVendorName	Category for Device information and control.	StringReg	DeviceControl	Category	0x2000	32	RO					
DeviceModelName	Category for Device information and control.	StringReg	DeviceControl	Category	0x2020	32	RO					
DeviceManufacturerInfo	Category for Device information and control.	StringReg	DeviceControl	Category	0x2040	48	RO					
DevicePhfwVersionReg	Version of the firmware in the device.	IntReg	DevicePhfwVersion	Integer	0x8174	4	RO	Unsigned	BigEndian			
DeviceSerialNumberReg	Serial Number of device.	IntReg	DeviceSerialNumber	Integer	0x8158	4	RO	Unsigned	BigEndian			
DeviceIPAddress	Category for Device information and control.	StringReg	DeviceControl	Category	0x8300	32	RO					
DeviceNetmask	Category for Device information and control.	StringReg	DeviceControl	Category	0x8320	32	RO					
DeviceResetReg	Resets the device to its power up state.	IntReg	DeviceReset	Command	0x4000	4	WO	Unsigned	BigEndian			
pDeviceTemperatureSelectorReg	Selects the location within the device, where the temperature will be measured.	MaskedIntReg	DeviceTemperatureSelector	Enumeration	0x8168	4	RW	Unsigned	BigEndian	15	0	Sensor:0 Mainboard:1
pDeviceTemperatureReg	Device temperature in degrees Celsius (C).	MaskedIntReg	DeviceTemperature	Integer	0x8168	4	RO	Signed	BigEndian	31	16	
WidthMaxReg	Maximum width (in pixels) of the image. The dimension is calculated after horizontal binning, decimation or any other function changing the horizontal dimension of the image.	MaskedIntReg	WidthMax	Integer	0x8010	4	RO	Unsigned	BigEndian	31	0	
WidthReg	This feature represents the actual image width expelled by the camera (in pixels).	IntReg	Width	Integer	0x8000	4	RW	Unsigned	BigEndian			
HeightMaxReg	Maximum height (in pixels) of the image. This dimension is calculated after vertical binning, decimation or any other function changing the vertical dimension of the image.	MaskedIntReg	HeightMax	Integer	0x8014	4	RO	Unsigned	BigEndian	31	0	
HeightReg	This feature represents the actual image height expelled by the camera (in pixels).	IntReg	Height	Integer	0x8004	4	RW	Unsigned	BigEndian			
PixelFormatReg	This feature indicates the format of the pixel to use during the acquisition.	IntReg	PixelFormat	Enumeration	0x8008	4	RW	Unsigned	BigEndian			Mono8:0x01080001 Mono12:0x010C0006 Mono16:0x01100007 BayerGB8:0x0108000A BayerGB12:0x010C0055
ImageSourceReg	This feature controls the image source.	IntReg	ImageSource	Enumeration	0x8120	4	RW	Unsigned	BigEndian			imgsrc0:0 imgsrc1:1 imgsrc2:2 imgsrc3:3 imgsrc4:4
ImageSourceGrabReg	Grab Gain and Offset from camera.	IntReg	ImageSourceGrab	Command	0x8124	4	RW	Unsigned	BigEndian			
AcquisitionModeReg	This feature controls the acquisition mode of the device.	IntReg	AcquisitionMode	Enumeration	0x8018	4	RW	Unsigned	BigEndian			Continuous:2
AcquisitionStartReg	This feature starts the Acquisition of the device.	MaskedIntReg	AcquisitionStart	Command	0x801C	4	RW	Unsigned	BigEndian	31	24	
AcquisitionStopReg	This feature stops the Acquisition of the device at the end of the current Frame.	MaskedIntReg	AcquisitionStop	Command	0x8020	4	RW	Unsigned	BigEndian	31	24	
pFrameRateReg	Frame rate in Hz.	IntReg	AcquisitionFrameRate	Integer	0x80C0	4	RW		BigEndian			
pFrameRateRegMax	Frame rate in Hz.	IntReg	AcquisitionFrameRate	Integer	0x80C4	4	RO		BigEndian			
ExposureTimeReg	Sets the Exposure time (in microseconds). This controls the duration where the photosensitive cells are exposed to light.	FloatReg	ExposureTime	Float	0x80C8	4	RW		BigEndian			
pExposureTimeRegMax	Sets the Exposure time (in microseconds). This controls the duration where the photosensitive cells are exposed to light.	FloatReg	ExposureTime	Float	0x80CC	4	RO		BigEndian			
SensorShutterModeReg	Select Global or rolling shutter mode.	IntReg	AENotAvailable	IntSwissKnife	0x817C	4	RW	Unsigned	BigEndian			Rolling:0 Global:1
FeaturesReg		IntReg			0x80EC	4	RO	Unsigned	BigEndian			
TriggerModeReg	Select camera sync mode.	MaskedIntReg	io2NotAvailable	IntSwissKnife	0x8128	4	RW	Unsigned	BigEndian	31	24	TriggerModeOff:0 TriggerModeOn:1
TriggerSelectorReg	Selects the type of trigger to configure.	MaskedIntReg	TriggerSelector	Enumeration	0x8128	4	RW	Unsigned	BigEndian	23	16	ExposureStart:0 ExposureActive:1
TriggerSourceReg	Specifies the internal signal or physical input Line to use as the trigger source. The selected trigger must have its TriggerMode set to On.	MaskedIntReg	io2NotAvailable	IntSwissKnife	0x8128	4	RW	Unsigned	BigEndian	15	8	GPIO0:0 GPIO1:1 GPIO2:2 SWTRIGGER:5
CTRLReg_fan	Turn camera fan on/off.	MaskedIntReg	FanCtrl	Enumeration	0x8180	4	RW	Unsigned	BigEndian	23	16	FanOff:0 FanOn:1
CTRLReg_led	Turn CXP LEDs on/off.	MaskedIntReg	LEDCtrl	Enumeration	0x8180	4	RW	Unsigned	BigEndian	15	8	LEDOff:0 LEDOn:1
TimestampOffsetReg	Set camera time by entering current time in seconds since January 1st, 1970.	IntReg	TimestampOffset	Integer	0x8188	4	WO	Unsigned	BigEndian			f10:10 f12:12 f14:14 f18:18 f20:20 f24:24 f28:28 f33:33 f40:40 f48:48 f56:56 f67:67 f80:80 f96:96 f110:110 f132:132 f160:160 f192:192 f220:220 f264:264 f320:320 f384:384 f480:480 f576:576 f640:640
LensApertureReg	Lens Aperture.	IntReg	LensAperture	Enumeration	0x81A0	4	RW	Unsigned	BigEndian			
LensApertureMinReg		IntReg	LF640	IntSwissKnife	0x81A4	4	RO	Unsigned	BigEndian			
LensApertureMaxReg		IntReg	LF640	IntSwissKnife	0x81A8	4	RO	Unsigned	BigEndian			
LensFocusReg	Set Lens Focus.	IntReg	LensFocus	Command	0x81AC	4	RW	Unsigned	BigEndian			
LensFocusStepReg	Set Lens Focus Step.	IntReg	LensFocusStep	Integer	0x81B0	4	RW	Signed	BigEndian			
LensShutterReg	Camera Shutter Open/Close.	IntReg	LensShutter	Enumeration	0x81B4	4	RW	Unsigned	BigEndian			Open:0 Close:1
GainSelectorReg	Selects which Gain is controlled by the various Gain features.	IntReg	GainSelector	Enumeration	0x80E4	4	RW	Unsigned	BigEndian			DigitalAll:20 DigitalRed:21 DigitalGreen:22 DigitalBlue:23
GainReg	Controls the selected gain as an absolute physical value. This is an amplification factor applied to the video signal.	FloatReg	Gain	Float	0x80E8	4	RW		BigEndian			
BlackLevelSelectorReg	Selects which Black Level is controlled by the various Black Level features.	IntReg	BlackLevelSelector	Enumeration	0x80F8	4	RW	Unsigned	BigEndian			All:0 Red:1 Green:2 Blue:3
BlackLevelReg	Controls the analog black level as an absolute physical value. This represents a DC offset applied to the video signal.	FloatReg	BlackLevel	Float	0x80FC	4	RW		BigEndian			
BalanceWhiteAutoReg	Controls the mode for automatic white balancing between the color channels.	IntReg	BalanceWhiteAuto	Enumeration	0x80DC	4	RW	Unsigned	BigEndian			Off:0 Once:1
BalanceWhiteMarkerReg	Auto White Balance Marker.	IntReg	BalanceWhiteMarker	Enumeration	0x80E0	4	RW	Unsigned	BigEndian			Off:0 On:1
GainBlackLevelResetReg	Set camera gain and black level to default.	IntReg	GainBlackLevelReset	Command	0x8208	4	RW	Unsigned	BigEndian			
OutputRawImageReg	Grab raw images.	IntReg	OutputRawImage	Enumeration	0x820C	4	RW	Unsigned	BigEndian			Off:0 On:1
DigitalIO0Reg	Selects the physical line (or pin) of the external device connector or the virtual line of the Transport Layer to configure.	MaskedIntReg	GPIO0	Enumeration	0x8198	4	RW	Unsigned	BigEndian	31	24	eventin0:0 userin0:6 strobe0:16 triggerout0:17 ready0:18 tcout0:22 memgate0:3 swtrigger0:21 userout0:31
DigitalIO1Reg	Selects the physical line (or pin) of the external device connector or the virtual line of the Transport Layer to configure.	MaskedIntReg	GPIO1	Enumeration	0x8198	4	RW	Unsigned	BigEndian	23	16	eventin1:0 userin1:6 strobe1:16 triggerout1:17 ready1:18 tcout1:22 memgate1:3 swtrigger1:21 userout1:31
DigitalIO2Reg	Selects the physical line (or pin) of the external device connector or the virtual line of the Transport Layer to configure.	MaskedIntReg	GPIO2	Enumeration	0x8198	4	RW	Unsigned	BigEndian	15	8	eventin2:0 userin2:6 strobe2:16 triggerout2:17 ready2:18 tcout2:22 memgate2:3 swtrigger2:21 userout2:31
UserOutputSetReg	Set user output high/low.	IntReg	UserOutputSet	Enumeration	0x8200	4	RW	Unsigned	BigEndian			Low:0 High:1
UserInputStatusReg	Displays state of user input GPIO line.	IntReg	UserInputStatus	Boolean	0x8204	4	RW	Unsigned	BigEndian			
LinkNumberReg	Set active CXP banks	IntReg	Banks	Enumeration	0x8184	4	RW	Unsigned	BigEndian			Banks_AB:1 Banks_A:0
ConnectedBankIDReg	Image1StreamID.	IntReg	Image1StreamID	Integer	0x80D8	4	RO	Unsigned	BigEndian			
EventRefreshReg	EventRefresh	IntReg	EventRefresh	Integer	0x827C	4	RW	Unsigned	BigEndian			
LinkConfigReg	Bootstrap register LinkConfig.	IntReg	LinkConfig	Enumeration	0x4014	4	RW	Unsigned	BigEndian			CXP_12:0x00040058

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TestModeReg	Bootstrap register TestMode.	IntReg	TestMode	Enumeration	0x401C	4	RW	Unsigned	BigEndian			TestModeOff:0 TestModeOn:1
ComplianceTestReg	Bootstrap Compliance Test.	IntReg	ComplianceTest	Enumeration	0x8210	4	RW	Unsigned	BigEndian			ComplianceTestOff:0 ComplianceTest1G:0x00010028 ComplianceTest2G:0x00010030 ComplianceTest3G:0x00010038 ComplianceTest5G:0x00010040 ComplianceTest6G:0x00010048
TestErrorCountSelectorReg	Bootstrap register TestErrorCountSelector.	IntReg	TestErrorCountSelector	Integer	0x4020	4	RW	Unsigned	BigEndian			
TestErrorCountReg	Bootstrap register TestErrorCount.	IntReg	TestErrorCount	Integer	0x4024	4	RW	Unsigned	BigEndian			
TestPacketCountTxReg	Bootstrap register TestPacketCountTx.	IntReg	TestPacketCountTx	Integer	0x4028	4	RW	Unsigned	BigEndian			
TestPacketCountRxReg	Bootstrap register TestPacketCountRx.	IntReg	TestPacketCountRx	Integer	0x4030	4	RW	Unsigned	BigEndian			
DeviceTapGeometryReg	This device tap geometry feature describes the geometrical properties characterizing the taps of a camera as presented at the output of the device.	IntReg	DeviceTapGeometry	Enumeration	0x800C	4	RW	Unsigned	BigEndian			Geometry_1X_1Y:0
UserSerialTxReg		IntReg			0x8148	4	RW	Unsigned	BigEndian			
UserSerialRxReg		IntReg			0x8154	4	RO	Unsigned	BigEndian			
UserSerialBaudRateReg		IntReg			0x8164	4	RW	Unsigned	BigEndian			
FactorySerialTxReg		IntReg			0x8140	4	RW	Unsigned	BigEndian			
FactorySerialRxReg		IntReg			0x8144	4	RO	Unsigned	BigEndian			
FactorySerialUpdateReg		IntReg			0x8130	4	RW	Unsigned	BigEndian			