Hangzhou Hikrobot Technology Co., Ltd.

CoaXPress-6 Frame Grabber

User Manual

HIKROBOT

Table B-2 Event Source Fields

Event Type	Enumerated Value	Value Name
Soft Event	140	CardPacketReceived0
	141	CardPacketReadDone0
	142	CardAckPacketReceived0
	143	CardAckPacketReadDone0
Link Event	100	Trigger0RisingEdge0
	101	Trigger0RisingEdge1
	102	Trigger0RisingEdge2
	103	Trigger0RisingEdge3
	104	Trigger0FallingEdge0
	105	Trigger0FallingEdge1
	106	Trigger0FallingEdge2
	107	Trigger0FallingEdge3
	108	LockedEvent0
	109	LockedEvent1
	110	LockedEvent2
	111	LockedEvent3
	112	UnlockedEvent0
	113	UnlockedEvent1
	114	UnlockedEvent2
	115	UnlockedEvent3
	116	ControlAckPacketReceived0
	117	ControlAckPacketReceived1
	118	ControlAckPacketReceived2
	119	ControlAckPacketReceived3
	120	ControlAckPacketTransmitted0

Event Type	Enumerated Value	Value Name
	121	ControlAckPacketTransmitted1
	122	ControlAckPacketTransmitted2
	123	ControlAckPacketTransmitted3
	124	ControlPacketReceived0
	125	ControlPacketReceived1
	126	ControlPacketReceived2
	127	ControlPacketReceived3
	128	ControlPacketTransmitted0
	129	ControlPacketTransmitted1
	130	ControlPacketTransmitted2
	131	ControlPacketTransmitted3
	132	LinkTriggerPacketTransmitted0
	133	LinkTriggerPacketTransmitted1
	134	LinkTriggerPacketTransmitted2
	135	LinkTriggerPacketTransmitted3
	136	LinkTriggerAckPacketReceived0
	137	LinkTriggerAckPacketReceived1
	138	LinkTriggerAckPacketReceived2
	139	LinkTriggerAckPacketReceived3
Stream Event	84	ReceiveImageFrameStart0
	85	ReceiveImageFrameStart1
	86	ReceiveImageFrameStart2
	87	ReceiveImageFrameStart3
	88	ReceiveImageFrameEnd0
	89	ReceiveImageFrameEnd1
	90	ReceiveImageFrameEnd2
	91	ReceiveImageFrameEnd3

Event Type	Enumerated Value	Value Name
	92	TransmitImageBlockStart0
	93	TransmitImageBlockStart1
	94	TransmitImageBlockStart2
	95	TransmitImageBlockStart3
	96	TransmitImageBlockEnd0
	97	TransmitImageBlockEnd1
	98	TransmitImageBlockEnd2
	99	TransmitImageBlockEnd3
	200	TheFirstLineInFrame0
	201	TheFirstLineInFrame1
	202	TheFirstLineInFrame2
	203	TheFirstLineInFrame3
	204	TheLastLineInFrame0
	205	TheLastLineInFrame1
	206	TheLastLineInFrame2
	207	TheLastLineInFrame3
PCIE Event	76	PCIEDMAStart0
	77	PCIEDMAStart1
	78	PCIEDMAStart2
	79	PCIEDMAStart3
	80	PCIEDMAEnd0
	81	PCIEDMAEnd1
	82	PCIEDMAEnd2
	83	PCIEDMAEnd3
IO Event	0	TimerRisingEdge0
	1	TimerRisingEdge1
	2	TimerRisingEdge2

Event Type	Enumerated Value	Value Name
	3	TimerRisingEdge3
	4	TimerFallingEdge0
	5	TimerFallingEdge1
	6	TimerFallingEdge2
	7	TimerFallingEdge3
	8	EncoderRisingEdge0
	9	EncoderRisingEdge1
	10	EncoderFallingEdge0
	11	EncoderFallingEdge1
	12	OptoCoupledInputRisingEdge0
	13	OptoCoupledInputRisingEdge1
	14	OptoCoupledInputRisingEdge2
	15	OptoCoupledInputRisingEdge3
	16	OptoCoupledInputFallingEdge0
	17	OptoCoupledInputFallingEdge1
	18	OptoCoupledInputFallingEdge2
	19	OptoCoupledInputFallingEdge3
	20	OptoCoupledOutputRisingEdge0
	21	OptoCoupledOutputRisingEdge1
	22	OptoCoupledOutputRisingEdge2
	23	OptoCoupledOutputRisingEdge3
	24	OptoCoupledOutputFallingEdge0
	25	OptoCoupledOutputFallingEdge1
	26	OptoCoupledOutputFallingEdge2
	27	OptoCoupledOutputFallingEdge3
	28	RS422diffInputRisingEdge0
	29	RS422diffInputRisingEdge1

Event Type	Enumerated Value	Value Name
	30	RS422diffInputRisingEdge2
	31	RS422diffInputRisingEdge3
	32	RS422diffInputFallingEdge0
	33	RS422diffInputFallingEdge1
	34	RS422diffInputFallingEdge2
	35	RS422diffInputFallingEdge3
	36	RS422diffOutputRisingEdge0
	37	RS422diffOutputRisingEdge1
	38	RS422diffOutputRisingEdge2
	39	RS422diffOutputRisingEdge3
	40	RS422diffOutputFallingEdge0
	41	RS422diffOutputFallingEdge1
	42	RS422diffOutputFallingEdge2
	43	RS422diffOutputFallingEdge3
	44	TTLInputRisingEdge0
	45	TTLInputRisingEdge1
	46	TTLInputRisingEdge2
	47	TTLInputRisingEdge3
	48	TTLInputFallingEdge0
	49	TTLInputFallingEdge1
	50	TTLInputFallingEdge2
	51	TTLInputFallingEdge3
	52	TTLOutputRisingEdge0
	53	TTLOutputRisingEdge1
	54	TTLOutputRisingEdge2
	55	TTLOutputRisingEdge3
	56	TTLOutputFallingEdge0

Event Type	Enumerated Value	Value Name
	57	TTLOutputFallingEdge1
	58	TTLOutputFallingEdge2
	59	TTLOutputFallingEdge3
	244	AdvancedIORisingEdge0
	245	AdvancedIORisingEdge1
	246	AdvancedIORisingEdge2
	247	AdvancedIORisingEdge3
	248	AdvancedIOFallingEdge0
	249	AdvancedIOFallingEdge1
	250	AdvancedIOFallingEdge2
	251	AdvancedIOFallingEdge3

Table B-3 Other Fields

Field Name	Field Type	Enumerated Value	Value Name	Description
Frame grabber trigger				
StreamSelector	Enum	0	Stream0	Stream selector
		1	Stream1	
		2	Stream2	
		3	Stream3	
CurrentStreamDevice	String	/	/	Current stream device
MinFrameDelay	Boolean	/	/	Minimum frame delay
CameraType	Enum	0	FrameScan	Scanning type
		1	LineScan	
ImageHeight	Integer	/	/	Image height; range: 1 to 4294967295
FrameTimeoutTime	Integer	/	/	Frame timeout; unit: ms; range: 0 to 40000
PartialImageOutputMo	Enum	1	PartialImageOutput	Partial image

de		2	PartialImageDiscard	output
		3	PartialImageFilled	
StreamTriggerSource	Enum	255	Off	Trigger source
		0	OptoCoupledInput0	
		1	OptoCoupledInput1	
		2	OptoCoupledInput2	
		3	OptoCoupledInput3	
		16	RS422diffInput0	
		17	RS422diffInput1	
		18	RS422diffInput2	
		19	RS422diffInput3	
		32	TTLInput0	
		33	TTLInput1	
		34	TTLInput2	
		35	TTLInput3	
		48	Timer0Active	
		49	Timer1Active	
		50	Timer2Active	
		51	Timer3Active	
		64	Encoder0	
		65	Encoder1	
		80	SoftwareSignal0	
		112	AdvancedIO0	
		113	AdvancedIO1	
		114	AdvancedIO2	
		115	AdvancedIO3	
		128	QuickSoftwareTrigger0	
		129	QuickSoftwareTrigger1	
		130	QuickSoftwareTrigger2	
		131	QuickSoftwareTrigger3	
StreamTriggerType	Enum	0	FixedLine	Triger type
		1	VariableLine	
StreamTriggerActivation	Enum	0	LowLevel	Trigger activation
		1	HighLevel	
		2	RisingEdge	
		3	FallingEdge	
StreamTriggerDelayType	Enum	0	FrameDelay	Trigger delay type
		1	LineDelay	
		2	TimeDelay	

StreamTriggerDelayValue	Integer	/	/	Trigger delay value
Encoder control				
EncoderSelector	Enum	0	Encoder0	Select encoder
		1	Encoder1	
EncoderSourceA	Enum	0	OptoCoupledInput0	Select encoder input source (PHASE_A)
		1	OptoCoupledInput1	
		2	OptoCoupledInput2	
		3	OptoCoupledInput3	
		16	RS422diffInput0	
		17	RS422diffInput1	
		18	RS422diffInput2	
		19	RS422diffInput3	
		32	TTLInput0	
		33	TTLInput1	
		34	TTLInput2	
		35	TTLInput3	
		127	Off	
EncoderSourceB	Enum	0	OptoCoupledInput0	Select encoder input source (PHASE_B)
		1	OptoCoupledInput1	
		2	OptoCoupledInput2	
		3	OptoCoupledInput3	
		16	RS422diffInput0	
		17	RS422diffInput1	
		18	RS422diffInput2	
		19	RS422diffInput3	
		32	TTLInput0	
		33	TTLInput1	
		34	TTLInput2	
		35	TTLInput3	
		127	Off	
EncoderTriggerMode	Enum	0	AnyDirection	Encoder trigger mode
		1	ForwardOnly	
		2	BackwardOnly	
EncoderCounterMode	Enum	0	AnyDirection	Encoder counter mode
		1	ForwardDirection	
		2	BackwardDirection	
EncoderCounter	Integer	/	/	Encoder counter; range: 0 to 4294967295
EncoderCounterReset	Command	/	/	Encoder counter reset

EncoderMaxReverseCounter	Integer	/	/	Encoder reverse counter; range: 0 to 65535
EncoderReverseCounterReset	Command	/	/	Encoder reverse counter reset
EncoderTriggerLineRate	Integer	/	/	Encoder trigger line rate; unit: Hz; range: 0 to 4294967295
EncoderPreDivider	Integer	/	/	Encoder pre divider; range: 0 to 128
EncoderMultiplier	Integer	/	/	Encoder multiplier; range: 1 to 32
EncoderPostDivider	Integer	/	/	Encoder post divider; range: 1 to 128
ResultingTriggerLineRate	Integer	/	/	Resulting trigger line rate; unit: Hz; range: 0 to 4294967295
Input/output signal				
LineSelector	Enum	0	OptoCoupledInput0	Select line
		1	OptoCoupledInput1	
		2	OptoCoupledInput2	
		3	OptoCoupledInput3	
		4	RS422diffInput0	
		5	RS422diffInput1	
		6	RS422diffInput2	
		7	RS422diffInput3	
		8	TTLInput0	
		9	TTLInput1	
		10	TTLInput2	
		11	TTLInput3	
		12	OptoCoupledOutput0	
		13	OptoCoupledOutput1	
		14	OptoCoupledOutput2	
		15	OptoCoupledOutput3	

		16	RS422diffOutput0	
		17	RS422diffOutput1	
		18	RS422diffOutput2	
		19	RS422diffOutput3	
		20	TTLOutput0	
		21	TTLOutput1	
		22	TTLOutput2	
		23	TTLOutput3	
LineMode	Enum	0	Input	Line mode
		1	Output	
LineInverter	Boolean	/	/	Line inverter
LineDebouncerTimeNs	Integer	/	/	Line debouncer time; unit: ns; range: 0 to 400000000
LineSource	Enum	255	Off	Line source
		0	OptoCoupledInput0	
		1	OptoCoupledInput1	
		2	OptoCoupledInput2	
		3	OptoCoupledInput3	
		16	RS422diffInput0	
		17	RS422diffInput1	
		18	RS422diffInput2	
		19	RS422diffInput3	
		32	TTLInput0	
		33	TTLInput1	
		34	TTLInput2	
		35	TTLInput3	
		48	Timer0Active	
		49	Timer1Active	
		50	Timer2Active	
		51	Timer3Active	
		64	HighLevel	
		65	LowLevel	
		96	AdvancedIO0	
		97	AdvancedIO1	
		98	AdvancedIO2	
		99	AdvancedIO3	
Timer control				
Timer Selector	Enum	0	Timer0	Select timer
		1	Timer1	
		2	Timer2	
		3	Timer3	

TimerDuration	Integer	/	/	Timer duration; range: 0 to 34000000
TimerDelay	Integer	/	/	Timer delay; range: 0 to 34000000
TimerFrequency	Integer	/	/	Timer frequency; range: 0 to 1000000
TimerTriggerSource	Enum	255	Off	Timer trigger source
		0	OptoCoupledInput0	
		1	OptoCoupledInput1	
		2	OptoCoupledInput2	
		3	OptoCoupledInput3	
		16	RS422diffInput0	
		17	RS422diffInput1	
		18	RS422diffInput2	
		19	RS422diffInput3	
		32	TTLInput0	
		33	TTLInput1	
		34	TTLInput2	
		35	TTLInput3	
		48	Timer0Active	
		49	Timer1Active	
		50	Timer2Active	
		51	Timer3Active	
		64	Encoder0	
		65	Encoder1	
		80	SoftwareSignal0	
		81	Continuous	
		112	AdvancedIO0	
		113	AdvancedIO1	
		114	AdvancedIO2	
		115	AdvancedIO3	
		128	ReceiveImageFrameStart0	
		129	ReceiveImageFrameStart1	
		130	ReceiveImageFrameStart2	
		131	ReceiveImageFrameStart3	

		144	ReceiveImageFrameEnd0	
		145	ReceiveImageFrameEnd1	
		146	ReceiveImageFrameEnd2	
		147	ReceiveImageFrameEnd3	
		192	QuickSoftwareTrigger0	
		193	QuickSoftwareTrigger1	
		194	QuickSoftwareTrigger2	
		195	QuickSoftwareTrigger3	
Timer Trigger Activation	Enum	0	RisingEdge	Timer trigger activation
		1	FallingEdge	
		2	AnyEdge	
		3	LevelHigh	
		4	LevelLow	
TimerTriggerDelay	Integer	/	/	Timer trigger delay; range: 0 to 34000000
User set control				
UserSetCurrent	Integer	/	/	Current user set; range: 0 to 4294967295
UserSetSelector	Enum	0	Default	Select user set
		1	UserSet1	
		2	UserSet2	
		3	UserSet3	
UserSetLoad	Command	/	/	Load user set
UserSetSave	Command	/	/	Save user set
UserSetDefault	Enum	0	Default	Default user set
		1	UserSet1	
		2	UserSet2	
		3	UserSet3	

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