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Event Capture Attributes

These are the event related attributes associated with a Motion Control Axis. These include registration, marker, and homing events. The Event Capture attributes are designed to support the possibility of up to 7 active events per controller update period. The basis for all Time Stamp attributes is absolute System Time and follows the CIP Sync standard with 0 corresponding to January 1, 1970. Within the Logix controller, the System Time for event time stamps are converted to the local CST by applying the local System Time Offset to the event time stamp. In general, these event related attributes are only applicable when there is an associated position feedback device; if the axis is configured for Encoderless or Sensorless operation, the event functionality is not applicable.

The Motion Control Axis supports two independent registration input channels per device axis instance that can be triggered on either the rising or falling edges of the signal. If the device hardware implementation allows, event time and position data can be captured for all four event conditions simultaneously. The Event Capture attributes also support Auto-rearm for registration events. This allows for controller implementation of important features like Windowed Registration and Registration Pattern Recognition.

The Motion Control Axis also supports Home Switch, Marker and Switch-Marker events for homing functionality on a per axis basis. The Marker events are typically generated by the configured position feedback device for the associated device axis.

Registration Inputs

Usage	Access	T	Data Type	Default	Min	Max	Semantics of Values
Required - E	Set/GSV		USINT	0	0	10	

The Registration Inputs attribute determines the number of Registration Inputs supported by this device axis instance. Maximum value is determined by drive device profile.

Registration 1 Positive Edge Position

Usage	Access	T	Data Type	Default	Min	Max	Semantics of Values
Required - E	Get/GSV	T	REAL	-	-	-	Position Units

The Registration 1 Positive Edge Position attribute is the feedback position latched on the rising edge of the Registration Input 1.

Registration 1 Negative Edge Position

Usage	Access	T	Data Type	Default	Min	Max	Semantics of Values
Required - E	Get/GSV	T	REAL	-	-	-	Position Units

The Registration 1 Negative Edge Position attribute is the feedback position latched on the falling edge of the Registration Input 1.

Registration 2 Positive Edge Position

Usage	Access	T	Data Type	Default	Min	Max	Semantics of Values
Required - E	Get/GSV	T	REAL	-	-	-	Position Units

The Registration 2 Positive Edge Position attribute feedback position latched on the rising

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edge of the Registration Input 2.

Registration 2 Negative Edge Position

Usage	Access	T	Data Type	Default	Min	Max	Semantics of Values
Required - E	Get/GSV	T	REAL	-	-	-	Position Units

The Registration 2 Negative Edge Position attribute feedback position latched on the falling edge of the Registration Input 2.

Registration 1 Positive Edge Time

Usage	Access	T	Data Type	Default	Min	Max	Semantics of Values
Required - E	Get/GSV	T	DINT	-	-	-	CST Time in Microseconds

The Registration 1 Positive Edge Time attribute is the CST time stamp on the rising edge of the Registration Input 1.

Registration 1 Negative Edge Time

Usage	Access	T	Data Type	Default	Min	Max	Semantics of Values
Required - E	Get/GSV	T	DINT	-	-	-	CST Time in Microseconds

The Registration 1 Negative Edge Time attribute is the CST time stamp on the falling edge of the Registration Input 1.

Registration 2 Positive Edge Time

Usage	Access	T	Data Type	Default	Min	Max	Semantics of Values
Required - E	Get/GSV	T	DINT	-	-	-	CST Time in Microseconds

The Registration 2 Positive Edge Time attribute is the CST Time stamp on the rising edge of the Registration Input 2.

Registration 2 Negative Edge Time

Usage	Access	T	Data Type	Default	Min	Max	Semantics of Values
Required - E	Get/GSV	T	DINT	-	-	-	CST Time in Microseconds

The Registration 2 Negative Edge Time attribute is the CST Time stamp on the falling edge of the Registration Input 2.

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