Mecco EtherMark/IP Object Model

Date 21-Oct-2015

O2T (Output) From PLC outbound to EtherMark/IP

# Bytes	Type	Source Code Struct Member	Description	Assembly #
2	int16	x_offset_mm	X offset (+/- 160mm X 100)	112
2	int16	y_offset_mm	Y offset (+/- 160mm X 100)	112
2	int16	rotation_deg	Rotation (0-360 deg x 10)	112
2	int16	x_rot_center_mm	X center of rotation (mm x 100)	112
2	int16	y_rot_center_mm	Y center of rotation (mm x 100)	112
2	uint16	x_scale	X scale (scale x 1000)	112
2	uint16	y_scale	Y scale (scale x 1000)	112
2	uint16	reserved	Reserved (2 bytes) for 32-bit alignment	112
2	uint16	cmd_seq_num	Marker command	112
2	uint16	LEC_computed_job_field_num	LEC computed job field #	112
2	uint16	job_tmo_sec	Mark Timeout (seconds, 0 disable)	112
2	uint16	tcp_tmo_sec	TCP Timeout (seconds, 0 disable)	112
2	uint16	barcode_pass_grade	Pass grade for barcode verification	112
2	uint16	max_remarks	Maximum number of remarks (0, 1, 2 ..)	112
4	CIP_INDEX_UNIQUE	short_field_index_unique[0]	Short Field 1	112
4	CIP_INDEX_UNIQUE	short_field_index_unique[1]	Short Field 2	112
4	CIP_INDEX_UNIQUE	short_field_index_unique[2]	Short Field 3	112
4	CIP_INDEX_UNIQUE	short_field_index_unique[3]	Short Field 4	112
4	CIP_INDEX_UNIQUE	short_field_index_unique[4]	Short Field 5	112
4	CIP_INDEX_UNIQUE	long_field_index_unique[0]	Long Field 1	112
36	CIP_STR32	marker_job_file_name	Laser or Dot Peen Job File Name	112
36	CIP_STR32	camera_job_file_name	Camera (Cognex) Job File Name	112
36	CIP_STR32	short_field_string[0]	Short Field String 1	112
36	CIP_STR32	short_field_string[1]	Short Field String 2	112
36	CIP_STR32	short_field_string[2]	Short Field String 3	112
36	CIP_STR32	short_field_string[3]	Short Field String 4	112
36	CIP_STR32	short_field_string[4]	Short Field String 5	112
132	CIP_STR128	long_field_string	Long Field String	112

436	**Total Bytes**
109	Total Words (32bit)

T2O (Input) From EtherMark/IP inbound to PLC

# Bytes	Type	Source Code Struct Member	Description	Assembly #
2	uint16	marker_state	Marker state number	100
2	uint16	reserved	Reserved (2 bytes) for 32-bit alignment	100
4	uint32	last_mark_cycle_time_ms	Elapsed and Last Mark Cycle Time (ms)	100
4	uint32	status_gpio	Status DWORD / GPIO	100
2	uint16	marker_error_code	Marker Error Code	100
2	uint16	controller_error_code	Controller Error Code	100
4	uint32	heart_beat	Heart Beat	100
4	uint32	input_check_sum	32-bit simple sum of all input field bytes[1]	100
36	CIP_STR32	echo_job_file_name	Echo Job File Name	100
132	CIP_STR128	results_field	LEC computed job field string, or general command results	100
68	CIP_STR64	marker_state_desc	Marker state description	100
132	CIP_STR128	marker_error_desc	Marker error description	100

392	**Total Bytes**
98	Total Words (32bit)

Nested Data Structures

# Bytes	Type	Source Code Struct Member	Description
CIP_STR32			
4	uint32	str_len	String Length
32	char	str[32]	String
CIP_STR64			
4	uint32	str_len	String Length
64	char	str[64]	String
CIP_STR128			
4	uint32	str_len	String Length
128	char	str[128]	String
CIP_INDEX_UNIQUE			
1	uint8	index	Index
1	uint8	unique	Uniqueness flag
1	uint8	verify	Cognex flags (bit 0 = Verify barcode, bit 1= Verify OCR)
1	uint8	justify	Text jusitification (0 = Left, 1 = Center, 2 = Right)

1. The checksum is the 32-bit simple sum of the following fields: job_file_name, camera_job_file_name, all short field strings, and the long field string. If concatenation is employed on the long string, the checksum is computed using the full length concatenated string. The checksum is updated by specific command request (see command listing), and at the start of every mark sequence.