

## IO-Link Data Map

This document refers to the following IODD file: Banner\_Engineering-R95C-8UI-20230801-IODD1.1.xml. The IODD file and support files can be found on [www.bannerengineering.com](http://www.bannerengineering.com) under the download section of the product family page.

### Communication Parameters

The following communication parameters are used.

Parameter	Value
IO-Link revision	V1.1
Process Data In length	256-bits
Process Data Out length	None
Bit Rate	38400 bps
Minimum cycle time	13.6 ms
Device ID	659472 (0x0A1010)
Port class	A
SIO mode	No
Smart Sensor Profile	No
Block parameterization	Yes
Data Storage	Yes

### IO-Link Process Data In (Device to Master)

Two analog modes are supported. The voltage mode is presented in mV and the current mode is presented in  $\mu$ A.

If the mode of Analog In = Voltage, then the Process Data Input = Value  $\times$  0.001 V.

If the mode of Analog In = Current, then the Process Data Input = Value  $\times$  0.000001 A.

### Process Data Input Configuration = Analog Data

Subindex	Name	Number of Bits	Data Values
1	Measurement Value - Analog In 1	32	The measurement device value
5	Measurement Value - Analog In 2	32	The measurement device value
9	Measurement Value - Analog In 3	32	The measurement device value
13	Measurement Value - Analog In 4	32	The measurement device value
17	Measurement Value - Analog In 5	32	The measurement device value
21	Measurement Value - Analog In 6	32	The measurement device value
25	Measurement Value - Analog In 7	32	The measurement device value
29	Measurement Value - Analog In 8	32	The measurement device value

Octet 0								
Subindex	1	1	1	1	1	1	1	1
Bit offset	255	254	253	252	251	250	249	248
Value	0	0	0	0	0	0	0	0
Octet 1								
Subindex	1	1	1	1	1	1	1	1
Bit offset	247	246	245	244	243	242	241	240
Value	0	0	0	0	0	0	0	0



<b>Octet 2</b>								
Subindex	1	1	1	1	1	1	1	1
Bit offset	239	238	237	236	235	234	233	232
Value	0	0	0	0	0	0	0	1
<b>Octet 3</b>								
Subindex	1	1	1	1	1	1	1	1
Bit offset	231	230	229	228	227	226	225	224
Value	1	1	1	1	1	1	0	1
<b>Octet 4</b>								
Subindex	5	5	5	5	5	5	5	5
Bit offset	223	222	221	220	219	218	217	216
Value	0	0	0	0	0	0	0	0
<b>Octet 5</b>								
Subindex	5	5	5	5	5	5	5	5
Bit offset	215	214	213	212	211	210	209	208
Value	0	0	0	0	0	0	0	0
<b>Octet 6</b>								
Subindex	5	5	5	5	5	5	5	5
Bit offset	207	206	205	204	203	202	201	200
Value	0	0	0	0	0	0	0	1
<b>Octet 7</b>								
Subindex	5	5	5	5	5	5	5	5
Bit offset	199	198	197	196	195	194	193	192
Value	1	1	1	1	1	1	0	1
<b>Octet 8</b>								
Subindex	9	9	9	9	9	9	9	9
Bit offset	191	190	189	188	187	186	185	184
Value	0	0	0	0	0	0	0	0
<b>Octet 9</b>								
Subindex	9	9	9	9	9	9	9	9
Bit offset	183	182	181	180	179	178	177	176
Value	0	0	0	0	0	0	0	0
<b>Octet 10</b>								
Subindex	9	9	9	9	9	9	9	9
Bit offset	175	174	173	172	171	170	169	168
Value	0	0	0	0	0	0	0	1
<b>Octet 11</b>								
Subindex	9	9	9	9	9	9	9	9
Bit offset	167	166	165	164	163	162	161	160
Value	1	1	1	1	1	1	0	1
<b>Octet 12</b>								
Subindex	13	13	13	13	13	13	13	13

Continued on page 3

Continued from page 2

<b>Octet 12</b>								
Bit offset	159	158	157	156	155	154	153	152
Value	0	0	0	0	0	0	0	0
<b>Octet 13</b>								
Subindex	13	13	13	13	13	13	13	13
Bit offset	151	150	149	148	147	146	145	144
Value	0	0	0	0	0	0	0	0
<b>Octet 14</b>								
Subindex	13	13	13	13	13	13	13	13
Bit offset	143	142	141	140	139	138	137	136
Value	0	0	0	0	0	0	0	1
<b>Octet 15</b>								
Subindex	13	13	13	13	13	13	13	13
Bit offset	135	134	133	132	131	130	129	128
Value	1	1	1	1	1	1	0	1
<b>Octet 16</b>								
Subindex	17	17	17	17	17	17	17	17
Bit offset	127	126	125	124	123	122	121	120
Value	0	0	0	0	0	0	0	0
<b>Octet 17</b>								
Subindex	17	17	17	17	17	17	17	17
Bit offset	119	118	117	116	115	114	113	112
Value	0	0	0	0	0	0	0	0
<b>Octet 18</b>								
Subindex	17	17	17	17	17	17	17	17
Bit offset	111	110	109	108	107	106	105	104
Value	0	0	0	0	0	0	0	1
<b>Octet 19</b>								
Subindex	17	17	17	17	17	17	17	17
Bit offset	103	102	101	100	99	98	97	96
Value	1	1	1	1	1	1	0	1
<b>Octet 20</b>								
Subindex	21	21	21	21	21	21	21	21
Bit offset	95	94	93	92	91	90	89	88
Value	0	0	0	0	0	0	0	0
<b>Octet 21</b>								
Subindex	21	21	21	21	21	21	21	21
Bit offset	87	86	85	84	83	82	81	80
Value	0	0	0	0	0	0	0	0
<b>Octet 22</b>								
Subindex	21	21	21	21	21	21	21	21
Bit offset	79	78	77	76	75	74	73	72

Continued on page 4

Continued from page 3

<b>Octet 22</b>								
Value	0	0	0	0	0	0	0	1
<b>Octet 23</b>								
Subindex	21	21	21	21	21	21	21	21
Bit offset	71	70	69	68	67	66	65	64
Value	1	1	1	1	1	1	0	1
<b>Octet 24</b>								
Subindex	25	25	25	25	25	25	25	25
Bit offset	63	62	61	60	59	58	57	56
Value	0	0	0	0	0	0	0	0
<b>Octet 25</b>								
Subindex	25	25	25	25	25	25	25	25
Bit offset	55	54	53	52	51	50	49	48
Value	0	0	0	0	0	0	0	0
<b>Octet 26</b>								
Subindex	25	25	25	25	25	25	25	25
Bit offset	47	46	45	44	43	42	41	40
Value	0	0	0	0	0	0	0	1
<b>Octet 27</b>								
Subindex	25	25	25	25	25	25	25	25
Bit offset	39	38	37	36	35	34	33	32
Value	1	1	1	1	1	1	0	1
<b>Octet 28</b>								
Subindex	29	29	29	29	29	29	29	29
Bit offset	31	30	29	28	27	26	25	24
Value	0	0	0	0	0	0	0	0
<b>Octet 29</b>								
Subindex	29	29	29	29	29	29	29	29
Bit offset	23	22	21	20	19	18	17	16
Value	0	0	0	0	0	0	0	0
<b>Octet 30</b>								
Subindex	29	29	29	29	29	29	29	29
Bit offset	15	14	13	12	11	10	9	8
Value	0	0	0	0	0	0	0	1
<b>Octet 31</b>								
Subindex	29	29	29	29	29	29	29	29
Bit offset	7	6	5	4	3	2	1	0
Value	1	1	1	1	1	1	0	1

## Example Based Upon the Value Above

Measurement Value = 509 (0x01FD)

Scaled Measurement Value = 0.509 V

## Process Data Input Configuration = Digital Measuring Sensor

Subindex	Name	Number of Bits	Data Values
1	Measurement Value - Analog In 1	16	The measurement device value
2	Measurement Scale - Analog In 1	8	The measurement device scale: -3 for voltage and -6 for current
4	SSC1.1 - Switching Signal	1	Indicates the detection status of an object/measurement value within a window
5	Measurement Value - Analog In 2	16	The measurement device value
6	Measurement Scale - Analog In 2	8	The measurement device scale: -3 for voltage and -6 for current
8	SSC2.1 - Switching Signal	1	Indicates the detection status of an object/measurement value within a window
9	Measurement Value - Analog In 3	16	The measurement device value
10	Measurement Scale - Analog In 3	8	The measurement device scale: -3 for voltage and -6 for current
12	SSC3.1 - Switching Signal	1	Indicates the detection status of an object/measurement value within a window
13	Measurement Value - Analog In 4	16	The measurement device value
14	Measurement Scale - Analog In 4	8	The measurement device scale: -3 for voltage and -6 for current
16	SSC4.1 - Switching Signal	1	Indicates the detection status of an object/measurement value within a window
17	Measurement Value - Analog In 5	16	The measurement device value
18	Measurement Scale - Analog In 5	8	The measurement device scale: -3 for voltage and -6 for current
20	SSC5.1 - Switching Signal	1	Indicates the detection status of an object/measurement value within a window
21	Measurement Value - Analog In 6	16	The measurement device value
22	Measurement Scale - Analog In 6	8	The measurement device scale: -3 for voltage and -6 for current
24	SSC6.1 - Switching Signal	1	Indicates the detection status of an object/measurement value within a window
25	Measurement Value - Analog In 7	16	The measurement device value
26	Measurement Scale - Analog In 7	8	The measurement device scale: -3 for voltage and -6 for current
28	SSC7.1 - Switching Signal	1	Indicates the detection status of an object/measurement value within a window
29	Measurement Value - Analog In 8	16	The measurement device value
30	Measurement Scale - Analog In 8	8	The measurement device scale: -3 for voltage and -6 for current
32	SSC8.1 - Switching Signal	1	Indicates the detection status of an object/measurement value within a window

<b>Octet 0</b>								
Subindex	1	1	1	1	1	1	1	1
Bit offset	255	254	253	252	251	250	249	248
Value	0	0	0	0	0	0	0	1

<b>Octet 1</b>								
Subindex	1	1	1	1	1	1	1	1
Bit offset	247	246	245	244	243	242	241	240
Value	1	1	1	1	1	1	0	1

<b>Octet 2</b>								
Subindex	2	2	2	2	2	2	2	2
Bit offset	239	238	237	236	235	234	233	232
Value	1	1	1	1	1	1	0	1

<b>Octet 3</b>								
Subindex	3	3	3	3	3	3	3	4

Continued on page 6

Continued from page 5

<b>Octet 3</b>								
Bit offset	231	230	229	228	227	226	225	224
Value	-	-	-	-	-	-	-	1
<b>Octet 4</b>								
Subindex	5	5	5	5	5	5	5	5
Bit offset	223	222	221	220	219	218	217	216
Value	0	0	0	0	0	0	0	1
<b>Octet 5</b>								
Subindex	5	5	5	5	5	5	5	5
Bit offset	215	214	213	212	211	210	209	208
Value	1	1	1	1	1	1	0	1
<b>Octet 6</b>								
Subindex	6	6	6	6	6	6	6	6
Bit offset	207	206	205	204	203	202	201	200
Value	1	1	1	1	1	1	0	1
<b>Octet 7</b>								
Subindex	7	7	7	7	7	7	7	8
Bit offset	199	198	197	196	195	194	193	192
Value	-	-	-	-	-	-	-	1
<b>Octet 8</b>								
Subindex	9	9	9	9	9	9	9	9
Bit offset	191	190	189	188	187	186	185	184
Value	0	0	0	0	0	0	0	1
<b>Octet 9</b>								
Subindex	9	9	9	9	9	9	9	9
Bit offset	183	182	181	180	179	178	177	176
Value	1	1	1	1	1	1	0	1
<b>Octet 10</b>								
Subindex	10	10	10	10	10	10	10	10
Bit offset	175	174	173	172	171	170	169	168
Value	1	1	1	1	1	1	0	1
<b>Octet 11</b>								
Subindex	11	11	11	11	11	11	11	12
Bit offset	167	166	165	164	163	162	161	160
Value	-	-	-	-	-	-	-	1
<b>Octet 12</b>								
Subindex	13	13	13	13	13	13	13	13
Bit offset	159	158	157	156	155	154	153	152
Value	0	0	0	0	0	0	0	1
<b>Octet 13</b>								
Subindex	13	13	13	13	13	13	13	13
Bit offset	151	150	149	148	147	146	145	144

Continued on page 7

Continued from page 6

<b>Octet 13</b>								
Value	1	1	1	1	1	1	0	1
<b>Octet 14</b>								
Subindex	14	14	14	14	14	14	14	14
Bit offset	143	142	141	140	139	138	137	136
Value	1	1	1	1	1	1	0	1
<b>Octet 15</b>								
Subindex	15	15	15	15	15	15	15	16
Bit offset	135	134	133	132	131	130	129	128
Value	-	-	-	-	-	-	-	1
<b>Octet 16</b>								
Subindex	17	17	17	17	17	17	17	17
Bit offset	127	126	125	124	123	122	121	120
Value	0	0	0	0	0	0	0	1
<b>Octet 17</b>								
Subindex	17	17	17	17	17	17	17	17
Bit offset	119	118	117	116	115	114	113	112
Value	1	1	1	1	1	1	0	1
<b>Octet 18</b>								
Subindex	18	18	18	18	18	18	18	18
Bit offset	111	110	109	108	107	106	105	104
Value	1	1	1	1	1	1	0	1
<b>Octet 19</b>								
Subindex	19	19	19	19	19	19	19	20
Bit offset	103	102	101	100	99	98	97	96
Value	-	-	-	-	-	-	-	1
<b>Octet 20</b>								
Subindex	21	21	21	21	21	21	21	21
Bit offset	95	94	93	92	91	90	89	88
Value	0	0	0	0	0	0	0	1
<b>Octet 21</b>								
Subindex	21	21	21	21	21	21	21	21
Bit offset	87	86	85	84	83	82	81	80
Value	1	1	1	1	1	1	0	1
<b>Octet 22</b>								
Subindex	22	22	22	22	22	22	22	22
Bit offset	79	78	77	76	75	74	73	72
Value	1	1	1	1	1	1	0	1
<b>Octet 23</b>								
Subindex	23	23	23	23	23	23	23	24
Bit offset	71	70	69	68	67	66	65	64
Value	-	-	-	-	-	-	-	1

<b>Octet 24</b>								
Subindex	25	25	25	25	25	25	25	25
Bit offset	63	62	61	60	59	58	57	56
Value	0	0	0	0	0	0	0	1
<b>Octet 25</b>								
Subindex	25	25	25	25	25	25	25	25
Bit offset	55	54	53	52	51	50	49	48
Value	1	1	1	1	1	1	0	1
<b>Octet 26</b>								
Subindex	26	26	26	26	26	26	26	26
Bit offset	47	46	45	44	43	42	41	40
Value	1	1	1	1	1	1	0	1
<b>Octet 27</b>								
Subindex	27	27	27	27	27	27	27	28
Bit offset	39	38	37	36	35	34	33	32
Value	-	-	-	-	-	-	-	1
<b>Octet 28</b>								
Subindex	29	29	29	29	29	29	29	29
Bit offset	31	30	29	28	27	26	25	24
Value	0	0	0	0	0	0	0	1
<b>Octet 29</b>								
Subindex	29	29	29	29	29	29	29	29
Bit offset	23	22	21	20	19	18	17	16
Value	1	1	1	1	1	1	0	1
<b>Octet 30</b>								
Subindex	30	30	30	30	30	30	30	30
Bit offset	15	14	13	12	11	10	9	8
Value	1	1	1	1	1	1	0	1
<b>Octet 31</b>								
Subindex	31	31	31	31	31	31	31	32
Bit offset	7	6	5	4	3	2	1	0
Value	-	-	-	-	-	-	-	1

## Example Based Upon the Value Above

Measurement Value = 509 (0x01FD)

Measurement Scale = -3 (0xFD)

Scaled Measurement Value = 0.509 V

Analog Input Validity = True

## Parameters Set Using IO-Link

These parameters can be read from and/or written to an R95C 8-Port Analog In to IO-Link Hub. Also included is information about whether the variable in question is saved during Data Storage.

Unlike Process Data In, which is transmitted from the IO-Link device to the IO-Link master cyclically, these parameters are read or written acyclically as needed.

Index	Subindex	Name	Length	Value Range	Default	Access Rights	Data Storage?
0	1-16	Direct Parameter Page 1 (incl. Vendor ID & Device ID)				RO	
1	1-16	Direct Parameters Page 2				RW	
2		Standard Command		130 = Restore Factory Settings 162 = Start Discovery 163 = Stop Discovery		WO	
3		Data Storage Index (device-specific list of parameters to be stored)				RW	
4-11		<i>Reserved by IO-Link Specification</i>					
<b>12</b>		<b>Device Access Locks</b>					
12	1	Parameter Write Access Lock		0 = Off, 1 = On	0	RW	Y
12	2	Data Storage Lock		0 = Off, 1 = On	0	RW	Y
12	3	Local Parameterization Lock		0 = Off, 1 = On	0	RW	Y
12	4	Local User Interface Lock		0 = Off, 1 = On	0	RW	Y
16		Vendor Name String		Banner Engineering Corporation		RO	
17		Vendor Text String		More Sensors. More Solutions.		RO	
18		Product Name String		R95C		RO	
19		Product ID String		R95C-8UI-KQ		RO	
20		Product Text String				RO	
21		Serial Number				RO	
23		Firmware Version				RO	
24		App Specific Tag (user defined)				RW	Y
36		Device Status	8-bit integer	0 = Device is OK 1 = Maintenance required 2 = Out of specification 3 = Functional check 4 = Failure 5..255 Reserved		RO	
37		Detailed Device Status	Array [6] of 3-octet			RO	
38-39		<i>reserved</i>					
40		Process Data Input		<i>See Process Data In</i>		RO	
41-57		<i>unused/reserved</i>					
<b>69</b>		<b>All-Time Run</b>					
69	1	Run Counter	32-bit Unsigned Integer	0..2147483647		RO	Y
<b>70</b>		<b>Resettable Run Time</b>					
70	1	Run Counter	32-bit Unsigned Integer	0..2147483647	0	RO	
<b>71</b>		<b>Pulse Frequency Configuration</b>					
71	1	Near Frequency (Hz)	32-bit Unsigned Integer	100..45000	100	RW	Y
71	2	Far Frequency (Hz)	32-bit Unsigned Integer	100..45000	600	RW	Y
<b>72</b>		<b>Pulse Frequency LOS Frequency (Hz)</b>					
72	1	Pulse Frequency LOS Frequency = Frequency used to indicate Loss-of-Signal	32-bit Unsigned Integer	50..45000	50	RW	Y
<b>76</b>		<b>Vendor Specific Configuration</b>					
76	1	Process Data Input Configuration	8-bit Unsigned Integer	0 = Analog Value, 1 = Digital Measuring Sensor	0	RW	Y
76	2	IOL Filter Time (ms)	16-bit Unsigned Integer		200	RW	Y
76	3	Secondary Output Function = Pin 2 (White) host side output	8-bit Unsigned Integer	0 = Disabled, 1 = Pulse Frequency Modulation	0	RW	Y

Continued on page 9

Continued from page 9

Index	Subindex	Name	Length	Value Range	Default	Access Rights	Data Storage?
76	4	PFM Input Selection	8-bit Unsigned	0 = Analog In 1 1 = Analog In 2 2 = Analog In 3 3 = Analog In 4 4 = Analog In 5 5 = Analog In 6 6 = Analog In 7 7 = Analog In 8	0	RW	Y
76	5	Port 1 - The Mode of Analog In	8-bit Unsigned	0 = Voltage, 1 = Current	1	RW	Y
76	6	Port 2 - The Mode of Analog In	8-bit Unsigned	0 = Voltage, 1 = Current	1	RW	Y
76	7	Port 3 - The Mode of Analog In	8-bit Unsigned	0 = Voltage, 1 = Current	1	RW	Y
76	8	Port 4 - The Mode of Analog In	8-bit Unsigned	0 = Voltage, 1 = Current	1	RW	Y
76	9	Port 5 - The Mode of Analog In	8-bit Unsigned	0 = Voltage, 1 = Current	1	RW	Y
76	10	Port 6 - The Mode of Analog In	8-bit Unsigned	0 = Voltage, 1 = Current	1	RW	Y
76	11	Port 7 - The Mode of Analog In	8-bit Unsigned	0 = Voltage, 1 = Current	1	RW	Y
76	12	Port 8 - The Mode of Analog In	8-bit Unsigned	0 = Voltage, 1 = Current	1	RW	Y
<b>78</b>		<b>All-Time Run Time Event Time</b>					
78	1	Event Time	32-bit Unsigned	0..2147483647	0	RW	Y
<b>79</b>		<b>Resettable Run Time Event Time</b>					
79	1	Event Time	32-bit Unsigned	0..2147483647	0	RW	Y
<b>12288</b>		<b>MDC Descriptor - Port 5</b>					
12288	1	Lower Limit	32-bit Integer			RO	
12288	2	Upper Limit	32-bit Integer			RO	
12288	3	Unit	16-bit Unsigned	1209 = A, 1240 = V		RO	
12288	4	Scale	8-bit Integer	-6 ( $\mu$ A), -3 (mV)		RO	
<b>12289</b>		<b>MDC Descriptor - Port 6</b>					
12289	1	Lower Limit	32-bit Integer			RO	
12289	2	Upper Limit	32-bit Integer			RO	
12289	3	Unit	16-bit Unsigned	1209 = A, 1240 = V		RO	
12289	4	Scale	8-bit Integer	-6 ( $\mu$ A), -3 (mV)		RO	
<b>12290</b>		<b>MDC Descriptor - Port 7</b>					
12290	1	Lower Limit	32-bit Integer			RO	
12290	2	Upper Limit	32-bit Integer			RO	
12290	3	Unit	16-bit Unsigned	1209 = A, 1240 = V		RO	
12290	4	Scale	8-bit Integer	-6 ( $\mu$ A), -3 (mV)		RO	
<b>12291</b>		<b>MDC Descriptor - Port 8</b>					
12291	1	Lower Limit	32-bit Integer			RO	
12291	2	Upper Limit	32-bit Integer			RO	
12291	3	Unit	16-bit Unsigned	1209 = A, 1240 = V		RO	
12291	4	Scale	8-bit Integer	-6 ( $\mu$ A), -3 (mV)		RO	
<b>16396</b>		<b>SSC1.BDC1 Setpoints</b>					
16396	1	Port 1 - Voltage - Setpoint SP1	32-bit Integer	Port 1 - SP1 Switchpoint = Voltage In LED lower switchpoint	0 V	RW	Y
16396	2	Port 1 - Voltage - Setpoint SP2	32-bit Integer	Port 1 - SP2 Switchpoint = Voltage In LED upper switchpoint	10 V	RW	Y
16396	3	Voltage - Hysteresis	32-bit Integer	Hysteresis value for the Voltage In Port 1 switchpoint	0.05 V	RW	Y
16396	4	Port 1 - Current - Setpoint SP1	32-bit Integer	Port 1 - SP1 Switchpoint = Current In LED lower switchpoint	0.004 A	RW	Y
16396	5	Port 1 - Current - Setpoint SP2	32-bit Integer	Port 1 - SP2 Switchpoint = Current In LED upper switchpoint	0.02 A	RW	Y

Continued on page 11

Continued from page 10

Index	Subindex	Name	Length	Value Range	Default	Access Rights	Data Storage?
16396	6	Current - Hysteresis	32-bit Integer	Hysteresis value for the Current In Port 1 switchpoint	0.0001 A	RW	Y
<b>16397</b>		<b>SSC2.BDC1 Setpoints</b>					
16397	1	Port 2 - Voltage - Setpoint SP1	32-bit Integer	Port 2 - SP1 Switchpoint = Voltage In LED lower switchpoint	0 V	RW	Y
16397	2	Port 2 - Voltage - Setpoint SP2	32-bit Integer	Port 2 - SP2 Switchpoint = Voltage In LED upper switchpoint	10 V	RW	Y
16397	3	Voltage - Hysteresis	32-bit Integer	Hysteresis value for the Voltage In Port 2 switchpoint	0.05 V	RW	Y
16397	4	Port 2 - Current - Setpoint SP1	32-bit Integer	Port 2 - SP1 Switchpoint = Current In LED lower switchpoint	0.004 A	RW	Y
16397	5	Port 2 - Current - Setpoint SP2	32-bit Integer	Port 2 - SP2 Switchpoint = Current In LED upper switchpoint	0.02 A	RW	Y
16397	6	Current - Hysteresis	32-bit Integer	Hysteresis value for the Current In Port 2 switchpoint	0.0001 A	RW	Y
<b>16398</b>		<b>SSC3.BDC1 Setpoints</b>					
16398	1	Port 3 - Voltage - Setpoint SP1	32-bit Integer	Port 3 - SP1 Switchpoint = Voltage In LED lower switchpoint	0 V	RW	Y
16398	2	Port 3 - Voltage - Setpoint SP2	32-bit Integer	Port 3 - SP2 Switchpoint = Voltage In LED upper switchpoint	10 V	RW	Y
16398	3	Voltage - Hysteresis	32-bit Integer	Hysteresis value for the Voltage In Port 3 switchpoint	0.05 V	RW	Y
16398	4	Port 3 - Current - Setpoint SP1	32-bit Integer	Port 3 - SP1 Switchpoint = Current In LED lower switchpoint	0.004 A	RW	Y
16398	5	Port 3 - Current - Setpoint SP2	32-bit Integer	Port 3 - SP2 Switchpoint = Current In LED upper switchpoint	0.02 A	RW	Y
16398	6	Current - Hysteresis	32-bit Integer	Hysteresis value for the Current In Port 3 switchpoint	0.0001 A	RW	Y
<b>16399</b>		<b>SSC4.BDC1 Setpoints</b>					
16399	1	Port 4 - Voltage - Setpoint SP1	32-bit Integer	Port 4 - SP1 Switchpoint = Voltage In LED lower switchpoint	0 V	RW	Y
16399	2	Port 4 - Voltage - Setpoint SP2	32-bit Integer	Port 4 - SP2 Switchpoint = Voltage In LED upper switchpoint	10 V	RW	Y
16399	3	Voltage - Hysteresis	32-bit Integer	Hysteresis value for the Voltage In Port 4 switchpoint	0.05 V	RW	Y
16399	4	Port 4 - Current - Setpoint SP1	32-bit Integer	Port 4 - SP1 Switchpoint = Current In LED lower switchpoint	0.004 A	RW	Y
16399	5	Port 4 - Current - Setpoint SP2	32-bit Integer	Port 4 - SP2 Switchpoint = Current In LED upper switchpoint	0.02 A	RW	Y
16399	6	Current - Hysteresis	32-bit Integer	Hysteresis value for the Current In Port 4 switchpoint	0.0001 A	RW	Y
<b>16400</b>		<b>SSC5.BDC1 Setpoints</b>					
16400	1	Port 5 - Voltage - Setpoint SP1	32-bit Integer	Port 5 - SP1 Switchpoint = Voltage In LED lower switchpoint	0 V	RW	Y
16400	2	Port 5 - Voltage - Setpoint SP2	32-bit Integer	Port 5 - SP2 Switchpoint = Voltage In LED upper switchpoint	10 V	RW	Y
16400	3	Voltage - Hysteresis	32-bit Integer	Hysteresis value for the Voltage In Port 5 switchpoint	0.05 V	RW	Y
16400	4	Port 5 - Current - Setpoint SP1	32-bit Integer	Port 5 - SP1 Switchpoint = Current In LED lower switchpoint	0.004 A	RW	Y
16400	5	Port 5 - Current - Setpoint SP2	32-bit Integer	Port 5 - SP2 Switchpoint = Current In LED upper switchpoint	0.02 A	RW	Y
16400	6	Current - Hysteresis	32-bit Integer	Hysteresis value for the Current In Port 5 switchpoint	0.0001 A	RW	Y
<b>16401</b>		<b>SSC6.BDC1 Setpoints</b>					
16401	1	Port 6 - Voltage - Setpoint SP1	32-bit Integer	Port 6 - SP1 Switchpoint = Voltage In LED lower switchpoint	0 V	RW	Y
16401	2	Port 6 - Voltage - Setpoint SP2	32-bit Integer	Port 6 - SP2 Switchpoint = Voltage In LED upper switchpoint	10 V	RW	Y
16401	3	Voltage - Hysteresis	32-bit Integer	Hysteresis value for the Voltage In Port 6 switchpoint	0.05 V	RW	Y
16401	4	Port 6 - Current - Setpoint SP1	32-bit Integer	Port 6 - SP1 Switchpoint = Current In LED lower switchpoint	0.004 A	RW	Y

Continued on page 12

Continued from page 11

Index	Subindex	Name	Length	Value Range	Default	Access Rights	Data Storage?
16401	5	Port 6 - Current - Setpoint SP2	32-bit Integer	Port 6 - SP2 Switchpoint = Current In LED upper switchpoint	0.02 A	RW	Y
16401	6	Current - Hysteresis	32-bit Integer	Hysteresis value for the Current In Port 6 switchpoint	0.0001 A	RW	Y
<b>16402</b>		<b>SSC7.BDC1 Setpoints</b>					
16402	1	Port 7 - Voltage - Setpoint SP1	32-bit Integer	Port 7 - SP1 Switchpoint = Voltage In LED lower switchpoint	0 V	RW	Y
16402	2	Port 7 - Voltage - Setpoint SP2	32-bit Integer	Port 7 - SP2 Switchpoint = Voltage In LED upper switchpoint	10 V	RW	Y
16402	3	Voltage - Hysteresis	32-bit Integer	Hysteresis value for the Voltage In Port 7 switchpoint	0.05 V	RW	Y
16402	4	Port 7 - Current - Setpoint SP1	32-bit Integer	Port 7 - SP1 Switchpoint = Current In LED lower switchpoint	0.004 A	RW	Y
16402	5	Port 7 - Current - Setpoint SP2	32-bit Integer	Port 7 - SP2 Switchpoint = Current In LED upper switchpoint	0.02 A	RW	Y
16402	6	Current - Hysteresis	32-bit Integer	Hysteresis value for the Current In Port 7 switchpoint	0.0001 A	RW	Y
<b>16403</b>		<b>SSC8.BDC1 Setpoints</b>					
16403	1	Port 8 - Voltage - Setpoint SP1	32-bit Integer	Port 8 - SP1 Switchpoint = Voltage In LED lower switchpoint	0 V	RW	Y
16403	2	Port 8 - Voltage - Setpoint SP2	32-bit Integer	Port 8 - SP2 Switchpoint = Voltage In LED upper switchpoint	10 V	RW	Y
16403	3	Voltage - Hysteresis	32-bit Integer	Hysteresis value for the Voltage In Port 8 switchpoint	0.05 V	RW	Y
16403	4	Port 8 - Current - Setpoint SP1	32-bit Integer	Port 8 - SP1 Switchpoint = Current In LED lower switchpoint	0.004 A	RW	Y
16403	5	Port 8 - Current - Setpoint SP2	32-bit Integer	Port 8 - SP2 Switchpoint = Current In LED upper switchpoint	0.02 A	RW	Y
16403	6	Current - Hysteresis	32-bit Integer	Hysteresis value for the Current In Port 8 switchpoint	0.0001 A	RW	Y
<b>16512</b>		<b>MDC Descriptor - Port 1</b>					
16512	1	Lower Limit	32-bit Integer			RO	
16512	2	Upper Limit	32-bit Integer			RO	
16512	3	Unit	16-bit Unsigned Integer	1209 = A, 1240 = V		RO	
16512	4	Scale	8-bit Integer	-6 ( $\mu$ A), -3 (mV)		RO	
<b>16513</b>		<b>MDC Descriptor - Port 2</b>					
16513	1	Lower Limit	32-bit Integer			RO	
16513	2	Upper Limit	32-bit Integer			RO	
16513	3	Unit	16-bit Unsigned Integer	1209 = A, 1240 = V		RO	
16513	4	Scale	8-bit Integer	-6 ( $\mu$ A), -3 (mV)		RO	
<b>16514</b>		<b>MDC Descriptor - Port 3</b>					
16514	1	Lower Limit	32-bit Integer			RO	
16514	2	Upper Limit	32-bit Integer			RO	
16514	3	Unit	16-bit Unsigned Integer	1209 = A, 1240 = V		RO	
16514	4	Scale	8-bit Integer	-6 ( $\mu$ A), -3 (mV)		RO	
<b>16515</b>		<b>MDC Descriptor - Port 4</b>					
16515	1	Lower Limit	32-bit Integer			RO	
16515	2	Upper Limit	32-bit Integer			RO	
16515	3	Unit	16-bit Unsigned Integer	1209 = A, 1240 = V		RO	
16515	4	Scale	8-bit Integer	-6 ( $\mu$ A), -3 (mV)		RO	

## IO-Link Events

Events are acyclic transmissions from the IO-Link device to the IO-Link master. Events can be error messages and/or warning or maintenance data.

Code	Type	Name	Description
25376 (0x6320)	Error	Parameter error	Check data sheet and values
36000 (0x8CA0)	Warning	All-time Run Time Event	Event indicating the corresponding configured running time has elapsed.
36001 (0x8CA1)	Warning	Resettable Run Time Event	Event indicating the corresponding configured running time has elapsed.