

## IO-Link Data Reference Guide

This document refers to the following IODD file: Banner\_Engineering-IC70-16P-K-20241101-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

| Parameter               | Value     | Parameter              | Value |
|-------------------------|-----------|------------------------|-------|
| IO-Link revision        | V1.1      | Port class             | A     |
| Process data in length  | 16-bits   | SIO mode               | Yes   |
| Process data out length | 16-bits   | Smart sensor profile   | No    |
| Bit rate                | 38400 bps | Block parameterization | Yes   |
| Minimum cycle time      | 3.3 ms    | Data storage           | Yes   |
| Device ID               | 659478    |                        |       |

### Process Data In (Device to Master)

| Subindex | Name                   | Number of Bits | Data Values                 |
|----------|------------------------|----------------|-----------------------------|
| 1        | Channel 1 Input State  | 1              | false=inactive, true=active |
| 2        | Channel 2 Input State  | 1              | false=inactive, true=active |
| 3        | Channel 3 Input State  | 1              | false=inactive, true=active |
| 4        | Channel 4 Input State  | 1              | false=inactive, true=active |
| 5        | Channel 5 Input State  | 1              | false=inactive, true=active |
| 6        | Channel 6 Input State  | 1              | false=inactive, true=active |
| 7        | Channel 7 Input State  | 1              | false=inactive, true=active |
| 8        | Channel 8 Input State  | 1              | false=inactive, true=active |
| 9        | Channel 9 Input State  | 1              | false=inactive, true=active |
| 10       | Channel 10 Input State | 1              | false=inactive, true=active |
| 11       | Channel 11 Input State | 1              | false=inactive, true=active |
| 12       | Channel 12 Input State | 1              | false=inactive, true=active |
| 13       | Channel 13 Input State | 1              | false=inactive, true=active |
| 14       | Channel 14 Input State | 1              | false=inactive, true=active |
| 15       | Channel 15 Input State | 1              | false=inactive, true=active |
| 16       | Channel 16 Input State | 1              | false=inactive, true=active |

#### Octet 0

| Subindex   | 8  | 7  | 6  | 5  | 4  | 3  | 2 | 1 |
|------------|----|----|----|----|----|----|---|---|
| Bit offset | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 |
| Value      | 1  | 1  | 1  | 1  | 1  | 1  | 0 | 1 |

#### Octet 1

| Subindex   | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 |
|------------|----|----|----|----|----|----|----|---|
| Bit offset | 7  | 6  | 5  | 4  | 3  | 2  | 1  | 0 |
| Value      | 1  | 1  | 1  | 0  | 1  | 1  | 1  | 0 |

Example based on the listed values

|   |                       |          |    |                        |          |
|---|-----------------------|----------|----|------------------------|----------|
| 1 | Channel 1 input state | active   | 9  | Channel 9 input state  | inactive |
| 2 | Channel 2 input state | inactive | 10 | Channel 10 input state | active   |

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|   |                       |        |    |                        |          |
|---|-----------------------|--------|----|------------------------|----------|
| 3 | Channel 3 input state | active | 11 | Channel 11 input state | active   |
| 4 | Channel 4 input state | active | 12 | Channel 12 input state | active   |
| 5 | Channel 5 input state | active | 13 | Channel 13 input state | inactive |
| 6 | Channel 6 input state | active | 14 | Channel 14 input state | active   |
| 7 | Channel 7 input state | active | 15 | Channel 15 input state | active   |
| 8 | Channel 8 input state | active | 16 | Channel 16 input state | active   |

## Process Data Out (Master to Device)

| Subindex | Name                    | Number of Bits | Data Values                        |
|----------|-------------------------|----------------|------------------------------------|
| 1        | Channel 1 Output State  | 1              | false=Off/Inactive, true=On/Active |
| 2        | Channel 2 Output State  | 1              | false=Off/Inactive, true=On/Active |
| 3        | Channel 3 Output State  | 1              | false=Off/Inactive, true=On/Active |
| 4        | Channel 4 Output State  | 1              | false=Off/Inactive, true=On/Active |
| 5        | Channel 5 Output State  | 1              | false=Off/Inactive, true=On/Active |
| 6        | Channel 6 Output State  | 1              | false=Off/Inactive, true=On/Active |
| 7        | Channel 7 Output State  | 1              | false=Off/Inactive, true=On/Active |
| 8        | Channel 8 Output State  | 1              | false=Off/Inactive, true=On/Active |
| 1        | Channel 9 Output State  | 1              | false=Off/Inactive, true=On/Active |
| 2        | Channel 10 Output State | 1              | false=Off/Inactive, true=On/Active |
| 3        | Channel 11 Output State | 1              | false=Off/Inactive, true=On/Active |
| 4        | Channel 12 Output State | 1              | false=Off/Inactive, true=On/Active |
| 5        | Channel 13 Output State | 1              | false=Off/Inactive, true=On/Active |
| 6        | Channel 14 Output State | 1              | false=Off/Inactive, true=On/Active |
| 7        | Channel 15 Output State | 1              | false=Off/Inactive, true=On/Active |
| 8        | Channel 16 Output State | 1              | false=Off/Inactive, true=On/Active |

### Octet 0

|            |    |    |    |    |    |    |   |   |
|------------|----|----|----|----|----|----|---|---|
| Subindex   | 8  | 7  | 6  | 5  | 4  | 3  | 2 | 1 |
| Bit offset | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 |

### Octet 1

|            |    |    |    |    |    |    |    |   |
|------------|----|----|----|----|----|----|----|---|
| Subindex   | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 |
| Bit offset | 7  | 6  | 5  | 4  | 3  | 2  | 1  | 0 |

## Parameters Set Using IO-Link

These parameters can be read from and/or written to an IC70-16P-K IO-Link Hub. Also included is information about whether the variable in question is saved during data storage and whether the variable came from the IO-Link Smart Sensor Profile. 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     |          | System Command                                                       |        | 130 = Restore Factory Settings 162 = Start discovery 163 = Stop discovery 164 = Reset All Metrics |         | wo            |               |
| 3     |          | Data Storage Index (device-specific list of parameters to be stored) |        |                                                                                                   |         | rw            |               |
| 4-11  |          | reserved by IO-Link Specification                                    |        |                                                                                                   |         |               |               |

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| Index     | Subindex | Name                                  | Length              | Value Range                                                                                                    | Default | Access Rights | Data Storage? |
|-----------|----------|---------------------------------------|---------------------|----------------------------------------------------------------------------------------------------------------|---------|---------------|---------------|
| <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                   |                     | IC70-16P-K                                                                                                     |         | ro            |               |
| 19        |          | Product ID string                     |                     | IC70-16P-K                                                                                                     |         | 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     |          | reserved                              |                     |                                                                                                                |         |               |               |
| 40        |          | Process Data Input                    |                     | see Process Data In                                                                                            |         | ro            |               |
| 41        |          | Process Data Output                   |                     | see Process Data Out                                                                                           |         | ro            |               |
| 42-57     |          | unused/reserved                       |                     |                                                                                                                |         |               |               |
| <b>69</b> |          | <b>All-Time Run Time</b>              |                     |                                                                                                                |         |               |               |
| 69        | 1        | Run counter                           | 32-bit Unsigned     | 0..2147483647                                                                                                  |         | ro            | y             |
| <b>70</b> |          | <b>Resettable Run Time</b>            |                     |                                                                                                                |         |               |               |
| 70        | 1        | Run counter                           | 32-bit Unsigned     | 0..2147483647                                                                                                  | 0       | rw            |               |
| <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>80</b> |          | <b>IO Metrics Channels 1 to 8</b>     |                     |                                                                                                                |         |               |               |
| 80        | 1        | Channel 1 Count                       | 32-bit Unsigned     | 0..2147483647                                                                                                  |         | ro            |               |
| 80        | 2        | Channel 1 Count Duration -            | 32-bit Unsigned     | 0..2147483647, 50µS resolution                                                                                 |         | ro            |               |
| 80        | 3        | Channel 1 Count Events per Minute     | 32-bit Unsigned     | 1..300000                                                                                                      |         | ro            |               |
| 80        | 4        | Channel 1 CountTotalizer Counter      | 32-bit Unsigned     | 0..2147483647                                                                                                  |         | ro            |               |
| 80        | 5        | Channel 2 Count                       | 32-bit Unsigned     | 0..2147483647                                                                                                  |         | ro            |               |
| 80        | 6        | Channel 2 Duration                    | 32-bit Unsigned     | 0..2147483647, 50µS resolution                                                                                 |         | ro            |               |
| 80        | 7        | Channel 2 Events per Minute           | 32-bit Unsigned     | 1..300000                                                                                                      |         | ro            |               |
| 80        | 8        | Channel 2 Totalizer Counter           | 32-bit Unsigned     | 0..2147483647                                                                                                  |         | ro            |               |
| 80        | 9        | Channel 3 Count                       | 32-bit Unsigned     | 0..2147483647                                                                                                  |         | ro            |               |
| 80        | 10       | Channel 3 Duration                    | 32-bit Unsigned     | 0..2147483647, 50µS resolution                                                                                 |         | ro            |               |
| 80        | 11       | Channel 3 Events per Minute           | 32-bit Unsigned     | 1..300000                                                                                                      |         | ro            |               |
| 80        | 12       | Channel 3 Totalizer Counter           | 32-bit Unsigned     | 0..2147483647                                                                                                  |         | ro            |               |
| 80        | 13       | Channel 4 Count                       | 32-bit Unsigned     | 0..2147483647                                                                                                  |         | ro            |               |
| 80        | 14       | Channel 4 Duration                    | 32-bit Unsigned     | 0..2147483647, 50µS resolution                                                                                 |         | ro            |               |
| 80        | 15       | Channel 4 Events per Minute           | 32-bit Unsigned     | 1..300000                                                                                                      |         | ro            |               |
| 80        | 16       | Channel 4 Totalizer Counter           | 32-bit Unsigned     | 0..2147483647                                                                                                  |         | ro            |               |
| 80        | 17       | Channel 5 Count                       | 32-bit Unsigned     | 0..2147483647                                                                                                  |         | ro            |               |
| 80        | 18       | Channel 5 Duration                    | 32-bit Unsigned     | 0..2147483647, 50µS resolution                                                                                 |         | ro            |               |

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| Index     | Subindex | Name                               | Length          | Value Range                    | Default | Access Rights | Data Storage? |
|-----------|----------|------------------------------------|-----------------|--------------------------------|---------|---------------|---------------|
| 80        | 19       | Channel 5 Events per Minute        | 32-bit Uinteger | 1..300000                      |         | ro            |               |
| 80        | 20       | Channel 5 Totalizer Counter        | 32-bit Uinteger | 0..2147483647                  |         | ro            |               |
| 80        | 21       | Channel 6 Count                    | 32-bit Uinteger | 0..2147483647                  |         | ro            |               |
| 80        | 22       | Channel 6 Duration                 | 32-bit Uinteger | 0..2147483647, 50µS resolution |         | ro            |               |
| 80        | 23       | Channel 6 Events per Minute        | 32-bit Uinteger | 1..300000                      |         | ro            |               |
| 80        | 24       | Channel 6 Totalizer Counter        | 32-bit Uinteger | 0..2147483647                  |         | ro            |               |
| 80        | 25       | Channel 7 Count                    | 32-bit Uinteger | 0..2147483647                  |         | ro            |               |
| 80        | 26       | Channel 7 Duration                 | 32-bit Uinteger | 0..2147483647, 50µS resolution |         | ro            |               |
| 80        | 27       | Channel 7 Events per Minute        | 32-bit Uinteger | 1..300000                      |         | ro            |               |
| 80        | 28       | Channel 7 Totalizer Counter        | 32-bit Uinteger | 0..2147483647                  |         | ro            |               |
| 80        | 29       | Channel 8 Count                    | 32-bit Uinteger | 0..2147483647                  |         | ro            |               |
| 80        | 30       | Channel 8 Duration                 | 32-bit Uinteger | 0..2147483647, 50µS resolution |         | ro            |               |
| 80        | 31       | Channel 8 Events per Minute        | 32-bit Uinteger | 1..300000                      |         | ro            |               |
| 80        | 32       | Channel 8 Totalizer Counter        | 32-bit Uinteger | 0..2147483647                  |         | ro            |               |
| <b>81</b> |          | <b>IO Metrics Channels 9 to 16</b> |                 |                                |         |               |               |
| 81        | 1        | Channel 9 Count                    | 32-bit Uinteger | 0..2147483647                  |         | ro            |               |
| 81        | 2        | Channel 9 Duration -               | 32-bit Uinteger | 0..2147483647, 50µS resolution |         | ro            |               |
| 81        | 3        | Channel 9 Events per Minute        | 32-bit Uinteger | 1..300000                      |         | ro            |               |
| 81        | 4        | Channel 9 Totalizer Counter        | 32-bit Uinteger | 0..2147483647                  |         | ro            |               |
| 81        | 5        | Channel 10 Count                   | 32-bit Uinteger | 0..2147483647                  |         | ro            |               |
| 81        | 6        | Channel 10 Duration                | 32-bit Uinteger | 0..2147483647, 50µS resolution |         | ro            |               |
| 81        | 7        | Channel 10 Events per Minute       | 32-bit Uinteger | 1..300000                      |         | ro            |               |
| 81        | 8        | Channel 10 Totalizer Counter       | 32-bit Uinteger | 0..2147483647                  |         | ro            |               |
| 81        | 9        | Channel 11 Count                   | 32-bit Uinteger | 0..2147483647                  |         | ro            |               |
| 81        | 10       | Channel 11 Duration                | 32-bit Uinteger | 0..2147483647, 50µS resolution |         | ro            |               |
| 81        | 11       | Channel 11 Events per Minute       | 32-bit Uinteger | 1..300000                      |         | ro            |               |
| 81        | 12       | Channel 11 Totalizer Counter       | 32-bit Uinteger | 0..2147483647                  |         | ro            |               |
| 81        | 13       | Channel 12 Count                   | 32-bit Uinteger | 0..2147483647                  |         | ro            |               |
| 81        | 14       | Channel 12 Duration                | 32-bit Uinteger | 0..2147483647, 50µS resolution |         | ro            |               |
| 81        | 15       | Channel 12 Events per Minute       | 32-bit Uinteger | 1..300000                      |         | ro            |               |
| 81        | 16       | Channel 12 Totalizer Counter       | 32-bit Uinteger | 0..2147483647                  |         | ro            |               |
| 81        | 17       | Channel 13 Count                   | 32-bit Uinteger | 0..2147483647                  |         | ro            |               |
| 81        | 18       | Channel 13 Duration                | 32-bit Uinteger | 0..2147483647, 50µS resolution |         | ro            |               |
| 81        | 19       | Channel 13 Events per Minute       | 32-bit Uinteger | 1..300000                      |         | ro            |               |
| 81        | 20       | Channel 13 Totalizer Counter       | 32-bit Uinteger | 0..2147483647                  |         | ro            |               |
| 81        | 21       | Channel 14 Count                   | 32-bit Uinteger | 0..2147483647                  |         | ro            |               |
| 81        | 22       | Channel 14 Duration                | 32-bit Uinteger | 0..2147483647, 50µS resolution |         | ro            |               |
| 81        | 23       | Channel 14 Events per Minute       | 32-bit Uinteger | 1..300000                      |         | ro            |               |
| 81        | 24       | Channel 14 Totalizer Counter       | 32-bit Uinteger | 0..2147483647                  |         | ro            |               |
| 81        | 25       | Channel 15 Count                   | 32-bit Uinteger | 0..2147483647                  |         | ro            |               |
| 81        | 26       | Channel 15 Duration                | 32-bit Uinteger | 0..2147483647, 50µS resolution |         | ro            |               |
| 81        | 27       | Channel 15 Events per Minute       | 32-bit Uinteger | 1..300000                      |         | ro            |               |
| 81        | 28       | Channel 15 Totalizer Counter       | 32-bit Uinteger | 0..2147483647                  |         | ro            |               |
| 81        | 29       | Channel 16 Count                   | 32-bit Uinteger | 0..2147483647                  |         | ro            |               |
| 81        | 30       | Channel 16 Duration                | 32-bit Uinteger | 0..2147483647, 50µS resolution |         | ro            |               |
| 81        | 31       | Channel 16 Events per Minute       | 32-bit Uinteger | 1..300000                      |         | ro            |               |
| 81        | 32       | Channel 16 Totalizer Counter       | 32-bit Uinteger | 0..2147483647                  |         | ro            |               |
| <b>82</b> |          | <b>Selectable Metric Reset</b>     |                 |                                |         |               |               |
| 82        | 1        | Channel 1                          | Boolean         | false=Do Not Reset, true=Reset | false   | rw            |               |

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| Index     | Subindex | Name                           | Length          | Value Range                                                                                                                                                                                                                 | Default | Access Rights | Data Storage? |
|-----------|----------|--------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------------|---------------|
| 82        | 2        | Channel 2                      | Boolean         | false=Do Not Reset, true=Reset                                                                                                                                                                                              | false   | rw            |               |
| 82        | 3        | Channel 3                      | Boolean         | false=Do Not Reset, true=Reset                                                                                                                                                                                              | false   | rw            |               |
| 82        | 4        | Channel 4                      | Boolean         | false=Do Not Reset, true=Reset                                                                                                                                                                                              | false   | rw            |               |
| 82        | 5        | Channel 5                      | Boolean         | false=Do Not Reset, true=Reset                                                                                                                                                                                              | false   | rw            |               |
| 82        | 6        | Channel 6                      | Boolean         | false=Do Not Reset, true=Reset                                                                                                                                                                                              | false   | rw            |               |
| 82        | 7        | Channel 7                      | Boolean         | false=Do Not Reset, true=Reset                                                                                                                                                                                              | false   | rw            |               |
| 82        | 8        | Channel 8                      | Boolean         | false=Do Not Reset, true=Reset                                                                                                                                                                                              | false   | rw            |               |
| 82        | 9        | Channel 9                      | Boolean         | false=Do Not Reset, true=Reset                                                                                                                                                                                              | false   | rw            |               |
| 82        | 10       | Channel 10                     | Boolean         | false=Do Not Reset, true=Reset                                                                                                                                                                                              | false   | rw            |               |
| 82        | 11       | Channel 11                     | Boolean         | false=Do Not Reset, true=Reset                                                                                                                                                                                              | false   | rw            |               |
| 82        | 12       | Channel 12                     | Boolean         | false=Do Not Reset, true=Reset                                                                                                                                                                                              | false   | rw            |               |
| 82        | 13       | Channel 13                     | Boolean         | false=Do Not Reset, true=Reset                                                                                                                                                                                              | false   | rw            |               |
| 82        | 14       | Channel 14                     | Boolean         | false=Do Not Reset, true=Reset                                                                                                                                                                                              | false   | rw            |               |
| 82        | 15       | Channel 15                     | Boolean         | false=Do Not Reset, true=Reset                                                                                                                                                                                              | false   | rw            |               |
| 82        | 16       | Channel 16                     | Boolean         | false=Do Not Reset, true=Reset                                                                                                                                                                                              | false   | rw            |               |
| 82        | 17       | Channel 1 Reset Count          | 32-bit Uinteger | 0..2147483647                                                                                                                                                                                                               | 0       | rw            |               |
| 82        | 18       | Channel 1 Reset Count          | 32-bit Uinteger | 0..2147483647                                                                                                                                                                                                               | 0       | rw            |               |
| 82        | 19       | Channel 3 Reset Count          | 32-bit Uinteger | 0..2147483647                                                                                                                                                                                                               | 0       | rw            |               |
| 82        | 20       | Channel 4 Reset Count          | 32-bit Uinteger | 0..2147483647                                                                                                                                                                                                               | 0       | rw            |               |
| 82        | 21       | Channel 5 Reset Count          | 32-bit Uinteger | 0..2147483647                                                                                                                                                                                                               | 0       | rw            |               |
| 82        | 22       | Channel 6 Reset Count          | 32-bit Uinteger | 0..2147483647                                                                                                                                                                                                               | 0       | rw            |               |
| 82        | 23       | Channel 7 Reset Count          | 32-bit Uinteger | 0..2147483647                                                                                                                                                                                                               | 0       | rw            |               |
| 82        | 24       | Channel 8 Reset Count          | 32-bit Uinteger | 0..2147483647                                                                                                                                                                                                               | 0       | rw            |               |
| 82        | 25       | Channel 9 Reset Count          | 32-bit Uinteger | 0..2147483647                                                                                                                                                                                                               | 0       | rw            |               |
| 82        | 26       | Channel 10 Reset Count         | 32-bit Uinteger | 0..2147483647                                                                                                                                                                                                               | 0       | rw            |               |
| 82        | 27       | Channel 11 Reset Count         | 32-bit Uinteger | 0..2147483647                                                                                                                                                                                                               | 0       | rw            |               |
| 82        | 28       | Channel 12 Reset Count         | 32-bit Uinteger | 0..2147483647                                                                                                                                                                                                               | 0       | rw            |               |
| 82        | 29       | Channel 13 Reset Count         | 32-bit Uinteger | 0..2147483647                                                                                                                                                                                                               | 0       | rw            |               |
| 82        | 30       | Channel 14 Reset Count         | 32-bit Uinteger | 0..2147483647                                                                                                                                                                                                               | 0       | rw            |               |
| 82        | 31       | Channel 15 Reset Count         | 32-bit Uinteger | 0..2147483647                                                                                                                                                                                                               | 0       | rw            |               |
| 82        | 32       | Channel 16 Reset Count         | 32-bit Uinteger | 0..2147483647                                                                                                                                                                                                               | 0       | rw            |               |
| <b>87</b> |          | <b>Channel 1 Configuration</b> |                 |                                                                                                                                                                                                                             |         |               |               |
| 87        | 1        | IO Selection                   | 8-bit Uinteger  | 1=PNP Input, 3=PNP Output with Pull Down                                                                                                                                                                                    | 3       | rw            | y             |
| 87        | 2        | Delay Mode                     | 8-bit Uinteger  | 0 = Disabled, 1 = On Off Delay, 2 = On One-shot, 3 = Off One-shot, 4 = On Pulse-stretcher, 5 = Off Pulse-stretcher, 6 = Totalizer, 7 = Retriggerable On One-shot, 8 = Retriggerable Off One-Shot                            | 0       | rw            | y             |
| 87        | 3        | Delay Timer 1                  | 32-bit Uinteger | 0..2147483647 [Channel On Delay, One-shot, Pulse-stretcher time(ms) or Totalizer Count]                                                                                                                                     | 0       | rw            | y             |
| 87        | 4        | Delay Timer 2                  | 32-bit Uinteger | 0..2147483647 (Channel Off Delay or Totalizer time)ms                                                                                                                                                                       | 0       | rw            | y             |
| 87        | 5        | Mirroring Enable               | 8-bit Uinteger  | 0=Disabled, 1=Enabled                                                                                                                                                                                                       | 0       | rw            | y             |
| 87        | 6        | Mirroring Channel Selection    | 8-bit Uinteger  | 0=Channel 1, 1=Channel 2, 2=Channel 3, 3=Channel 4, 4=Channel 5, 5=Channel 6, 6=Channel 7, 7=Channel 8, 8=Channel 9, 9=Channel 10, 10=Channel 11, 11=Channel 12, 12=Channel 13, 13=Channel 14, 14=Channel 15, 15=Channel 16 | 0       | rw            | y             |
| 87        | 7        | Mirroring Inversion            | 8-bit Uinteger  | 0=Not Inverted, 1=Inverted                                                                                                                                                                                                  | 0       | rw            | y             |
| <b>88</b> |          | <b>Channel 2 Configuration</b> |                 |                                                                                                                                                                                                                             |         |               |               |
| 88        | 1        | IO Selection                   | 8-bit Uinteger  | 1=PNP Input, 3=PNP Output with Pull Down                                                                                                                                                                                    | 3       | rw            | y             |
| 88        | 2        | Delay Mode                     | 8-bit Uinteger  | 0 = Disabled, 1 = On Off Delay, 2 = On One-shot, 3 = Off One-shot, 4 = On Pulse-stretcher, 5 = Off Pulse-stretcher, 6 = Totalizer, 7 = Retriggerable On One-shot, 8 = Retriggerable Off One-Shot                            | 0       | rw            | y             |

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| 88        | 3        | Delay Timer 1                  | 32-bit Uinteger | 0..2147483647 [Channel On Delay, One-shot, Pulse-stretcher time(ms) or Totalizer Count]                                                                                                                                     | 0       | rw            | y             |
| 88        | 4        | Delay Timer 2                  | 32-bit Uinteger | 0..2147483647 (Channel Off Delay or Totalizer time)ms                                                                                                                                                                       | 0       | rw            | y             |
| 88        | 5        | Mirroring Enable               | 8-bit Uinteger  | 0=Disabled, 1=Enabled                                                                                                                                                                                                       | 0       | rw            | y             |
| 88        | 6        | Mirroring Channel Selection    | 8-bit Uinteger  | 0=Channel 1, 1=Channel 2, 2=Channel 3, 3=Channel 4, 4=Channel 5, 5=Channel 6, 6=Channel 7, 7=Channel 8, 8=Channel 9, 9=Channel 10, 10=Channel 11, 11=Channel 12, 12=Channel 13, 13=Channel 14, 14=Channel 15, 15=Channel 16 | 0       | rw            | y             |
| 88        | 7        | Mirroring Inversion            | 8-bit Uinteger  | 0=Not Inverted, 1=Inverted                                                                                                                                                                                                  | 0       | rw            | y             |
| <b>89</b> |          | <b>Channel 3 Configuration</b> |                 |                                                                                                                                                                                                                             |         |               |               |
| 89        | 1        | IO Selection                   | 8-bit Uinteger  | 1=PNP Input, 3=PNP Output with Pull Down                                                                                                                                                                                    | 3       | rw            | y             |
| 89        | 2        | Delay Mode                     | 8-bit Uinteger  | 0 = Disabled, 1 = On Off Delay, 2 = On One-shot, 3 = Off One-shot, 4 = On Pulse-stretcher, 5 = Off Pulse-stretcher, 6 = Totalizer, 7 = Retriggerable On One-shot, 8 = Retriggerable Off One-Shot                            | 0       | rw            | y             |
| 89        | 3        | Delay Timer 1                  | 32-bit Uinteger | 0..2147483647 [Channel On Delay, One-shot, Pulse-stretcher time(ms) or Totalizer Count]                                                                                                                                     | 0       | rw            | y             |
| 89        | 4        | Delay Timer 2                  | 32-bit Uinteger | 0..2147483647 (Channel Off Delay or Totalizer time)ms                                                                                                                                                                       | 0       | rw            | y             |
| 89        | 5        | Mirroring Enable               | 8-bit Uinteger  | 0=Disabled, 1=Enabled                                                                                                                                                                                                       | 0       | rw            | y             |
| 89        | 6        | Mirroring Channel Selection    | 8-bit Uinteger  | 0=Channel 1, 1=Channel 2, 2=Channel 3, 3=Channel 4, 4=Channel 5, 5=Channel 6, 6=Channel 7, 7=Channel 8, 8=Channel 9, 9=Channel 10, 10=Channel 11, 11=Channel 12, 12=Channel 13, 13=Channel 14, 14=Channel 15, 15=Channel 16 | 0       | rw            | y             |
| 89        | 7        | Mirroring Inversion            | 8-bit Uinteger  | 0=Not Inverted, 1=Inverted                                                                                                                                                                                                  | 0       | rw            | y             |
| <b>90</b> |          | <b>Channel 4 Configuration</b> |                 |                                                                                                                                                                                                                             |         |               |               |
| 90        | 1        | IO Selection                   | 8-bit Uinteger  | 1=PNP Input, 3=PNP Output with Pull Down                                                                                                                                                                                    | 3       | rw            | y             |
| 90        | 2        | Delay Mode                     | 8-bit Uinteger  | 0 = Disabled, 1 = On Off Delay, 2 = On One-shot, 3 = Off One-shot, 4 = On Pulse-stretcher, 5 = Off Pulse-stretcher, 6 = Totalizer, 7 = Retriggerable On One-shot, 8 = Retriggerable Off One-Shot                            | 0       | rw            | y             |
| 90        | 3        | Delay Timer 1                  | 32-bit Uinteger | 0..2147483647 [Channel On Delay, One-shot, Pulse-stretcher time(ms) or Totalizer Count]                                                                                                                                     | 0       | rw            | y             |
| 90        | 4        | Delay Timer 2                  | 32-bit Uinteger | 0..2147483647 (Channel Off Delay or Totalizer time)ms                                                                                                                                                                       | 0       | rw            | y             |
| 90        | 5        | Mirroring Enable               | 8-bit Uinteger  | 0=Disabled, 1=Enabled                                                                                                                                                                                                       | 0       | rw            | y             |
| 90        | 6        | Mirroring Channel Selection    | 8-bit Uinteger  | 0=Channel 1, 1=Channel 2, 2=Channel 3, 3=Channel 4, 4=Channel 5, 5=Channel 6, 6=Channel 7, 7=Channel 8, 8=Channel 9, 9=Channel 10, 10=Channel 11, 11=Channel 12, 12=Channel 13, 13=Channel 14, 14=Channel 15, 15=Channel 16 | 0       | rw            | y             |
| 90        | 7        | Mirroring Inversion            | 8-bit Uinteger  | 0=Not Inverted, 1=Inverted                                                                                                                                                                                                  | 0       | rw            | y             |
| <b>91</b> |          | <b>Channel 5 Configuration</b> |                 |                                                                                                                                                                                                                             |         |               |               |
| 91        | 1        | IO Selection                   | 8-bit Uinteger  | 1=PNP Input, 3=PNP Output with Pull Down                                                                                                                                                                                    | 3       | rw            | y             |
| 91        | 2        | Delay Mode                     | 8-bit Uinteger  | 0 = Disabled, 1 = On Off Delay, 2 = On One-shot, 3 = Off One-shot, 4 = On Pulse-stretcher, 5 = Off Pulse-stretcher, 6 = Totalizer, 7 = Retriggerable On One-shot, 8 = Retriggerable Off One-Shot                            | 0       | rw            | y             |
| 91        | 3        | Delay Timer 1                  | 32-bit Uinteger | 0..2147483647 [Channel On Delay, One-shot, Pulse-stretcher time(ms) or Totalizer Count]                                                                                                                                     | 0       | rw            | y             |
| 91        | 4        | Delay Timer 2                  | 32-bit Uinteger | 0..2147483647 (Channel Off Delay or Totalizer time)ms                                                                                                                                                                       | 0       | rw            | y             |
| 91        | 5        | Mirroring Enable               | 8-bit Uinteger  | 0=Disabled, 1=Enabled                                                                                                                                                                                                       | 0       | rw            | y             |
| 91        | 6        | Mirroring Channel Selection    | 8-bit Uinteger  | 0=Channel 1, 1=Channel 2, 2=Channel 3, 3=Channel 4, 4=Channel 5, 5=Channel 6, 6=Channel 7, 7=Channel 8, 8=Channel 9, 9=Channel 10, 10=Channel 11, 11=Channel 12, 12=Channel 13, 13=Channel 14, 14=Channel 15, 15=Channel 16 | 0       | rw            | y             |
| 91        | 7        | Mirroring Inversion            | 8-bit Uinteger  | 0=Not Inverted, 1=Inverted                                                                                                                                                                                                  | 0       | rw            | y             |
| <b>92</b> |          | <b>Channel 6 Configuration</b> |                 |                                                                                                                                                                                                                             |         |               |               |
| 92        | 1        | IO Selection                   | 8-bit Uinteger  | 1=PNP Input, 3=PNP Output with Pull Down                                                                                                                                                                                    | 3       | rw            | y             |

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| 92        | 2        | Delay Mode                     | 8-bit Uinteger  | 0 = Disabled, 1 = On Off Delay, 2 = On One-shot, 3 = Off One-shot, 4 = On Pulse-stretcher, 5 = Off Pulse-stretcher, 6 = Totalizer, 7 = Retriggerable On One-shot, 8 = Retriggerable Off One-Shot                            | 0       | rw            | y             |
| 92        | 3        | Delay Timer 1                  | 32-bit Uinteger | 0..2147483647 [Channel On Delay, One-shot, Pulse-stretcher time(ms) or Totalizer Count]                                                                                                                                     | 0       | rw            | y             |
| 92        | 4        | Delay Timer 2                  | 32-bit Uinteger | 0..2147483647 (Channel Off Delay or Totalizer time)ms                                                                                                                                                                       | 0       | rw            | y             |
| 92        | 5        | Mirroring Enable               | 8-bit Uinteger  | 0=Disabled, 1=Enabled                                                                                                                                                                                                       | 0       | rw            | y             |
| 92        | 6        | Mirroring Channel Selection    | 8-bit Uinteger  | 0=Channel 1, 1=Channel 2, 2=Channel 3, 3=Channel 4, 4=Channel 5, 5=Channel 6, 6=Channel 7, 7=Channel 8, 8=Channel 9, 9=Channel 10, 10=Channel 11, 11=Channel 12, 12=Channel 13, 13=Channel 14, 14=Channel 15, 15=Channel 16 | 0       | rw            | y             |
| 92        | 7        | Mirroring Inversion            | 8-bit Uinteger  | 0=Not Inverted, 1=Inverted                                                                                                                                                                                                  | 0       | rw            | y             |
| <b>93</b> |          | <b>Channel 7 Configuration</b> |                 |                                                                                                                                                                                                                             |         |               |               |
| 93        | 1        | IO Selection                   | 8-bit Uinteger  | 1=PNP Input, 3=PNP Output with Pull Down                                                                                                                                                                                    | 3       | rw            | y             |
| 93        | 2        | Delay Mode                     | 8-bit Uinteger  | 0 = Disabled, 1 = On Off Delay, 2 = On One-shot, 3 = Off One-shot, 4 = On Pulse-stretcher, 5 = Off Pulse-stretcher, 6 = Totalizer, 7 = Retriggerable On One-shot, 8 = Retriggerable Off One-Shot                            | 0       | rw            | y             |
| 93        | 3        | Delay Timer 1                  | 32-bit Uinteger | 0..2147483647 [Channel On Delay, One-shot, Pulse-stretcher time(ms) or Totalizer Count]                                                                                                                                     | 0       | rw            | y             |
| 93        | 4        | Delay Timer 2                  | 32-bit Uinteger | 0..2147483647 (Channel Off Delay or Totalizer time)ms                                                                                                                                                                       | 0       | rw            | y             |
| 93        | 5        | Mirroring Enable               | 8-bit Uinteger  | 0=Disabled, 1=Enabled                                                                                                                                                                                                       | 0       | rw            | y             |
| 93        | 6        | Mirroring Channel Selection    | 8-bit Uinteger  | 0=Channel 1, 1=Channel 2, 2=Channel 3, 3=Channel 4, 4=Channel 5, 5=Channel 6, 6=Channel 7, 7=Channel 8, 8=Channel 9, 9=Channel 10, 10=Channel 11, 11=Channel 12, 12=Channel 13, 13=Channel 14, 14=Channel 15, 15=Channel 16 | 0       | rw            | y             |
| 93        | 7        | Mirroring Inversion            | 8-bit Uinteger  | 0=Not Inverted, 1=Inverted                                                                                                                                                                                                  | 0       | rw            | y             |
| <b>94</b> |          | <b>Channel 8 Configuration</b> |                 |                                                                                                                                                                                                                             |         |               |               |
| 94        | 1        | IO Selection                   | 8-bit Uinteger  | 1=PNP Input, 3=PNP Output with Pull Down                                                                                                                                                                                    | 3       | rw            | y             |
| 94        | 2        | Delay Mode                     | 8-bit Uinteger  | 0 = Disabled, 1 = On Off Delay, 2 = On One-shot, 3 = Off One-shot, 4 = On Pulse-stretcher, 5 = Off Pulse-stretcher, 6 = Totalizer, 7 = Retriggerable On One-shot, 8 = Retriggerable Off One-Shot                            | 0       | rw            | y             |
| 94        | 3        | Delay Timer 1                  | 32-bit Uinteger | 0..2147483647 [Channel On Delay, One-shot, Pulse-stretcher time(ms) or Totalizer Count]                                                                                                                                     | 0       | rw            | y             |
| 94        | 4        | Delay Timer 2                  | 32-bit Uinteger | 0..2147483647 (Channel Off Delay or Totalizer time)ms                                                                                                                                                                       | 0       | rw            | y             |
| 94        | 5        | Mirroring Enable               | 8-bit Uinteger  | 0=Disabled, 1=Enabled                                                                                                                                                                                                       | 0       | rw            | y             |
| 94        | 6        | Mirroring Channel Selection    | 8-bit Uinteger  | 0=Channel 1, 1=Channel 2, 2=Channel 3, 3=Channel 4, 4=Channel 5, 5=Channel 6, 6=Channel 7, 7=Channel 8, 8=Channel 9, 9=Channel 10, 10=Channel 11, 11=Channel 12, 12=Channel 13, 13=Channel 14, 14=Channel 15, 15=Channel 16 | 0       | rw            | y             |
| 94        | 7        | Mirroring Inversion            | 8-bit Uinteger  | 0=Not Inverted, 1=Inverted                                                                                                                                                                                                  | 0       | rw            | y             |
| <b>95</b> |          | <b>Channel 9 Configuration</b> |                 |                                                                                                                                                                                                                             |         |               |               |
| 95        | 1        | IO Selection                   | 8-bit Uinteger  | 1=PNP Input, 3=PNP Output with Pull Down                                                                                                                                                                                    | 3       | rw            | y             |
| 95        | 2        | Delay Mode                     | 8-bit Uinteger  | 0 = Disabled, 1 = On Off Delay, 2 = On One-shot, 3 = Off One-shot, 4 = On Pulse-stretcher, 5 = Off Pulse-stretcher, 6 = Totalizer, 7 = Retriggerable On One-shot, 8 = Retriggerable Off One-Shot                            | 0       | rw            | y             |
| 95        | 3        | Delay Timer 1                  | 32-bit Uinteger | 0..2147483647 [Channel On Delay, One-shot, Pulse-stretcher time(ms) or Totalizer Count]                                                                                                                                     | 0       | rw            | y             |
| 95        | 4        | Delay Timer 2                  | 32-bit Uinteger | 0..2147483647 (Channel Off Delay or Totalizer time)ms                                                                                                                                                                       | 0       | rw            | y             |
| 95        | 5        | Mirroring Enable               | 8-bit Uinteger  | 0=Disabled, 1=Enabled                                                                                                                                                                                                       | 0       | rw            | y             |
| 95        | 6        | Mirroring Channel Selection    | 8-bit Uinteger  | 0=Channel 1, 1=Channel 2, 2=Channel 3, 3=Channel 4, 4=Channel 5, 5=Channel 6, 6=Channel 7, 7=Channel 8, 8=Channel 9, 9=Channel 10, 10=Channel 11, 11=Channel 12, 12=Channel 13, 13=Channel 14, 14=Channel 15, 15=Channel 16 | 0       | rw            | y             |

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| 95        | 7        | Mirroring Inversion             | 8-bit Uinteger  | 0=Not Inverted, 1=Inverted                                                                                                                                                                                                  | 0       | rw            | y             |
| <b>96</b> |          | <b>Channel 10 Configuration</b> |                 |                                                                                                                                                                                                                             |         |               |               |
| 96        | 1        | IO Selection                    | 8-bit Uinteger  | 1=PNP Input, 3=PNP Output with Pull Down                                                                                                                                                                                    | 3       | rw            | y             |
| 96        | 2        | Delay Mode                      | 8-bit Uinteger  | 0 = Disabled, 1 = On Off Delay, 2 = On One-shot, 3 = Off One-shot, 4 = On Pulse-stretcher, 5 = Off Pulse-stretcher, 6 = Totalizer, 7 = Retriggerable On One-shot, 8 = Retriggerable Off One-Shot                            | 0       | rw            | y             |
| 96        | 3        | Delay Timer 1                   | 32-bit Uinteger | 0..2147483647 [Channel On Delay, One-shot, Pulse-stretcher time(ms) or Totalizer Count]                                                                                                                                     | 0       | rw            | y             |
| 96        | 4        | Delay Timer 2                   | 32-bit Uinteger | 0..2147483647 (Channel Off Delay or Totalizer time)ms                                                                                                                                                                       | 0       | rw            | y             |
| 96        | 5        | Mirroring Enable                | 8-bit Uinteger  | 0=Disabled, 1=Enabled                                                                                                                                                                                                       | 0       | rw            | y             |
| 96        | 6        | Mirroring Channel Selection     | 8-bit Uinteger  | 0=Channel 1, 1=Channel 2, 2=Channel 3, 3=Channel 4, 4=Channel 5, 5=Channel 6, 6=Channel 7, 7=Channel 8, 8=Channel 9, 9=Channel 10, 10=Channel 11, 11=Channel 12, 12=Channel 13, 13=Channel 14, 14=Channel 15, 15=Channel 16 | 0       | rw            | y             |
| 96        | 7        | Mirroring Inversion             | 8-bit Uinteger  | 0=Not Inverted, 1=Inverted                                                                                                                                                                                                  | 0       | rw            | y             |
| <b>97</b> |          | <b>Channel 11 Configuration</b> |                 |                                                                                                                                                                                                                             |         |               |               |
| 97        | 1        | IO Selection                    | 8-bit Uinteger  | 1=PNP Input, 3=PNP Output with Pull Down                                                                                                                                                                                    | 3       | rw            | y             |
| 97        | 2        | Delay Mode                      | 8-bit Uinteger  | 0 = Disabled, 1 = On Off Delay, 2 = On One-shot, 3 = Off One-shot, 4 = On Pulse-stretcher, 5 = Off Pulse-stretcher, 6 = Totalizer, 7 = Retriggerable On One-shot, 8 = Retriggerable Off One-Shot                            | 0       | rw            | y             |
| 97        | 3        | Delay Timer 1                   | 32-bit Uinteger | 0..2147483647 [Channel On Delay, One-shot, Pulse-stretcher time(ms) or Totalizer Count]                                                                                                                                     | 0       | rw            | y             |
| 97        | 4        | Delay Timer 2                   | 32-bit Uinteger | 0..2147483647 (Channel Off Delay or Totalizer time)ms                                                                                                                                                                       | 0       | rw            | y             |
| 97        | 5        | Mirroring Enable                | 8-bit Uinteger  | 0=Disabled, 1=Enabled                                                                                                                                                                                                       | 0       | rw            | y             |
| 97        | 6        | Mirroring Channel Selection     | 8-bit Uinteger  | 0=Channel 1, 1=Channel 2, 2=Channel 3, 3=Channel 4, 4=Channel 5, 5=Channel 6, 6=Channel 7, 7=Channel 8, 8=Channel 9, 9=Channel 10, 10=Channel 11, 11=Channel 12, 12=Channel 13, 13=Channel 14, 14=Channel 15, 15=Channel 16 | 0       | rw            | y             |
| 97        | 7        | Mirroring Inversion             | 8-bit Uinteger  | 0=Not Inverted, 1=Inverted                                                                                                                                                                                                  | 0       | rw            | y             |
| <b>98</b> |          | <b>Channel 12 Configuration</b> |                 |                                                                                                                                                                                                                             |         |               |               |
| 98        | 1        | IO Selection                    | 8-bit Uinteger  | 1=PNP Input, 3=PNP Output with Pull Down                                                                                                                                                                                    | 3       | rw            | y             |
| 98        | 2        | Delay Mode                      | 8-bit Uinteger  | 0 = Disabled, 1 = On Off Delay, 2 = On One-shot, 3 = Off One-shot, 4 = On Pulse-stretcher, 5 = Off Pulse-stretcher, 6 = Totalizer, 7 = Retriggerable On One-shot, 8 = Retriggerable Off One-Shot                            | 0       | rw            | y             |
| 98        | 3        | Delay Timer 1                   | 32-bit Uinteger | 0..2147483647 [Channel On Delay, One-shot, Pulse-stretcher time(ms) or Totalizer Count]                                                                                                                                     | 0       | rw            | y             |
| 98        | 4        | Delay Timer 2                   | 32-bit Uinteger | 0..2147483647 (Channel Off Delay or Totalizer time)ms                                                                                                                                                                       | 0       | rw            | y             |
| 98        | 5        | Mirroring Enable                | 8-bit Uinteger  | 0=Disabled, 1=Enabled                                                                                                                                                                                                       | 0       | rw            | y             |
| 98        | 6        | Mirroring Channel Selection     | 8-bit Uinteger  | 0=Channel 1, 1=Channel 2, 2=Channel 3, 3=Channel 4, 4=Channel 5, 5=Channel 6, 6=Channel 7, 7=Channel 8, 8=Channel 9, 9=Channel 10, 10=Channel 11, 11=Channel 12, 12=Channel 13, 13=Channel 14, 14=Channel 15, 15=Channel 16 | 0       | rw            | y             |
| 98        | 7        | Mirroring Inversion             | 8-bit Uinteger  | 0=Not Inverted, 1=Inverted                                                                                                                                                                                                  | 0       | rw            | y             |
| <b>99</b> |          | <b>Channel 13 Configuration</b> |                 |                                                                                                                                                                                                                             |         |               |               |
| 99        | 1        | IO Selection                    | 8-bit Uinteger  | 1=PNP Input, 3=PNP Output with Pull Down                                                                                                                                                                                    | 3       | rw            | y             |
| 99        | 2        | Delay Mode                      | 8-bit Uinteger  | 0 = Disabled, 1 = On Off Delay, 2 = On One-shot, 3 = Off One-shot, 4 = On Pulse-stretcher, 5 = Off Pulse-stretcher, 6 = Totalizer, 7 = Retriggerable On One-shot, 8 = Retriggerable Off One-Shot                            | 0       | rw            | y             |
| 99        | 3        | Delay Timer 1                   | 32-bit Uinteger | 0..2147483647 [Channel On Delay, One-shot, Pulse-stretcher time(ms) or Totalizer Count]                                                                                                                                     | 0       | rw            | y             |
| 99        | 4        | Delay Timer 2                   | 32-bit Uinteger | 0..2147483647 (Channel Off Delay or Totalizer time)ms                                                                                                                                                                       | 0       | rw            | y             |
| 99        | 5        | Mirroring Enable                | 8-bit Uinteger  | 0=Disabled, 1=Enabled                                                                                                                                                                                                       | 0       | rw            | y             |

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| 99         | 6        | Mirroring Channel Selection     | 8-bit Uinteger  | 0=Channel 1, 1=Channel 2, 2=Channel 3, 3=Channel 4, 4=Channel 5, 5=Channel 6, 6=Channel 7, 7=Channel 8, 8=Channel 9, 9=Channel 10, 10=Channel 11, 11=Channel 12, 12=Channel 13, 13=Channel 14, 14=Channel 15, 15=Channel 16 | 0       | rw            | y             |
| 99         | 7        | Mirroring Inversion             | 8-bit Uinteger  | 0=Not Inverted, 1=Inverted                                                                                                                                                                                                  | 0       | rw            | y             |
| <b>100</b> |          | <b>Channel 14 Configuration</b> |                 |                                                                                                                                                                                                                             |         |               |               |
| 100        | 1        | IO Selection                    | 8-bit Uinteger  | 1=PNP Input, 3=PNP Output with Pull Down                                                                                                                                                                                    | 3       | rw            | y             |
| 100        | 2        | Delay Mode                      | 8-bit Uinteger  | 0 = Disabled, 1 = On Off Delay, 2 = On One-shot, 3 = Off One-shot, 4 = On Pulse-stretcher, 5 = Off Pulse-stretcher, 6 = Totalizer, 7 = Retriggerable On One-shot, 8 = Retriggerable Off One-Shot                            | 0       | rw            | y             |
| 100        | 3        | Delay Timer 1                   | 32-bit Uinteger | 0..2147483647 [Channel On Delay, One-shot, Pulse-stretcher time(ms) or Totalizer Count]                                                                                                                                     | 0       | rw            | y             |
| 100        | 4        | Delay Timer 2                   | 32-bit Uinteger | 0..2147483647 (Channel Off Delay or Totalizer time)ms                                                                                                                                                                       | 0       | rw            | y             |
| 100        | 5        | Mirroring Enable                | 8-bit Uinteger  | 0=Disabled, 1=Enabled                                                                                                                                                                                                       | 0       | rw            | y             |
| 100        | 6        | Mirroring Channel Selection     | 8-bit Uinteger  | 0=Channel 1, 1=Channel 2, 2=Channel 3, 3=Channel 4, 4=Channel 5, 5=Channel 6, 6=Channel 7, 7=Channel 8, 8=Channel 9, 9=Channel 10, 10=Channel 11, 11=Channel 12, 12=Channel 13, 13=Channel 14, 14=Channel 15, 15=Channel 16 | 0       | rw            | y             |
| 100        | 7        | Mirroring Inversion             | 8-bit Uinteger  | 0=Not Inverted, 1=Inverted                                                                                                                                                                                                  | 0       | rw            | y             |
| <b>101</b> |          | <b>Channel 15 Configuration</b> |                 |                                                                                                                                                                                                                             |         |               |               |
| 101        | 1        | IO Selection                    | 8-bit Uinteger  | 1=PNP Input, 3=PNP Output with Pull Down                                                                                                                                                                                    | 3       | rw            | y             |
| 101        | 2        | Delay Mode                      | 8-bit Uinteger  | 0 = Disabled, 1 = On Off Delay, 2 = On One-shot, 3 = Off One-shot, 4 = On Pulse-stretcher, 5 = Off Pulse-stretcher, 6 = Totalizer, 7 = Retriggerable On One-shot, 8 = Retriggerable Off One-Shot                            | 0       | rw            | y             |
| 101        | 3        | Delay Timer 1                   | 32-bit Uinteger | 0..2147483647 [Channel On Delay, One-shot, Pulse-stretcher time(ms) or Totalizer Count]                                                                                                                                     | 0       | rw            | y             |
| 101        | 4        | Delay Timer 2                   | 32-bit Uinteger | 0..2147483647 (Channel Off Delay or Totalizer time)ms                                                                                                                                                                       | 0       | rw            | y             |
| 101        | 5        | Mirroring Enable                | 8-bit Uinteger  | 0=Disabled, 1=Enabled                                                                                                                                                                                                       | 0       | rw            | y             |
| 101        | 6        | Mirroring Channel Selection     | 8-bit Uinteger  | 0=Channel 1, 1=Channel 2, 2=Channel 3, 3=Channel 4, 4=Channel 5, 5=Channel 6, 6=Channel 7, 7=Channel 8, 8=Channel 9, 9=Channel 10, 10=Channel 11, 11=Channel 12, 12=Channel 13, 13=Channel 14, 14=Channel 15, 15=Channel 16 | 0       | rw            | y             |
| 101        | 7        | Mirroring Inversion             | 8-bit Uinteger  | 0=Not Inverted, 1=Inverted                                                                                                                                                                                                  | 0       | rw            | y             |
| <b>102</b> |          | <b>Channel 16 Configuration</b> |                 |                                                                                                                                                                                                                             |         |               |               |
| 102        | 1        | IO Selection                    | 8-bit Uinteger  | 1=PNP Input, 3=PNP Output with Pull Down                                                                                                                                                                                    | 3       | rw            | y             |
| 102        | 2        | Delay Mode                      | 8-bit Uinteger  | 0 = Disabled, 1 = On Off Delay, 2 = On One-shot, 3 = Off One-shot, 4 = On Pulse-stretcher, 5 = Off Pulse-stretcher, 6 = Totalizer, 7 = Retriggerable On One-shot, 8 = Retriggerable Off One-Shot                            | 0       | rw            | y             |
| 102        | 3        | Delay Timer 1                   | 32-bit Uinteger | 0..2147483647 [Channel On Delay, One-shot, Pulse-stretcher time(ms) or Totalizer Count]                                                                                                                                     | 0       | rw            | y             |
| 102        | 4        | Delay Timer 2                   | 32-bit Uinteger | 0..2147483647 (Channel Off Delay or Totalizer time)ms                                                                                                                                                                       | 0       | rw            | y             |
| 102        | 5        | Mirroring Enable                | 8-bit Uinteger  | 0=Disabled, 1=Enabled                                                                                                                                                                                                       | 0       | rw            | y             |
| 102        | 6        | Mirroring Channel Selection     | 8-bit Uinteger  | 0=Channel 1, 1=Channel 2, 2=Channel 3, 3=Channel 4, 4=Channel 5, 5=Channel 6, 6=Channel 7, 7=Channel 8, 8=Channel 9, 9=Channel 10, 10=Channel 11, 11=Channel 12, 12=Channel 13, 13=Channel 14, 14=Channel 15, 15=Channel 16 | 0       | rw            | y             |
| 102        | 7        | Mirroring Inversion             | 8-bit Uinteger  | 0=Not Inverted, 1=Inverted                                                                                                                                                                                                  | 0       | rw            | y             |

## IO-Link Events

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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 datasheet 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. |