



## Device Test Report

TMG IO-Link Device Tool V5.1 - TS: Revision: 5.1.1 Build: 8868  
TEngBas V5.1.1: Revision: 5.1.1 Build: 8861  
Test ID: 790163717



Vendor ID : 451 Vendor : Banner Engineering Corporation  
Device ID : 659478 Device : IC70-16P-K  
IO-Link Version : V1.1 Product ID : IC70-16P-K  
Firmware Revision : 1.0.51930 Hardware Revision : not known  
Serial Number : FSSSSSSSPPPPPDD  
  
ISDU supported : True SIO mode supported : True  
Process Data Input Bits : 16 Process Data Output Bits : 16  
Min Cycle Time : 3300  $\mu$ s Bitrate : COM2  
Implemented Access Locks :  
parameter="True" datastorage="True" localParameterization="True" localUserInterface="True"  
IODD : Banner\_Engineering-IC70-16P-K-20241101-IODD1.1.xml  
Checker : IODD-Checker V1.1.4 R3 IODD Stamp : 925136256  
Test conditions: Test according IO-Link specification V1.1.2

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Test result : All test were passed with positiv result in complete operation.

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Test operated by :

Company : Banner Engineering  
Name : Fathi Hassen  
Signature :

**Testreport : Test System Version information**

|                                    |                     |             |
|------------------------------------|---------------------|-------------|
| TMG IO-Link Device Tool V5.1 - TS: | Revision: 5.1.1     | Build: 8868 |
| TEngBas V5.1.1:                    | Revision: 5.1.1     | Build: 8861 |
| Testcase DLL:                      | Name: ProtocolTests | Build: 8861 |
| USB Master Firmware Revision:      | 3.2.2 / 1.3.C       |             |

**Testreport : Test Configuration**

Test variable for 8 Bit index access :

|                 |           |
|-----------------|-----------|
| Index : 244     | Length: 1 |
| Data (hex) : 00 |           |

Test variable for 16 Bit index access :

|                 |           |
|-----------------|-----------|
| Index : 16368   | Length: 1 |
| Data (hex) : 01 |           |

Test variable for 8 Bit index extended length :

|  |            |
|--|------------|
| Index : 243  | Length: 16 |
| Data (hex) : 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 |            |

|                               |                             |
|-------------------------------|-----------------------------|
| Implemented system commands : | 1 2 3 4 5 6 130 162 163 164 |
|-------------------------------|-----------------------------|

|                               |    |
|-------------------------------|----|
| M-sequence Capability (hex) : | 01 |
|-------------------------------|----|

|                                    |                     |
|------------------------------------|---------------------|
| Commands to generate events :      | Index : 16376       |
| Event trigger 1 : appear value = 0 | disappear value = 1 |
| Event trigger 2 : appear value = 2 | disappear value = 3 |

===== Config Messages from Testcases =====

The testcase is skipped because the device is not capable to change a parameter via local user interface

**Testreport Overview (1)**

|  |    |
|--|----|
| TC_Device_Identification                       | ok |
| Data Layer Tests V5.1.1.8851                   |    |
| SDCI_TC_0034 TCD_DLPC_STUP_CYCTIME             | ok |
| SDCI_TC_0035 TCD_DLPC_STUP_STUOPER1            | ok |
| SDCI_TC_0306 TCD_DLPC_CHK_OVERRIDOK            | ok |
| SDCI_TC_0036 TCD_DLPC_STUP_STUOPER2            | ok |
| SDCI_TC_0037 TCD_DLPC_OPER_OPERSTUP1           | ok |
| SDCI_TC_0038 TCD_DLPC_STAR_OPERSTAR2           | ok |
| SDCI_TC_0039 TCD_DLPC_PREO_READDPP1            | ok |
| SDCI_TC_0040 TCD_DLPC_PREO_WRITEDPP1           | ok |
| SDCI_TC_0041 TCD_DLPC_PROP_SHORT_MESSAGE       | ok |
| SDCI_TC_0043 TCD_DLPC_PROP_SIMRESET            | ok |
| SDCI_TC_0044 TCD_DLPC_PROP_MSEQFAULT           | ok |
| SDCI_TC_0045 TCD_DLPC_OPER_READ                | ok |
| SDCI_TC_0046 TCD_DLPC_OPER_WRITE               | ok |
| SDCI_TC_0047 TCD_DLPC_OPER_NEGWRITE            | ok |
| SDCI_TC_0049 TCD_DLPC_OPER_SIMRESET            | ok |
| ISDU Tests V5.1.1.8851                         |    |
| SDCI_TC_0052 TCD_DLPC_ISDU_AVAILMSEQCAP        | ok |
| SDCI_TC_0053 TCD_DLIC_ISDU_IDLEBUSYCHECK       | ok |
| SDCI_TC_0054 TCD_DLIC_ISDU_READINDEX8          | ok |
| SDCI_TC_0055 TCD_DLIC_ISDU_READ8EXTLENGTH      | ok |
| SDCI_TC_0056 TCD_DLIC_ISDU_WRITE8              | ok |
| SDCI_TC_0057 TCD_DLIC_ISDU_READ8RESERVED       | ok |
| SDCI_TC_0058 TCD_DLIC_ISDU_READ8NOSUBINDEX     | ok |
| SDCI_TC_0059 TCD_DLIC_ISDU_READ16              | ok |
| SDCI_TC_0060 TCD_DLIC_ISDU_WRITE16             | ok |
| SDCI_TC_0061 TCD_DLIC_ISDU_READ16RESERVED      | ok |
| SDCI_TC_0062 TCD_DLIC_ISDU_READ16NOSUBINDEX    | ok |
| SDCI_TC_0063 TCD_DLIC_ISDU_WRITE8LENOVERRUN    | ok |
| SDCI_TC_0064 TCD_DLIC_ISDU_WRITE8WRONGLEN      | ok |
| SDCI_TC_0065 TCD_DLIC_ISDU_WRITE8WRONGCHECKSUM | ok |
| SDCI_TC_0066 TCD_DLIC_ISDU_WRITE8ROINDEX       | ok |
| SDCI_TC_0067 TCD_DLIC_ISDU_ABORTREADREQ        | ok |
| SDCI_TC_0068 TCD_DLIC_ISDU_ABORTREADRESP       | ok |
| Event Tests V5.1.1.8851                        |    |
| SDCI_TC_0069 TCD_DLIC_EVNT_OPERSINGLEEVENT     | ok |
| SDCI_TC_0070 TCD_DLIC_EVNT_PROPSINGLEEVENT     | ok |
| SDCI_TC_0071 TCD_DLIC_EVNT_OPEREVENTCLEAR      | ok |
| SDCI_TC_0072 TCD_DLIC_EVNT_OPERCOMMINTERRUPT   | ok |
| SDCI_TC_0073 TCD_DLIC_EVNT_OPERPOWERINTERRUPT  | ok |
| SDCI_TC_0074 TCD_DLIC_EVNT_OPERAPPEARDISAPPEAR | ok |

**Testreport Overview (2)**

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|--|----|
| SDCI_TC_0075 TCD_DLIC_EVNT_OPERMULTEVENT           | ok |
| SDCI_TC_0076 TCD_DLIC_EVNT_OPERSHORTEVENT          | ok |
| Data Storage Tests V5.1.1.8851                     |    |
| SDCI_TC_0077 TCD_APPS_DSUP_NOFLAG                  | ok |
| SDCI_TC_0078 TCD_APPS_DSUP_VIADOWNLOADSTORE        | ok |
| SDCI_TC_0079 TCD_APPS_DSUP_VIADOWNLOADSTORENOWRITE | ok |
| SDCI_TC_0080 TCD_APPS_DSUP_VIALOCALCHANGE          | ok |
| SDCI_TC_0081 TCD_APPS_DSUP_PARABREAKABORT          | ok |
| SDCI_TC_0082 TCD_APPS_DSDN_PARAMODIFICATION        | ok |
| SDCI_TC_0083 TCD_APPS_DSDN_FACTORYRESET            | ok |
| SDCI_TC_0084 TCD_APPS_DSDN_PARABREAKABORT          | ok |
| Legacy Master Tests V5.1.1.8851                    |    |
| SDCI_TC_0085 TCD_DLIC_COMP_STARTUP                 | ok |
| SDCI_TC_0086 TCD_DLIC_COMP_TYPE1INTERLEAVE         | ok |
| SDCI_TC_0087 TCD_DLIC_COMP_PDINVALIDEVENT          | ok |
| Direct Parameter Page 1 Tests V5.1.1.8851          |    |
| SDCI_TC_0089 TCD_DLPC_STDP_MASTERCYCLETIME         | ok |
| SDCI_TC_0090 TCD_DLPC_STDP_MINCYCLETIME            | ok |
| SDCI_TC_0091 TCD_DLPC_STDP_MSEQCAPABILITY          | ok |
| SDCI_TC_0092 TCD_DLPC_STDP_REVISIONID              | ok |
| SDCI_TC_0093 TCD_DLPC_STDP_PDIN                    | ok |
| SDCI_TC_0094 TCD_DLPC_STDP_PDOUT                   | ok |
| SDCI_TC_0095 TCD_DLPC_STDP_VENDORID                | ok |
| SDCI_TC_0096 TCD_DLPC_STDP_DEVICEID                | ok |
| SDCI_TC_0097 TCD_DLPC_STDP_FUNCTIONID              | ok |
| SDCI_TC_0100 TCD_DLPC_STDP_READRESPAR              | ok |
| SDCI_TC_0101 TCD_DLPC_STDP_WRITERESPAR             | ok |
| Predefined Device Parameter Tests V5.1.1.8851      |    |
| SDCI_TC_0104 TCD_DLIC_DEFP_SYSCMDRES               | ok |
| SDCI_TC_0107 TCD_DLIC_DEFP_DSINDEX                 | ok |
| SDCI_TC_0108 TCD_DLIC_DEFP_DSRECORD                | ok |
| SDCI_TC_0109 TCD_DLIC_DEFP_ACCESSLOCKSVAL          | ok |
| SDCI_TC_0110 TCD_DLIC_DEFP_ACCESSLOCKSINVAL        | ok |
| SDCI_TC_0111 TCD_DLIC_DEFP_PROFILCHARAC            | ok |
| SDCI_TC_0112 TCD_DLIC_DEFP_PDINDESC                | ok |
| SDCI_TC_0113 TCD_DLIC_DEFP_PDOUTDESC               | ok |
| SDCI_TC_0114 TCD_DLIC_DEFP_VENDORNAM               | ok |
| SDCI_TC_0115 TCD_DLIC_DEFP_VENDORTEXT              | ok |
| SDCI_TC_0116 TCD_DLIC_DEFP_PRODUCTNAM              | ok |
| SDCI_TC_0117 TCD_DLIC_DEFP_PRODUCTID               | ok |
| SDCI_TC_0118 TCD_DLIC_DEFP_PRODUCTTEXT             | ok |
| SDCI_TC_0119 TCD_DLIC_DEFP_SERNUM                  | ok |

**Testreport Overview (3)**

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|--|----|
| SDCI_TC_0120 TCD_DLIC_DEFP_HARDREV             | ok |
| SDCI_TC_0121 TCD_DLIC_DEFP_FIRMREV             | ok |
| SDCI_TC_0122 TCD_DLIC_DEFP_TAGVALID            | ok |
| SDCI_TC_0123 TCD_DLIC_DEFP_TAGINVALID          | ok |
| SDCI_TC_0124 TCD_DLIC_DEFP_ERRCOUNT            | ok |
| SDCI_TC_0128 TCD_DLIC_DEFP_DEVSTAT             | ok |
| SDCI_TC_0129 TCD_DLIC_DEFP_DETAILDEVSTAT       | ok |
| SDCI_TC_0131 TCD_DLIC_DEFP_DETAILDEVSTATACTIVE | ok |
| SDCI_TC_0132 TCD_DLIC_DEFP_PDIN                | ok |
| SDCI_TC_0133 TCD_DLIC_DEFP_PDOUT               | ok |
| SDCI_TC_0134 TCD_DLIC_DEFP_OFFTIMEVALID        | ok |
| SDCI_TC_0136 TCD_DLIC_DEFP_PROFILEPARREAD      | ok |
| SDCI_TC_0137 TCD_DLIC_DEFP_PROFILEPARWRITE     | ok |
| SDCI_TC_0140 TCD_DLIC_DEFP_WRITETOREADONLY     | ok |
| SDCI_TC_0141 TCD_DLIC_DEFP_WRITETOOSHORT       | ok |
| SDCI_TC_0142 TCD_DLIC_DEFP_WRITETOOLONG        | ok |
| Block Parameter Tests V5.1.1.8851              |    |
| SDCI_TC_0143 TCD_DSBP_APPL_BPDOWNLOAD          | ok |
| SDCI_TC_0144 TCD_DSBP_APPL_BPBREAKCMD          | ok |
| SDCI_TC_0145 TCD_DSBP_APPL_BPBREAKRESET        | ok |
| SDCI_TC_0147 TCD_DSBP_APPL_BPBREAK2DOWNLOADS   | ok |
| SDCI_TC_0148 TCD_DSBP_APPL_BPBREAKLOCALLOCK    | ok |
| Parameter verification tests V5.1.1.8851       |    |
| SDCI_TC_0149 TCD_IODD_PARV_IDENT               | ok |
| SDCI_TC_0150 TCD_IODD_PARV_COMPPROFILE         | ok |
| SDCI_TC_0151 TCD_IODD_PARV_READVERIFY          | ok |
| SDCI_TC_0152 TCD_IODD_PARV_WRITEVERIFY         | ok |
| SDCI_TC_0157 TCD_IODD_PARV_INDEXCONSISTENT     | ok |
| Functional System Tests V5.1.1.8851            |    |
| SDCI_TC_0156 TCD_IODD_PARV_ACCESSLOCK          | ok |
| SDCI_TC_0155 TCD_IODD_PARV_FACTORYSETTINGS     | ok |
| support of Physical Layer Tests V5.1.1.8851    |    |
| SDCI_TC_0304 TCD_PHYL_INTF_UARTTRANSDelay      | ok |
| SDCI_TC_0305 TCD_PHYL_INTF_RESPONSETIME        | ok |
| SDCI_TC_0319 TCD_PHYL_INTF_TRANSMISSIONERRORS  | ok |
| Common Profile V5.1.1.8851                     |    |
| CP_TC_0001_TCD_CMPR_ID_ASCENDID                | ok |
| CP_TC_0002_TCD_CMPR_ID_HIDDEN_I_D              | ok |
| CP_TC_0003_TCD_CMPR_ID_LEASTPROFILE            | ok |
| CP_TC_0004_TCD_CMPR_ID_EXTENSION               | ok |
| CP_TC_0005_TCD_CMPR_ID_PDOUTDESCR              | ok |
| CP_TC_0006_TCD_CMPR_ID_LOCATOR                 | ok |

**Testreport Overview (4)**

Test Report Statistics:

Number of test cases overall : 114

Number of test cases ok : 114

Number of test cases failed : 0

Number of test cases skipped : 0

Test Operation : single