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TwinCAT Library for
Auxiliary Channels

Alexa Staley, Daniel Sigg

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| **California Institute of Technology****LIGO Project – MS 18-34****1200 E. California Blvd.****Pasadena, CA 91125**Phone (626) 395-2129Fax (626) 304-9834E-mail: info@ligo.caltech.edu | **Massachusetts Institute of Technology****LIGO Project – NW22-295****185 Albany St****Cambridge, MA 02139**Phone (617) 253-4824Fax (617) 253-7014E-mail: info@ligo.mit.edu |
| **LIGO Hanford Observatory****P.O. Box 159****Richland WA 99352**Phone 509-372-8106Fax 509-372-8137 | **LIGO Livingston Observatory****P.O. Box 940****Livingston, LA 70754**Phone 225-686-3100Fax 225-686-7189 |

http://www.ligo.caltech.edu/

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| **Library** |
| Title | Auxiliary |
| Version | 1 |
| TwinCAT version | 2.11 |
| Name space | – |
| Author | Alexa Staley, Daniel Sigg |
| Description | Controls the auxiliary  |
| Error codes | None |
| Library dependencies | Error |

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| **Hardware Input Type**TYPE AuxiliaryInStruct :STRUCT AuxAI1: INT;AuxAI2: INT;AuxAI3: INT;AuxAI4: INT;AuxBI1: INT;AuxBI2: INT;AuxBI3: INT;AuxBI4: INT;END\_STRUCTEND\_TYPE |
|   | AuxiliaryInStruct |
| Description | Structure of the hardware input that are wired up for the auxiliary |
| Definition | STRUCT |
| Element | Name: AuxAI1Type: INTDescription: Analog input 1 |
| Element | Name: AuxAI2Type: INTDescription: Analog input 2 |
| Element | Name: AuxAI3Type: INTDescription: Analog input 3 |
| Element | Name: AuxAI4Type: INTDescription: Analog input 4 |
| Element | Name: AuxBI1Type: INTDescription: Binary input 1 |
| Element | Name: AuxBI2Type: INTDescription: Binary input 2 |
| Element | Name: AuxBI3Type: INTDescription: Binary input 3 |
| Element | Name: AuxBI4Type: INTDescription: Binary input 4 |

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| **Hardware Output Type**TYPE AuxiliaryOutStruct :STRUCT AuxAO1: INT;AuxAO2: INT;AuxAO3: INT;AuxAO4: INT;AuxBO1: INT;AuxBO2: INT;AuxBO3: INT;AuxBO4: INT;END\_STRUCTEND\_TYPE |
|   | AuxiliaryOutStruct |
| Description | Structure of the hardware output that are wired up for the auxiliary |
| Definition | STRUCT |
| Element | Name: AuxAO1Type: INTDescription: Analog output 1 |
| Element | Name: AuxAO2Type: INTDescription: Analog output 2 |
| Element | Name: AuxAO3Type: INTDescription: Analog output 3 |
| Element | Name: AuxAO4Type: INTDescription: Analog output 4 |
| Element | Name: AuxBO1Type: INTDescription: Binary output 1 |
| Element | Name: AuxBO2Type: INTDescription: Binary output 2 |
| Element | Name: AuxBO3Type: INTDescription: Binary output 3 |
| Element | Name: AuxBO4Type: INTDescription: Binary output 4 |

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| **User Interface Type**TYPE AuxiliaryStruct :STRUCTError: ErrorStruct;AuxAI1: LREAL;AuxAI2: LREAL;AuxAI3: LREAL;AuxAI4: LREAL;AuxBI1: LREAL;AuxBI2: LREAL;AuxBI3: LREAL;AuxBI4: LREAL;AuxAO1: LREAL;AuxAO2: LREAL;AuxAO3: LREAL;AuxAO4: LREAL;AuxBO1: LREAL;AuxBO2: LREAL;AuxBO3: LREAL;AuxBO4: LREAL;END\_STRUCTEND\_TYPE |
| Type name | AuxiliaryStruct |
| Description | Structure of the user interface tags that are used to control the auxiliary |
| Definition | STRUCT |
| Output Tag | Name: ErrorType: ErrorStructDescription: For error handling |
| Input Tag | Name: AuxAI1Type: LREALDescription: Analog input 1 |
| Input Tag | Name: AuxAI2Type: LREALDescription: Analog input 2 |
| Input Tag | Name: AuxAI3Type: LREALDescription: Analog input 3 |
| Input Tag | Name: AuxAI4Type: LREALDescription: Analog input 4 |
| Input Tag | Name: AuxBI1Type: LREALDescription: Binary input 1 |
| Input Tag | Name: AuxBI2Type: LREALDescription: Binary input 2 |
| Input Tag | Name: AuxBI3Type: LREALDescription: Binary input 3 |
| Input Tag | Name: AuxBI4Type: LREALDescription: Binary input 4 |
| Output Tag | Name: AuxAO1Type: LREALDescription: Analog output 1 |
| Output Tag | Name: AuxAO2Type: LREALDescription: Analog output 2 |
| Output Tag | Name: AuxAO3Type: LREALDescription: Analog output 3 |
| Output Tag | Name: AuxAO4Type: LREALDescription: Analog output 4 |
| Output Tag | Name: AuxBO1Type: LREALDescription: Binary output 1 |
| Output Tag | Name: AuxBO2Type: LREALDescription: Binary output 2 |
| Output Tag | Name: AuxBO3Type: LREALDescription: Binary output 3 |
| Output Tag | Name: AuxBO4Type: LREALDescription: Binary output 4 |

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| **Function Block**FUNCTION\_BLOCK AuxiliaryFBVAR\_INPUTAuxiliaryIn: AuxiliaryInStruct;END\_VARVAR\_OUTPUTAuxiliaryOut: AuxiliaryOutStruct;END\_VARVAR\_IN\_OUT Auxiliary: AuxiliaryStruct;END\_VAR |
| Name | AuxiliaryFB |
| Description | Controls the auxiliary channels  |
| Input argument | Name: AuxiliaryInType: AuxiliaryInStructDescription: Input hardware structure |
| Output argument | Name: AuxiliaryOutType: AuxiliaryOutStructDescription: Output hardware structure |
| In/out argument | Name: AuxiliaryType: AuxiliaryStructDescription: User Interface structure |

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| **Visual** |
| Name | AuxiliaryVis |
| Description | Displays auxiliary input and output, and standard error message |
| Placeholder | Name: AuxiliaryStructType: AuxiliaryDescription: Auxiliary structure |