# **BECKHOFF** New Automation Technology

Documentation | EN

# Third party license declarations

for Beckhoff Motion products [spec a]





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bad alloc.cc

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#### profiler algos.h

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forward\_list, hash\_bytes.cc, hash\_bytes.h, hash\_c++0x.cc, hashtable\_policy.h, range\_access.h, ratio, regex.h, regex\_compiler.h, regex\_constants.h, regex\_error.h, safe\_sequence.tcc, typeindex, unordered map.h, unordered set.h, uses allocator.h

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base.h, map, map.h, profiler.h, profiler\_container\_size.h, profiler\_hash\_func.h, profiler\_hashtable\_size.h, profiler\_list\_to\_slist.h, profiler\_list\_to\_vector.h, profiler\_map\_to\_unordered\_map.h, profiler\_node.h, profiler\_state.h, profiler\_trace.h, profiler\_vector\_size.h, profiler\_vector\_to\_list.h, set, unordered\_map, unordered\_set, vector

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bitset, bool\_set, bool\_set.tcc, compatibility-c++0x.cc, compatibility-thread-c++0x.cc, decimal, decimal.h, deque, dynamic\_bitset, dynamic\_bitset.tcc, future, future.cc, iterator\_tracker.h, list, multimap.h, multiset.h, nested\_exception.h, random.h, random.tcc, set.h, uniform\_int\_dist.h
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eh ptr.cc, exception ptr.h, initializer list

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atexit\_arm.cc, cxxabi\_forced.h

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list partition.h

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algo.h, algobase.h, algorithm, algorithmfwd.h, array, auto\_ptr.h, balanced\_quicksort.h, base.h, basic\_iterator.h, c++0x\_warning.h, ccomplex, cfenv, checkers.h, cinttypes, compatibility.h, compiletime\_settings.h, complex.h, cstdbool, cstdint, ctgmath, equally\_split.h, features.h, fenv.h, find.h, find\_selectors.h, for\_each.h, for\_each\_selectors.h, functional\_hash.h, hashtable.h, hashtable\_c++0x.cc, inttypes.h, iterator.h, locale\_classes.tcc, locale\_facets\_nonio.h, locale\_facets\_nonio.tcc, losertree.h, merge.h, move.h, multiseq\_selection.h, multiway\_merge.h, multiway\_mergesort.h, numeric, numeric\_traits.h, numericfwd.h, omp\_loop.h, omp\_loop\_static.h, ostream\_insert.h, par\_loop.h, parallel.h, partial\_sum.h, partition.h, queue.h, quicksort.h, random, random\_number.h, random\_shuffle.h, regex, search.h, set\_operations.h, settings.h, shared\_ptr.h, shared\_ptr\_base.h, sort.h, stdbool.h, stdint.h, system\_error, system\_error.cc, tags.h, tgmath.h, tuple, type\_traits, types.h, unique\_copy.h, unordered\_map, unordered\_set, workstealing.h

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bessel\_function.tcc, beta\_function.tcc, cctype, cfenv, cfloat, cinttypes, climits, cmath, complex, cstdarg, cstdbool, cstdint, cstdio, cstdlib, ctgmath, ctime, ctype.h, cwchar, cwctype, ell\_integral.tcc, exp\_integral.tcc, expc++.h, extc++.h, fenv.h, float.h, gamma.tcc, hypergeometric.tcc, inttypes.h, legendre\_function.tcc, limits.h, math.h, modified\_bessel\_func.tcc, poly\_hermite.tcc, poly\_laguerre.tcc, random, riemann\_zeta.tcc, specfun.h, special\_function\_util.h, stdarg.h, stdbool.h, stdint.h, stdio.h, stdlib.h, stdtr1c++.h, tgmath.h, wchar.h, wctype.h

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assoc\_container.hpp, bin\_search\_tree\_.hpp, binary\_heap\_.hpp, binomial\_heap\_.hpp, binomial\_heap\_base\_.hpp, branch\_policy.hpp, cc\_hash\_max\_collision\_check\_resize\_trigger\_imp.hpp, cc ht map .hpp, cmp fn imps.hpp, cond dealtor.hpp, cond key dtor entry dealtor.hpp, const iterator.hpp, constructor destructor fn imps.hpp, constructor destructor no store hash fn imps.hpp, constructor destructor store hash fn imps.hpp, constructors destructor fn imps.hpp, container base dispatch.hpp, debug fn imps.hpp, debug\_map\_base.hpp, debug\_no\_store\_hash\_fn\_imps.hpp, debug\_store\_hash\_fn\_imps.hpp, direct\_mask\_range\_hashing\_imp.hpp, direct\_mod\_range\_hashing\_imp.hpp, entry\_cmp.hpp, entry\_list\_fn\_imps.hpp, entry\_metadata\_base.hpp, entry\_pred.hpp, eq\_by\_less.hpp, erase\_fn\_imps.hpp, erase\_no\_store\_hash\_fn\_imps.hpp, erase\_store\_hash\_fn\_imps.hpp, exception.hpp, find\_fn\_imps.hpp, find no store\_hash\_fn\_imps.hpp, find\_store\_hash\_fn\_imps.hpp, gp\_ht\_map\_.hpp, hash\_eq\_fn.hpp, hash exponential size policy imp.hpp, hash load check resize trigger imp.hpp, hash load check resize trigger size base.hpp, hash policy.hpp, hash prime size policy imp.hpp, hash standard resize policy imp.hpp, info fn imps.hpp, insert fn imps.hpp, insert join fn imps.hpp, insert no store hash fn imps.hpp, insert store hash fn imps.hpp, iterator.hpp, iterator fn imps.hpp, iterators fn imps.hpp, left child next sibling heap .hpp, linear probe fn imp.hpp, list update policy.hpp, lu counter metadata.hpp, lu map .hpp, mask based range hashing.hpp, memory, mod based range hashing.hpp, node.hpp, node iterators.hpp, node metadata selector.hpp, null\_node\_metadata.hpp, order\_statistics\_imp.hpp, ov\_tree\_map\_.hpp, pairing\_heap\_.hpp, pat\_trie\_.hpp, pat\_trie\_base.hpp, point\_const\_iterator.hpp, point\_iterator.hpp, point\_iterators.hpp, policy access fn imps.hpp, prefix search node update imp.hpp, priority queue.hpp, priority\_queue\_base\_dispatch.hpp, probe\_fn\_base.hpp, quadratic\_probe\_fn\_imp.hpp, r\_erase\_fn\_imps.hpp, ranged\_hash\_fn.hpp, ranged\_probe\_fn.hpp, rb\_tree\_.hpp, rc\_binomial\_heap\_.hpp, rc\_string\_base.h, resize fn imps.hpp, resize no store hash fn imps.hpp, resize policy.hpp, resize store hash fn imps.hpp, rotate fn imps.hpp, sample probe fn.hpp, sample range hashing.hpp, sample\_ranged\_hash\_fn.hpp, sample\_ranged\_probe\_fn.hpp, sample\_resize\_policy.hpp, sample resize trigger.hpp, sample size policy.hpp, sample tree node update.hpp, sample\_trie\_access\_traits.hpp, sample\_trie\_node\_update.hpp, sample\_update\_policy.hpp,



size\_fn\_imps.hpp, splay\_fn\_imps.hpp, splay\_tree\_.hpp, split\_fn\_imps.hpp, split\_join\_fn\_imps.hpp, sso\_string\_base.h, standard\_policies.hpp, synth\_access\_traits.hpp, tag\_and\_trait.hpp, thin\_heap\_.hpp, throw\_allocator.h, trace\_fn\_imps.hpp, traits.hpp, tree\_policy.hpp, tree\_trace\_base.hpp, trie\_policy.hpp, trie\_policy\_base.hpp, trie\_string\_access\_traits\_imp.hpp, type\_traits.h, type\_utils.hpp, typelist.h, types\_traits.hpp, unordered\_map, unordered\_set, update\_fn\_imps.hpp, vstring.h, vstring.tcc, vstring\_fwd.h, vstring\_util.h

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#### node iterators.hpp

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array, array\_allocator.h, atomicity.h, bitmap\_allocator.h, boost\_concept\_check.h, functional, refwrap.h, std\_function.h, tuple, type\_traits, utility

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assertions.h, bitset, concurrence.h, debug.cc, debug.h, deque, formatter.h, functions.h, helper\_functions.h, list, macros.h, map, map.h, mt\_allocator.h, multimap.h, multiset.h, mutex, safe\_base.h, safe\_iterator.h, safe\_iterator.tcc, safe\_sequence.h, set, set.h, std\_mutex.h, stdc++.h, stdio\_sync\_filebuf.h, string, unordered\_map, unordered\_set, vector

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assert.h, ctype.h, enc\_filebuf.h, errno.h, float.h, functional, iso646.h, limits.h, locale.h, math.h, memory, numeric, pod\_char\_traits.h, rb\_tree, setjmp.h, signal.h, stdarg.h, stddef.h, stdio.h, stdio\_filebuf.h, stdlib.h, string.h, time.h, wchar.h, wctype.h

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eh\_alloc.cc, eh\_call.cc, eh\_catch.cc, eh\_globals.cc, eh\_personality.cc, eh\_throw.cc, eh\_type.cc, unwind-cxx.h

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algorithm, allocator.h, backward\_warning.h, binders.h, bitset, ciso646, concept\_check.h, debug\_allocator.h, deque, deque.tcc, exception\_defines.h, functexcept.cc, functexcept.h, functional, hash\_fun.h, hash\_map, hash\_set, hashtable.h, iterator, list, list.tcc, malloc\_allocator.h, map, memory, memoryfwd.h, new\_allocator.h, numeric, pool\_allocator.h, queue, rope, ropeimpl.h, set, slist, stack, stdexcept, stl\_algo.h, stl\_algobase.h, stl\_bvector.h, stl\_construct.h, stl\_deque.h, stl\_function.h, stl\_heap.h, stl\_iterator.h, stl\_iterator\_base\_funcs.h, stl\_iterator\_base\_types.h, stl\_list.h, stl\_map.h, stl\_multimap.h, stl\_multiset.h, stl\_numeric.h, stl\_pair.h, stl\_queue.h, stl\_raw\_storage\_iter.h, stl\_set.h, stl\_stack.h, stl\_tempbuf.h, stl\_tree.h, stl\_uninitialized.h, stl\_vector.h, stream\_iterator.h, stringfwd.h, strstream, utility, vector, vector.tcc, vterminate.cc

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#### new handler.cc

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#### shared ptr.h, shared ptr base.h

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#### boost concept check.h

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#### bitset, strstream

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binders.h, hash\_fun.h, iterator, stl\_algobase.h, stl\_function.h, stl\_iterator.h, stl\_iterator\_base\_funcs.h, stl\_iterator\_base\_types.h

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deque, deque.tcc, functional, rope, ropeimpl.h, slist, stl\_deque.h, stl\_heap.h

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algorithm, hashtable.h, iterator, list, list.tcc, map, numeric, queue, set, splay\_tree\_.hpp, stack, stl\_construct.h, stl\_list.h, stl\_map.h, stl\_multimap.h, stl\_numeric.h, stl\_pair.h, stl\_queue.h, stl\_set.h, stl\_stack.h, stl\_tempbuf.h, stl\_tree.h, stl\_uninitialized.h, utility

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algorithm, functional, hash\_map, hash\_set, memory, numeric, rb\_tree, stl\_algo.h, stl\_multiset.h, stl\_raw\_storage\_iter.h, stl\_vector.h, vector, vector.tcc

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# 2.5 **LwIP**

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#### iana.h, ieee.h

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if.h, if\_api.c, if\_api.h, sockets\_priv.h

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dhcp6.h

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# 2.6 Newlib and GCC Libraries

fenv.h

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math\_config.h, math\_errf.c, sf\_pow.c

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arc4random.h

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memchr-stub.c, memchr.S, memcpy-stub.c, strlen-armv7.S, strlen-thumb1-Os.S, strlen-thumb2-Os.S, strlen.S

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memcpy.S

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w sqrt.S, wf sqrt.S

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# elf.h, nexttowardf.c, strverscmp.c

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### features.h

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## ftruncate.c, truncate.c

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#### rdimon-aem.S

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xdr\_private.c, xdr\_private.h

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strcpy.c

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posix\_spawn.c, spawn.h

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### reallocarray.c

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 $as {\it niprintf.c.}, \, as {\it nprintf.c.}, \, vas {\it niprintf.c.}$ 

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nearbyintf4.h, rintf4.h, scalbnf4.h

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fmemopen.c, fopencookie.c, funopen.c, open\_memstream.c, vasnprintf.c

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sqrtl.c

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basename.c, dirname.c

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fgetwc.c, fgetws.c, fputwc.c, fputws.c, ungetwc.c

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timeval.h, strings.h

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# redboot-syscalls.c

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### langinfo.h, Imessages.c, nl langinfo.c

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hcreate.c, hcreate r.c

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### namespace.h, un-namespace.h

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gdtoa-gethex.c, gdtoa.h

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## debug.c, debug.h

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### collate.c, collate.h

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cclass.h, cname.h, regex2.h, utils.h

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engine.c, regcomp.c, regerror.c, regexec.c, regfree.c

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s remquo.c, sf remquo.c

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rune.h, runetype.h

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 $w\_hypot.c, w\_j0.c, w\_j1.c, w\_jn.c, w\_lgamma.c, w\_log.c, w\_log10.c, w\_pow.c, w\_remainder.c, w\_scalb.c, w\_sinh.c, w\_sqrt.c, w\_tgamma.c, wf\_acos.c, wf\_acosh.c, wf\_asin.c, wf\_atan2.c, wf\_atanh.c, wf\_cosh.c, wf\_exp.c, wf\_exp2.c, wf\_fmod.c, wf\_gamma.c, wf\_hypot.c, wf\_j0.c, wf\_j1.c, wf\_jn.c, wf\_lgamma.c, wf\_log10.c, wf\_log2.c, wf\_pow.c, wf\_remainder.c, wf\_scalb.c, wf\_sinh.c, wf\_sqrt.c, wf\_tgamma.c, wr\_gamma.c, wr\_lgamma.c, wrf\_lgamma.c$ 

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## cdefs.h, queue.h

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dirent.h. wcsncmp.c

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## \_sigset.h

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timespec.h. time.h

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setjmp-dj.h

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dtoa.c, mprec.c, mprec.h, vfieeefp.h

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putenv r.c

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getenv\_r.c, setenv\_r.c

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## ctype .c, pwd.h

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## getpass.c, ttyname.c, ttyname\_r.c

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## mktemp.c, setenv.c

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## ar.h, grp.h

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# 2.7 Other

## libusbinterface.h

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Base64.cpp. Base64.h

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# 2.8 Xilinx Lib

xdevcfg.h, xdevcfg\_hw.h

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xspips\_g.c

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xdevcfg.h

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pcap.c, qspi.c

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boot.s, xemacps.h, xemacps\_hw.h, xiicps\_c, xiicps\_hw.h, xiicps\_intr.c, xiicps\_master.c, xiicps\_options.c, xiicps\_selftest.c, xiicps\_sinit.c, xiicps\_slave.c

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xspips hw.c

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xilisf atmel.h

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xil mmu.c, xil mmu.h

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xuartps\_options.c, xuartps\_selftest.c, xuartps\_sinit.c, xusbps.c, xusbps.h, xusbps\_endpoint.c, xusbps\_endpoint.h, xusbps\_hw.c, xusbps\_hw.h, xusbps\_intr.c, xusbps\_sinit.c
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xenv.h, xenv standalone.h, xstatus.h

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print.c, putnum.c

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## 2.9 mbed TLS

ssl tls13 keys.c, ssl tls13 keys.h

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