# Xref Mode support 🚧

| Language | etags | GNU Global gtags with ggtags | Universal Ctags | rtags for C/C++ only | Notes | Best choice |
|---|---|---|---|---|---|---|
| Ada | Yes | | | | | |
| assembler | Yes | | | | | |
| C | Yes | | | Yes | • etags —declarations create tags for declarations | |
| C++ | Yes | | | Yes | • etags -Q support class qualification<br>• etags —declarations create tags for declarations | |
| Clojure | | | | | | |
| Cobol | Yes | | | | | |
| Common Lisp | Yes | | | | | |
| D | | | | | | |
| Elixir | | | | | | |
| Elm | | | | | | |
| Emacs Lisp | Yes | Yes, via Universal CTags | Yes | | • etags supports Emacs Lisp and C, the 2 programming languages used by Emacs.<br>• creates a TAGS file<br>• etags can create a TAGS file for files in several directory trees, with files in .gz files.<br>• tools:<br>  • **etags-el**: create TAGS file for 1 directory<br>  • **tags-for-pel** : create 1 TAGS file for all PEL and Emacs elisp and C code. | etags |
| Erlang | | | | | | |
| forth | Yes | | | | | |
| Fortran | Yes | | | | | |
| go | Yes | | | | | |
| Haskell | | | | | | |
| Java | Yes | | | | • etags -Q support class qualification<br>• etags —declarations create tags for declarations | |
| Javascript | | | | | | |
| LaTex | Yes | | | | | |
| LFE | | | | | | |
| lua | Yes | | | | | |
| makefile | Yes | | | | | |
| Nim | | | | | | |
| Objective C | Yes | | | | • etags -Q support class qualification<br>• etags —declarations create tags for declarations | |
| OCaml | | | | | | |
| Pascal | Yes | | | | | |
| Perl | Yes | | | | | |
| php | Yes | | | | | |
| Postscript | Yes | | | | | |
| proc | Yes | | | | | |
| Prolog | Yes | | | | | |
| Python | Yes | | | | | |
| ruby | Yes | | | | | |
| Rust | | | | | | |
| Scheme | Yes | | | | | |
| TCL | | | | | | |
| Tex | Yes | | | | | |
| Texinfo | Yes | | | | | |
| V | | | | | | |
| yacc | Yes | | | | | |

Integration

| Tool | Programming Language | xref | auto-complete | company | flycheck | flymake | ivy | helm |
|---|---|---|---|---|---|---|---|---|
| rtags | C, C++ | Yes | Yes | Yes | Yes | No | Yes | Yes |
| hashtags | Haskell | | | | | | | |
| fast-tags | Haskell | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |

**xref-backend-functions**

| | | local | Global | |
|---|---|---|---|---|
| **C** | c-mode | | • etags--xref-backend | With nothing activated |
| | | | • dumb-jump-xref-activate<br>• etags--xref-backend | With pel-use-dumb-jump = t |
| | | • ggtags--xref-backend<br>• t | • etags--xref-backend | with ggtags-mode active in buffer |
| | | | | |
| | | | | |
| **Python** | | | • etags--xref-backend | With nothing activated |
| | | • ggtags--xref-backend<br>• t | • etags--xref-backend | with ggtags-mode active in buffer |
| | | | | |
| | | | | |
| **Erlang** | | • erlang-etags--xref-backend<br>•  t | etags--xref-backend | With nothing activated |
| | | • ggtags--xref-backend<br>• erlang-etags--xref-backend<br>• t | | with ggtags-mode active in buffer.<br>Tested a little on jabbed source, but could not get many hits. |
| | | | | |
| **Rust** | rust-mode | | etags--xref-backend | With nothing activated |
| | | • ggtags--xref-backend<br>• t | etags--xref-backend | with ggtags-mode active in buffer |
| | | | | |
| **Javascript** | js-mode | | etags--xref-backend | With nothing activated |
| | | | | with ggtags-mode active in buffer |
| | | | | |

**GGTags Programming Language Support**

| | C | | | |
|---|---|---|---|---|
| **Modules** | • Header files: | | | |
| **functions** | Yes | | | |
| **structures** | | | | |
| **Macros** | • pre-processor symbols:<br>• pre-processor macros: yes | | | |
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