Xref Mode support 🚧

Language	dumb-jump	etags	GNU Global gtags with ggtags	Universal Ctags	rtags for C/C++ only	Notes	Best choice
Ada		Yes		Yes			
Apex	Yes						
assembler		Yes	Yes	Yes			
autoconf		No		Yes			
automake		No		Yes			
Awk		No	via CTags	Yes			
Basic		No		Yes			
Batch		No	via CTags	Yes			
Bash	Yes						
C	Yes	Yes	Yes	Yes	Yes	• etags —declarations create tags for declarations	
C++	Yes	Yes	via CTags	Yes	Yes	• etags -Q support class qualification • etags —declarations create tags for declarations	
C#	Yes	Yes	via CTags	Yes			
Clojure	Yes	No		Yes			
CMake		No		Yes			
Cobol		Yes	via CTags	Yes			
Common Lisp	Yes	Yes	via CTags	Yes			
Coq	Yes						
Crystal	Yes						
D		No		Yes			
Dart	Yes						
Eiffel		No		Yes			
Elixir	Yes	No		Yes			
Elm		No		Yes			
Emacs Lisp	Yes	Yes	via CTags	Yes		• etags supports Emacs Lisp and C, the 2 programming languages used by Emacs. • creates a TAGS file • etags can create a TAGS file for files in several directory trees, with files in .gz files. • tools: • **etags-el**: create TAGS file for 1 directory	etags
Erlang	Yes	Yes	via CTags	Yes		• The **ivy-erlang-complete** external package also provides completion and navigation for Erlang. • See **PL - Erlang**. • etags and ctags produce the same results. • PEL provides the **etags-erl** script that supports both but uses etags by default. It also creates tags for Erlang and C files. • the Global/gtags tool is faster than etags/ctags based searches.	• etags comes with Emacs and does not require extra installation of Universal CTags. It's easy to use. • gtags/global create larger files but provide more features if you are willing to learn global command line.
F#	Yes						
Falcon		No		Yes			
Faust	Yes						
Fennel	Yes						
Flex		No		Yes			
Forth		Yes		No			
Fortran	Yes	Yes	via CTags	Yes			
Fypp		No		Yes			
Go	Yes	Yes		Yes			
Groovy	Yes						
Haskell	Yes	No		No			
Janet							
Java	Yes	Yes	Yes	Yes		• etags -Q support class qualification • etags —declarations create tags for declarations	
Javascript	Yes	No	via CTags	Yes			
Julia	Yes						
Kotlin	Yes						
LaTex	Yes	Yes		No			
LFE	Yes	No		No			
Lua	Yes	Yes	via CTags	Yes			
makefile		Yes		Yes			
Matlab	Yes	No	via CTags	Yes			
Nim	Yes	No		No			
Nix	Yes						

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Objective C	Yes	Yes		Yes		• etags -Q support class qualification • etags —declarations create tags for declarations	
OCaml	Yes	No	via CTags	Yes			
OpenSCAP	Yes						
Org mode	Yes						
Pascal	Yes	Yes	via CTags	Yes			
Perl	Yes	Yes		Yes			
PHP	Yes	Yes		Yes			
Postscript		Yes		No			
proc		Yes		No			
Prolog		Yes		No			
Protocol Buffers	Yes						
Python	Yes	Yes	via CTags	Yes		• gtags/global is faster than etags for large directory tree. To use make sure to run use-gtags before you start Emacs. • etags comes with Emacs and does not require extra installation of Universal CTags. It's easy to use but like gtags/global requires the creation of a file: the TAGS file. • dumb-jump works without having to create a database or tag file.	
R	Yes	No		Yes			
Racket	Yes						
REXX		No		Yes			
Ruby	Yes	Yes	via CTags	Yes			
Rust	Yes	No		Yes			
Sass	Yes						
Scala	Yes						
Scheme	Yes	Yes	via CTags	Yes			
SML	Yes						
Solidity	Yes						
Swift	Yes						
SQL	Yes	No		Yes			
TCL	Yes	No	via CTags	Yes			
Terraform / HCL	Yes						
Tex		Yes		Yes			
Texinfo		Yes		?			
V		No		No			
Vala	Yes						
Verilog	Yes	No	via CTags	Yes			
VHDL	Yes	No	via CTags	Yes			
yacc		Yes	Yes	Yes			
Zig	Yes						

Integration with Language Specific Tools

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							

PEL script Tools to help with tag creation programs

Tool	PEL Tool	Description
GNU Global gtags with ggtags	envfor-gtags	A shell script that must be sourced: add an alias to turn this into a shell command. I call the alias: *use-gtags* • It sets up environment variables required by gtags. • You will have to update it to conform to your environment. • Run it before issuing the gtags command to create the Global tag files. ☝ Unlike etagcs/ctags, gtags creates 3 files that can then be used on the command line by the **global command line tool** which provides a large set of searching capabilities. Inside Emacs the Global database is accessed via the ggtags Emacs external package. But you can also learn global command line and use it from the command line to perform more complex operations. • From within Emacs access global man page with `<f11> ? m global RET`

Tool	PEL Tool	Description
etags	**etags-c**	Build a etags TAGS file for C source code files. • Type it without arguments to get help.
	etags-cpp	Build a etags TAGS file for C++ source code files. • Type it without arguments to get help.
	etags-el	Build a etags TAGS file for Emacs Lisp source code files. • Type it without arguments to get help.
	etags-erl	Build a etags TAGS file for Erlang source code files. • Type it without arguments to get help.
	etags-lisp	Build a etags TAGS file for Common Lisp source code files. • Type it without arguments to get help.
	etags-py	Build a etags TAGS file for Python source code files. • Type it without arguments to get help.
Universal Ctags	The above etags-XX commands also support the Universal CTags. • To use them with Universal CTags set the **ETAGS_USE_UCTAGS** environment variable in the shell before running the etags-XX command. • For shells that support ability to set the environment variable for the duration of the next command you can issue the command like this at the root of a Python source code directory tree: `ETAGS_USE_UCTAGS=1 etags-py .`	

xref-backend-functions

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

Language	Modules	Types	Classes	Functions/Macros	Symbols		
C	• Header files:			• functions: yes • pre-processor macros: yes	• pre-processor symbols: •		
C++							
Erlang							