Routine Mappings

Visual Studio 2015

For the latest documentation on Visual Studio 2017 RC, see Visual Studio 2017 RC Documentation.

The generic-text routine mappings are defined in TCHAR.H. `_tccpy` and `_tclen` map to functions in the MBCS model; they are mapped to macros or inline functions in the SBCS and Unicode models for completeness. For information on a generic text routine, see the help topic about the corresponding SBCS-, _MBCS-, or _UNICODE-related routine.

More specific information about individual routines listed in the left column in the following table is not available in this documentation. However, you can easily look up the information on a corresponding SBCS-, _MBCS-, or _UNICODE-related routine. Use the **Search** command on the **Help** menu to look up any generic-text routine listed below.

For related information, see Generic-Text Mappings in TCHAR.H.

Generic-Text Routine Mappings

Generic-text routine name	SBCS (_UNICODE & MBCS not defined)	_MBCS defined	_UNICODE defined
`_cgetts`	`_cgets`	`_cgets`	`_cgetws`
`_cgetts_s`	`_cgets_s`	`_cgets_s`	`_cgetws_s`
`_cputts`	`_cputs`	`_cputs`	`_cputws`
`_fgettc`	`fgetc`	`fgetc`	`fgetwc`
`_fgettchar`	`_fgetchar`	`_fgetchar`	`_fgetwchar`
`_fgetts`	`fgets`	`fgets`	`fgetws`
`_fputtc`	`fputc`	`fputc`	`fputwc`
`_fputtchar`	`_fputchar`	`_fputchar`	`_fputwchar`
`_fputts`	`fputs`	`fputs`	`fputws`
`_ftprintf`	`fprintf`	`fprintf`	`fwprintf`
`_ftprintf_s`	`fprintf_s`	`fprintf_s`	`fwprintf_s`
`_ftscanf`	`fscanf`	`fscanf`	`fwscanf`
`_ftscanf_s`	`fscanf_s`	`fscanf_s`	`fwscanf_s`

Generic-text routine name	SBCS (_UNICODE & MBCS not defined)	_MBCS defined	_UNICODE defined
_gettc	getc	getc	getwc
_gettch	_getch	_getch	_getwch
_gettchar	getchar	getchar	getwchar
_gettche	_getche	_getche	_getwche
_getts	gets	gets	getws
_getts_s	gets_s	gets_s	getws_s
_istalnum	isalnum	_ismbcalnum	iswalnum
_istalpha	isalpha	_ismbcalpha	iswalpha
_istascii	isascii	isascii	iswascii
_istcntrl	iscntrl	iscntrl	iswcntrl
_istdigit	isdigit	_ismbcdigit	iswdigit
_istgraph	isgraph	_ismbcgraph	iswgraph
_istlead	Always returns false	_ismbblead	Always returns false
_istleadbyte	Always returns false	isleadbyte	Always returns false
_istlegal	Always returns true	_ismbclegal	Always returns true
_istlower	islower	_ismbclower	iswlower
_istprint	isprint	_ismbcprint	iswprint
_istpunct	ispunct	_ismbcpunct	iswpunct
_istspace	isspace	_ismbcspace	iswspace
_istupper	isupper	_ismbcupper	iswupper
_istxdigit	isxdigit	isxdigit	iswxdigit
_itot	_itoa	_itoa	_itow
_itot_s	_itoa_s	_itoa_s	_itow_s

Generic-text routine name	SBCS (_UNICODE & MBCS not defined)	_MBCS defined	_UNICODE defined
_ltot	_ltoa	_ltoa	_ltow
_ltot_s	_ltoa_s	_ltoa_s	_ltow_s
_puttc	putc	putc	putwc
_puttch	_putch	_putch	_putwch
_puttchar	putchar	putchar	putwchar
_putts	puts	puts	_putws
_sctprintf	_scprintf	_scprintf	_scwprintf
_sntprintf	_snprintf	_snprintf	_snwprintf
_sntprintf_s	_snprintf_s	_snprintf_s	_snwprintf_s
_sntscanf	_snscanf	_snscanf	_snwscanf
_sntscanf_s	_snscanf_s	_snscanf_s	_snwscanf_s
_stprintf	sprintf	sprintf	swprintf
_stprintf_s	sprintf_s	sprintf_s	swprintf_s
_stscanf	sscanf	sscanf	swscanf
_stscanf_s	sscanf_s	sscanf_s	swscanf_s
_taccess	_access	_access	_waccess
_taccess_s	_access_s	_access_s	_waccess_s
_tasctime	asctime	asctime	_wasctime
_tasctime_s	asctime_s	asctime_s	_wasctime_s
_tccmp	Maps to macro or inline function	_mbsncmp	Maps to macro or inline function
_tccpy	Maps to macro or inline function	_mbccpy	Maps to macro or inline function
_tccpy_s	strcpy_s	_mbccpy_s	wcscpy_s

Generic-text routine name	SBCS (_UNICODE & MBCS not defined)	_MBCS defined	_UNICODE defined
_tchdir	_chdir	_chdir	_wchdir
_tclen	Maps to macro or inline function	_mbclen	Maps to macro or inline function
_tchmod	_chmod	_chmod	_wchmod
_tcprintf	_cprintf	_cprintf	_cwprintf
_tcprintf_s	_cprintf_s	_cprintf_s	_cwprintf_s
_tcreat	_creat	_creat	_wcreat
_tcscanf	_cscanf	_cscanf	_cwscanf
_tcscanf_s	_cscanf_s	_cscanf_s	_cwscanf_s
_tcscat	strcat	_mbscat	wcscat
_tcscat_s	strcat_s	_mbscat_s	wcscat_s
_tcschr	strchr	_mbschr	wcschr
_tcsclen	strlen	_mbslen	wcslen
_tcsclen_s	strlen_s	_mbslen_s	wcslen_s
_tcscmp	strcmp	_mbscmp	wcscmp
_tcscoll	strcoll	_mbscoll	wcscoll
_tcscpy	strcpy	_mbscpy	wcscpy
_tcscpy_s	strcpy_s	_mbscpy_s	wcscpy_s
_tcscspn	strcspn	_mbscspn	wcscspn
_tcsdec	_strdec	_mbsdec	_wcsdec
_tcsdup	_strdup	_mbsdup	_wcsdup
_tcserror	strerror	strerror	_wcserror
_tcserror_s	strerror_s	strerror_s	_wcserror_s
_tcsftime	strftime	strftime	wcsftime

Generic-text routine name	SBCS (_UNICODE & MBCS not defined)	_MBCS defined	_UNICODE defined
_tcsicmp	_stricmp	_mbsicmp	_wcsicmp
_tcsicoll	_stricoll	_mbsicoll	_wcsicoll
_tcsinc	_strinc	_mbsinc	_wcsinc
_tcslen	strlen	strlen	wcslen
_tcslwr	_strlwr	_mbslwr	_wcslwr
_tcslwr_s	_strlwr_s	_mbslwr_s	_wcslwr_s
_tcsnbcnt	_strncnt	_mbsnbcnt	_wcsncnt
_tcsncat	strncat	_mbsnbcat	wcsncat
_tcsncat_s	strncat_s	_mbsnbcat_s	wcsncat_s
_tcsnccat	strncat	_mbsncat	wcsncat
_tcsnccmp	strncmp	_mbsncmp	wcsncmp
_tcsnccmp_s	strncmp_s	_mbsncmp_s	wcsncmp_s
_tcsnccoll	_strncoll	_mbsncoll	_wcsncoll
_tcsncmp	strncmp	_mbsnbcmp	wcsncmp
_tcsnccnt	_strncnt	_mbsnccnt	_wcsncnt
_tcsnccpy	strncpy	_mbsncpy	wcsncpy
_tcsnccpy_s	strncpy_s	_mbsncpy_s	wcsncpy_s
_tcsncicmp	_strnicmp	_mbsnicmp	_wcsnicmp
_tcsncicoll	_strnicoll	_mbsnicoll	_wcsnicoll
_tcsncpy	strncpy	_mbsnbcpy	wcsncpy
_tcsncpy_s	strncpy_s	_mbsnbcpy_s	wcsncpy_s
_tcsncset	_strnset	_mbsnset	_wcsnset
_tcsnextc	_strnextc	_mbsnextc	_wcsnextc

Generic-text routine name	SBCS (_UNICODE & MBCS not defined)	_MBCS defined	_UNICODE defined
_tcsnicmp	_strnicmp	_mbsnbicmp	_wcsnicmp
_tcsnicoll	_strnicoll	_mbsnbicoll	_wcsnicoll
_tcsninc	_strninc	_mbsninc	_wcsninc
_tcsnccnt	_strncnt	_mbsnccnt	_wcsncnt
_tcsnset	_strnset	_mbsnbset	_wcsnset
_tcspbrk	strpbrk	_mbspbrk	wcspbrk
_tcsspnp	_strspnp	_mbsspnp	_wcsspnp
_tcsrchr	strrchr	_mbsrchr	wcsrchr
_tcsrev	_strrev	_mbsrev	_wcsrev
_tcsset	_strset	_mbsset	_wcsset
_tcsspn	strspn	_mbsspn	wcsspn
_tcsstr	strstr	_mbsstr	wcsstr
_tcstod	strtod	strtod	wcstod
_tcstoi64	_strtoi64	_strtoi64	_wcstoi64
_tcstok	strtok	_mbstok	wcstok
_tcstok_s	strtok_s	_mbstok_s	wcstok_s
_tcstol	strtol	strtol	wcstol
_tcstoui64	_strtoui64	_strtoui64	_wcstoui64
_tcstoul	strtoul	strtoul	wcstoul
_tcsupr	_strupr	_mbsupr	_wcsupr
_tcsupr_s	_strupr_s	_mbsupr_s	_wcsupr_s
_tcsxfrm	strxfrm	strxfrm	wcsxfrm
_tctime	ctime	ctime	_wctime

Generic-text routine name	SBCS (_UNICODE & MBCS not defined)	_MBCS defined	_UNICODE defined
_tctime_s	ctime_s	ctime_s	_wctime_s
_tctime32	_ctime32	_ctime32	_wctime32
_tctime32_s	_ctime32_s	_ctime32_s	_wctime32_s
_tctime64	_ctime64	_ctime64	_wctime64
_tctime64_s	_ctime64_s	_ctime64_s	_wctime64_s
_texecl	_execl	_execl	_wexecl
_texecle	_execle	_execle	_wexecle
_texeclp	_execlp	_execlp	_wexeclp
_texeclpe	_execlpe	_execlpe	_wexeclpe
_texecv	_execv	_execv	_wexecv
_texecve	_execve	_execve	_wexecve
_texecvp	_execvp	_execvp	_wexecvp
_texecvpe	_execvpe	_execvpe	_wexecvpe
_tfdopen	_fdopen	_fdopen	_wfdopen
_tfindfirst	_findfirst	_findfirst	_wfindfirst
_tfindnext	_findnext	_findnext	_wfindnext
_tfindnext32	_findnext32	_findnext32	_wfindnext32
_tfindnext64	_findnext64	_findnext64	_wfindnext64
_tfindnexti64	_findnexti64	_findnexti64	_wfindnexti64
_tfindnexti6432	_findnexti6432	_findnexti6432	_wfindnexti6432
_tfindnext32i64	_findnext32i64	_findnext32i64	_wfindnext32i64
_tfopen	fopen	fopen	_wfopen

Generic-text routine name	SBCS (_UNICODE & MBCS not defined)	_MBCS defined	_UNICODE defined
_tfopen_s	fopen_s	fopen_s	_wfopen_s
_tfreopen	freopen	freopen	_wfreopen
_tfreopen_s	freopen_s	freopen_s	_wfreopen_s
_tfsopen	_fsopen	_fsopen	_wfsopen
_tfullpath	_fullpath	_fullpath	_wfullpath
_tgetcwd	_getcwd	_getcwd	_wgetcwd
_tgetdcwd	_getdcwd	_getdcwd	_wgetdcwd
_tgetenv	getenv	getenv	_wgetenv
_tgetenv_s	getenv_s	getenv_s	_wgetenv_s
_tmain	main	main	wmain
_tmakepath	_makepath	_makepath	_wmakepath
_tmakepath_s	_makepath_s	_makepath_s	_wmakepath_s
_tmkdir	_mkdir	_mkdir	_wmkdir
_tmktemp	_mktemp	_mktemp	_wmktemp
_tmktemp_s	_mktemp_s	_mktemp_s	_wmktemp_s
_topen	_open	_open	_wopen
_topen_s	_open_s	_open_s	_wopen_s
_totlower	tolower	_mbctolower	towlower
_totupper	toupper	_mbctoupper	towupper
_tperror	perror	perror	_wperror
_tpopen	_popen	_popen	_wpopen
_tprintf	printf	printf	wprintf
_tprintf_s	printf_s	printf_s	wprintf_s

Generic-text routine name	SBCS (_UNICODE & MBCS not defined)	_MBCS defined	_UNICODE defined
_tputenv	_putenv	_putenv	_wputenv
_tputenv_s	_putenv_s	_putenv_s	_wputenv_s
_tremove	remove	remove	_wremove
_trename	rename	rename	_wrename
_trmdir	_rmdir	_rmdir	_wrmdir
_tsearchenv	_searchenv	_searchenv	_wsearchenv
_tsearchenv_s	_searchenv_s	_searchenv_s	_wsearchenv_s
_tscanf	scanf	scanf	wscanf
_tscanf_s	scanf_s	scanf_s	wscanf_s
_tsetlocale	setlocale	setlocale	_wsetlocale
_tsopen	_sopen	_sopen	_wsopen
_tsopen_s	_sopen_s	_sopen_s	_wsopen_s
_tspawnl	_spawnl	_spawnl	_wspawnl
_tspawnle	_spawnle	_spawnle	_wspawnle
_tspawnlp	_spawnlp	_spawnlp	_wspawnlp
_tspawnlpe	_spawnlpe	_spawnlpe	_wspawnlpe
_tspawnv	_spawnv	_spawnv	_wspawnv
_tspawnve	_spawnve	_spawnve	_wspawnve
_tspawnvp	_spawnvp	_spawnvp	_wspawnvp
_tspawnvpe	_spawnvpe	_spawnvpe	_wspawnvpe
_tsplitpath	_splitpath	_splitpath	_wsplitpath
_tstat	_stat	_stat	_wstat
_tstat32	_stat32	_stat32	_wstat32

Generic-text routine name	SBCS (_UNICODE & MBCS not defined)	_MBCS defined	_UNICODE defined
_tstati32	_stati32	_stati32	_wstati32
_tstat64	_stat64	_stat64	_wstat64
_tstati64	_stati64	_stati64	_wstati64
_tstof	atof	atof	_wtof
_tstoi	atoi	atoi	_wtoi
_tstoi64	_atoi64	_atoi64	_wtoi64
_tstol	atol	atol	_wtol
_tstrdate	_strdate	_strdate	_wstrdate
_tstrdate_s	_strdate_s	_strdate_s	_wstrdate_s
_tstrtime	_strtime	_strtime	_wstrtime
_tstrtime_s	_strtime_s	_strtime_s	_wstrtime_s
_tsystem	system	system	_wsystem
_ttempnam	_tempnam	_tempnam	_wtempnam
_ttmpnam	tmpnam	tmpnam	_wtmpnam
_ttmpnam_s	tmpnam_s	tmpnam_s	_wtmpnam_s
_ttoi	atoi	atoi	_wtoi
_ttoi64	_atoi64	_atoi64	_wtoi64
_ttol	atol	atol	_wtol
_tunlink	_unlink	_unlink	_wunlink
_tutime	_utime	_utime	_wutime
_tutime32	_utime32	_utime32	_wutime32
_tutime64	_utime64	_utime64	_wutime64
_tWinMain	WinMain	WinMain	wWinMain

Generic-text routine name	SBCS (_UNICODE & MBCS not defined)	_MBCS defined	_UNICODE defined
_ui64tot	_ui64toa	_ui64toa	_ui64tow
_ui64tot_s	_ui64toa_s	_ui64toa_s	_ui64tow_s
_ultot	_ultoa	_ultoa	_ultow
_ultot_s	_ultoa_s	_ultoa_s	_ultow_s
_ungettc	ungetc	ungetc	ungetwc
_ungettch	_ungetch	_ungetch	_ungetwch
_vftprintf	vfprintf	vfprintf	vfwprintf
_vftprintf_s	vfprintf_s	vfprintf_s	vfwprintf_S
_vsctprintf	_vscprintf	_vscprintf	_vscwprintf
_vsctprintf_s	_vscprintf_s	_vscprintf_s	_vscwprintf_S
_vsntprintf	_vsnprintf	_vsnprintf	_vsnwprintf
_vsntprintf_s	_vsnprintf_s	_vsnprintf_s	_vsnwprintf_s
_vstprintf	vsprintf	vsprintf	vswprintf
_vstprintf_s	vsprintf_s	vsprintf_s	vswprintf_s
_vtprintf	vprintf	vprintf	vwprintf
_vtprintf_s	vprintf_s	vprintf_s	vwprintf_s

See Also

Generic-Text Mappings
Data Type Mappings
Constant and Global Variable Mappings
A Sample Generic-Text Program
Using Generic-Text Mappings