HP 9000 Series 300/800 Computers

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X Window System C
Quick Reference Guide

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HP 9000 Series 300/800 Computers

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Introduction

The *X Window System C Quick Reference Guide* provides a list of the C functions and widgets that are available to the users of the X Window System through the Xt Intrinsics, Xlib, and the HP Motif widgets.

Xlib is a C subroutine library that application programs (clients) use to interface with the window system. The HP Motif Widgets provide a base of predefined features that the programmer can use to build an application. A widget programmer can design new widgets by combining existing widgets or by using the Xt Intrinsics.

For detailed information about each function or widget, refer to *Programming with the Xt Intrinsics, Programming with Xlib, HP Motif Programmer's Guide,* and *HP Motif Programmer's Reference.*

This quick reference guide is organized as follows:

Chapter 1	Intrinsics functions alphabetized by name. Each entry contains the function call and parameter types.
Chapter 2	Xlib functions alphabetized by name. Each entry contains the function call and parameter types.
Chapter 3	Resource sets and convenience functions for widgets and gadgets listed alphabetically.

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Intrinsics Functions

The items in this table are in alphabetical order, disregarding the type, such as void or int.

void **MenuPopdown**(*shell_name*)
String *shell_name;*

void **MenuPopup**(*shell_name*)
String *shell_name;*

void **XtAddActions**(*actions, num_actions*)
XtActionList *actions;*
Cardinal *num_actions;*

void **XtAddCallback**(*w, callback_name, callback, client_data*)
Widget *w;*
String *callback_name;*
XtCallbackProc *callback;*
caddr_t *client_data;*

void **XtAddCallbacks**(*w, callback_name, callbacks*)
Widget *w;*
String *callback_name;*
XtCallbackList *callbacks;*

void **XtAddConverter**(*from_type, to_type, converter, convert_args, num_args*)
String *from_type, to_type;*
XtConverter *converter;*
XtConvertArgList *convert_args;*
Cardinal *num_args;*

void **XtAddEventHandler**(*w, event_mask, nonmaskable, proc, client_data*)
Widget *w;*
EventMask *event_mask;*
Boolean *nonmaskable;*
XtEventHandler *proc;*
caddr_t *client_data;*

void **XtAddExposureToRegion**(*event, region*)
XEvent **event;*
Region *region;*

void **XtAddGrab**(*w, exclusive, spring_loaded*)
Widget *w;*
Boolean *exlusive, spring_loaded;*

XtInputId **XtAddInput**(*source, condition, proc, client_data*)
int *source;*
caddr_t *condition, client_data;*
XtInputCallbackProc *proc;*

void **XtAddRawEventHandler**(*w, event_mask, nonmaskable, proc, client_data*)
Widget *w;*
EventMask *event_mask;*
Boolean *nonmaskable;*
XtEventHandler *proc;*
caddr_t *client_data;*

XtIntervalId **XtAddTimeOut**(*interval, proc, client_data*)
unsigned long *interval;*
XtTimerCallbackProc *proc;*
caddr_t *client_data;*

XtWorkProcId **XtAddWorkProc**(*proc, closure*)
XtWorkProc *proc;*
Opaque *closure;*

void **XtAppAddActions**(*app_context, actions, num_actions*)
XtAppContext *app_context;*
XtActionList *actions;*
Cardinal *num_actions;*

void **XtAppAddConverter**(*app_context, from_type, to_type, converter, convert_args, num_args*)
XtAppContext *app_context;*
String *from_type, to_type;*
XtConverter *converter;*
XtConvertArgList *convert_args;*
Cardinal *num_args;*

XtInputId **XtAppAddInput**(*app_context, source, condition, proc, client_data*)
XtAppContext *app_context;*
int *source;*
caddr_t *condition, client_data;*
XtInputCallbackProc *proc;*

XtIntervalId **XtAppAddTimeOut**(*app_context, interval, proc, client_data*)
XtAppContext *app_context;*
unsigned long *interval;*
XtTimerCallbackProc *proc;*
caddr_t *client_data;*

XtWorkProcId **XtAppAddWorkProc**(*app_context, proc, client_data*)
XtAppContext *app_context;*
XtWorkProc *proc;*
caddr_t *client_data;*

Widget **XtAppCreateShell**(*application_name, application_class, widget_class, display, args, num_args*)
String *application_name, application_class;*
WidgetClass *widget_class;*
Display **display;*
Arglist *args;*
Cardinal *num_args;*

void **XtAppError**(*app_context, message*)
XtAppContext *app_context;*
String *message;*

void **XtAppErrorMsg**(*app_context, name, type, class, default, params, num_params*)
XtAppContext *app_context;*
String *name, type, class, default, *params;*
Cardinal **num_params;*

XrmDatabase **XtAppGetErrorDatabase**(*app_context*)
XtAppContext *app_context;*

void **XtAppGetErrorDatabaseText**(*app_context, name, type, class, default, buffer_return, nbytes, database*)
XtAppContext *app_context;*
char **name, *type, *class, *default, *buffer_return;*
int nbytes*;*
XrmDatabase database*;*

unsigned long **XtAppGetSelectionTimeout**(*app_context*)
XtAppContext *app_context;*

void **XtAppMainLoop**(*app_context*)
XtAppContext *app_context;*

void **XtAppNextEvent**(*app_context, event_return*)
XtAppContext *app_context;*
XEvent **event_return;*

Boolean **XtAppPeekEvent**(*app_context, event_return*)
XtAppContext *app_context;*
XEvent **event_return;*

Boolean **XtAppPending**(*app_context*)
XtAppContext *app_context;*

void **XtAppProcessEvent**(*app_context, mask*)
XtAppContext *app_contest;*
XtInputMask *mask;*

void **XtAppSetErrorHandler**(*app_context, handler*)
XtAppContext *app_context;*
XtErrorHandler *handler;*

void **XtAppSetErrorMsgHandler**(*app_context, msg_handler*)
XtAppContext *app_context;*
XtErrorMsgHandler *msg_handler;*

void **XtAppSetSelectionTimeout**(*app_context, timeout*)
XtAppContext *app_context;*
unsigned long *timeout;*

void **XtAppSetWarningHandler**(*app_context, handler*)
XtAppContext *app_context;*
XtErrorHandler *handler;*

void **XtAppSetWarningMsgHandler**(*app_context, msg_handler*)
XtAppContext *app_context;*
XtErrorMsgHandler *msg_handler;*

void **XtAppWarning**(*app_context, message*)
XtAppContext *app_context;*
String *message;*

void **XtAppWarningMsg**(*app_context, name, type, class, default, params, num_params*)
XtAppContext *app_context;*
String *name, type, class, default, *params;*
Cardinal **num_params;*

void **XtAugmentTranslations**(*w, translations*)
Widget *w;*
XtTranslations *translations;*

void **XtBuildEventMask**(*w*)
Widget *w;*

Boolean **XtCallAcceptFocus**(*w, time*)
Widget *w;*
Time **time;*

void **XtCallbackExclusive**(*w, client_data, call_data*)
Widget *w;*
caddr_t *client_data, call_data;*

void **XtCallbackNone**(*w, client_data, call_data*)
Widget *w;*
caddr_t *client_data, call_data;*

void **XtCallbackNonexclusive**(*w, client_data, call_data*)
Widget *w;*
caddr_t *client_data, call_data;*

void **XtCallbackPopdown**(*w, client_data, call_data*)
Widget *w;*
caddr_t *client_data, call_data;*

void **XtCallCallbacks**(*w, callback_name, call_data*)
Widget *w;*
String *callback_name;*
caddr_t *call_data;*

char ***XtCalloc**(*num, size*)
Cardinal *num, size;*

void **XtCheckSubclass**(*w, widget_class, message*)
Widget *w;*
WidgetClass *widget_class;*
String *message;*

WidgetClass **XtClass**(*w*)
Widget *w;*

void **XtCloseDisplay**(*display*)
Display **display;*

void **XtConfigureWidget**(*w, x, y, width, height, border_width*)
Widget *w;*
Position *x, y;*
Dimension *width, height, border_width;*

void **XtConvert**(*w, from_type, from, to_type, to_return*)
Widget *w;*
String *from_type, to_type;*
XrmValuePtr *from, to_return;*

void **XtConvertCase**(*display, keysym, lower_return, upper_return*)
Display **display;*
KeySym *keysym, *lower_return, *upper_return;*

XtAppContext **XtCreateApplicationContext**()

Widget **XtCreateApplicationShell**(*name, widget_class, args, num_args*)
String *name;*
WidgetClass *widget_class;*
Arglist *args;*
Cardinal *num_args;*

Widget **XtCreateManagedWidget**(*name, widget_class, parent, args, num_args*)
String *name;*
WidgetClass *widget_class;*
Widget *parent;*
Arglist *args;*
Cardinal *num_args;*

Widget **XtCreatePopupShell**(*name, widget_class, parent, args, num_args*)
String *name;*
WidgetClass *widget_class;*
Widget *parent;*
Arglist *args;*
Cardinal *num_args;*

Widget **XtCreateWidget**(*name, widget_class, parent, args, num_args*)
String *name;*
WidgetClass *widget_class;*
Widget *parent;*
Arglist *args;*
Cardinal *num_args;*

void **XtCreateWindow**(*w, window_class, visual, value_mask, attributes*)
Widget *w;*
unsigned int *window_class;*
Visual **visual;*
XtValueMask *value_mask;*
XSetWindowAttributes **attributes;*

XrmDatabase **XtDatabase**(*display*)
Display **display;*

void **XtDestroyApplicationContext**(*app_context*)
XtAppContext *app_context;*

void **XtDestroyGC**(*gc*)
GC *gc;*

void **XtDestroyWidget**(*w*)
Widget *w;*

void **XtDirectConvert**(*converter, args, num_args, from, to_return*)
XtConverter *converter;*
XrmValuePtr *args, from, to_return;*
Cardinal *num_args;*

void **XtDisownSelection**(*w, selection, time*)
Widget *w;*
Atom *selection;*
Time *time;*

void **XtDispatchEvent**(*event*)
XEvent **event;*

Display ***XtDisplay**(*w*)
Widget *w;*

void **XtDisplayInitialize**(*app_context, display, application_name, application_class, options, num_options, argc, argv*)
XtAppContext *app_context;*
Display **display;*
String *application_name, application_class;*
XrmOptionDescRec *options[ ];*
Cardinal *num_options, *argc;*
String *argv[ ];*

void **XtError**(*message*)
String *message;*

void **XtErrorMsg**(*name, type, class, default, params, num_params*)
String *name, type, class, default, *params;*
Cardinal **num_params;*

void **XtFree**(*ptr*)
char **ptr;*

void **XtGetApplicationResources**(*w, base, resources, num_resources, args, num_args*)
Widget *w;*
caddr_t *base;*
XtResourceList *resources;*
Cardinal *num_resources, num_args;*
ArgList *args;*

XrmDatabase **XtGetErrorDatabase**()

void **XtGetErrorDatabaseText**(*name, type, class, default, buffer_return, nbytes*)
char **name, **type, **class, **default, **buffer_return;*
int *nbytes;*

GC **XtGetGC**(*w, value_mask, values*)
Widget *w;*
XtGCMask *value_mask;*
XGCValues **values;*

void **XtGetResourceList**(*class, resources_return, num_resources_return*)
WidgetClass *class;*
XtResourceList **resources_return;*
Cardinal **num_resources_return;*

unsigned long **XtGetSelectionTimeout**()

void **XtGetSelectionValue**(*w, selection, target, callback, client_data, time*);
Widget *w;*
Atom *selection, target;*
XtSelectionCallbackProc *callback;*
caddr_t *client_data;*
Time *time;*

void **XtGetSelectionValues**(*w, selection, targets, count, callback, client_data, time*)
Widget *w;*
Atom *selection, **targets;*
int *count;*
XtSelectionCallbackProc *callback;*
caddr_t *client_data;*
Time *time;*

void **XtGetSubresources**(*w, base, name, class, resources, num_resources, args, num_args*)
Widget *w;*
caddr_t *base;*
String *name, class;*
XtResourceList *resources;*
Cardinal *num_resources, num_args;*
ArgList *args;*

void **XtGetSubvalues**(*base, resources, num_resources, args, num_args*)
caddr_t *base;*
XtResourceList *resource;*
Cardinal *num_resources, num_args;*
ArgList *args;*

void **XtGetValues**(*w, args, num_args*)
Widget *w;*
ArgList *args;*
Cardinal *num_args;*

XtCallbackStatus **XtHasCallbacks**(*w, callback_name*)
Widget *w;*
String *callback_name;*

Widget **XtInitialize**(*shell_name, application_class, options, num_options, argc, argv*)
String *shell_name, application_class;*
XrmOptionDescRec *options[ ];*
Cardinal *num_options, *argc;*
String *argv[ ];*

void **XtInstallAccelerators**(*destination, source*)
Widget *destination, source;*

void **XtInstallAllAccelerators**(*destination, source*)
Widget *destination, source;*

Boolean **XtIsComposite**(*w*)
Widget *w;*

Boolean **XtIsManaged**(*w*)
Widget *w;*

Boolean **XtIsRealized**(*w*)
Widget *w;*

Boolean **XtIsSensitive**(*w*)
Widget *w;*

Boolean **XtIsSubclass**(*w, widget_class*)
Widget *w;*
WidgetClass *widget_class;*

XtGeometryResult **XtMakeGeometryRequest**(*w, request, reply_return*)
Widget *w;*
XtWidgetGeometry **request, *reply_return;*

XtGeometryResult **XtMakeResizeRequest**(*w, width, height, width_return, height_return*)
Widget *w;*
Dimension *width, height;*
Dimension **width_return, *height_return;*

char ***XtMalloc**(*size*)
Cardinal *size;*

void **XtManageChild**(*child*)
Widget *child;*

void **XtManageChildren**(*children, num_children*)
WidgetList *children;*
Cardinal *num_children;*

XtMapWidget(*w*)
Widget *w;*

ArgList **XtMergeArgLists**(*arg1, num_args1, arg2, num_args2*)
ArgList *arg1, arg2;*
Cardinal *num_args1, num_args2;*

void **XtMoveWidget**(*w, x, y*)
Widget *w;*
Position *x, y;*

Widget **XtNameToWidget**(*reference, names*)
Widget *reference;*
String *names;*

type ***XtNew**(*type*)
type;

String **XtNewString**(*string*)
String *string;*

void **XtNextEvent**(*event_return*);
XEvent **event_return;*

Cardinal **XtNumber**(*array*)
ArrayVariable *array;*

Cardinal **XtOffset**(*pointer_type, field_name*)
Type *pointer_type;*
Field *field_name;*

Display ***XtOpenDisplay**(*app_context, display_name, application_name, application_class, options, num_options, argc, argv*)
XtAppContext *app_context;*
String *display_name, application_name, application_class;*
XrmOptionDescRec **options;*
Cardinal *num_options, *argc;*
String **argv;*

void **XtOverrideTranslations**(*w, translations*)
Widget *w;*
XtTranslations *translations;*

Boolean **XtOwnSelection**(*w, selection, time, convert_proc, lose_selection, done_proc*)
Widget *w;*
Atom *selection;*
Time *time;*
XtConvertSelectionProc *convert_proc;*
XtLoseSelectionProc *lose_selection;*
XtSelectionDoneProc *done_proc;*

Widget **XtParent**(*w*)
Widget *w;*

XtAccelerators **XtParseAcceleratorTable**(*source*)
String *source;*

XtTranslations **XtParseTranslationTable**(*table*)
String *table;*

Boolean **XtPeekEvent**(*event_return*)
XEvent *event_return;*

Boolean **XtPending**()

void **XtPopdown**(*popup_shell*)
Widget *popup_shell;*

void **XtPopup**(*popup_shell, grab_kind*)
Widget *popup_shell;*
XtGrabKind *grab_kind;*

void **XtProcessEvent**(*mask*)
XtInputMask *mask;*

XtGeometryResult **XtQueryGeometry**(*w, intended, preferred_return*)
Widget *w;*
XtWidgetGeometry **intended, *preferred_return;*

void **XtRealizeWidget**(*w*)
Widget *w;*

char ***XtRealloc**(*ptr, num*)
char **ptr;*
Cardinal *num;*

void **XtRegisterCaseConverter**(*display, proc, start, stop*)
Display **display;*
XtCaseProc *proc;*
KeySym *start, stop;*

void **XtReleaseGC**(*w, gc*)
Widget *w;*
GC *gc;*

void **XtRemoveAllCallbacks**(*w, callback_name*)
Widget *w;*
String *callback_name;*

void **XtRemoveCallback**(*w, callback_name, callback, client_data*)
Widget *w;*
String *callback_name;*
XtCallbackProc *callback;*
caddr_t *client_data;*

void **XtRemoveCallbacks**(*w, callback_name, callback*)
Widget *w;*
String *callback_name;*
XtCallbackList *callbacks;*

void **XtRemoveEventHandler**(*w, event_mask, nonmaskable, proc, client_data*)
Widget *w;*
EventMask *event_mask;*
Boolean *nonmaskable;*
XtEventHandler *proc;*
caddr_t *client_data;*

void **XtRemoveGrab**(*w*)
Widget *w;*

void **XtRemoveInput**(*id*)
XtInputID *id;*

void **XtRemoveRawEventhandler**(*w, event_mask, nonmaskable, proc, client_data*)
Widget *w;*
EventMask *event_mask;*
Boolean *nonmaskable;*
XtEventHandler *proc;*
caddr_t *client_data;*

void **XtRemoveTimeOut**(*timer*)
XtIntervalId *timer;*

void **XtRemoveWorkProc**(*id*)
XtWorkProcId *id;*

void **XtResizeWidget**(*w, width, height, border_width*)
Widget *w;*
Dimension *width, height, border_width;*

void **XtResizeWindow**(*w*)
Widget *w;*

Screen ***XtScreen**(*w*)
Widget *w;*

XtSetArg(*arg, name, value*)
Arg *arg;*
String *name;*
XtArgVal *value;*

void **XtSetErrorHandler**(*handler*)
XtErrorHandler *handler;*

void **XtSetErrorMsgHandler**(*msg_handler*)
XtErrorMsgHandler *msg_handler;*

XtSetKeyboardFocus(*subtree, descendent*)
Widget *subtree, descendent;*

void **XtSetKeyTranslator**(*display, proc*)
Display **display;*
XtKeyProc *proc;*

void **XtSetMappedWhenManaged**(*w, map_when_managed*)
Widget *w;*
Boolean *map_when_managed;*

void **XtSetSelectionTimeout**(*timeout*);
unsigned long *timeout;*

void **XtSetSensitive**(*w, sensitive*)
Widget *w;*
Boolean *sensitive;*

void **XtSetSubvalues**(*base, resources, num_resources, args, num_args*)
caddr_t *base;*
XtResourceList *resources;*
Cardinal *num_resources, num_args;*
ArgList *args;*

void **XtSetValues**(*w, args, num_args*)
Widget *w;*
ArgList *args;*
Cardinal *num_args;*

void **XtSetWarningMsgHandler**(*msg_handler*)
XtErrorMsgHandler *msg_handler;*

void **XtStringConversionWarning**(*src, dst_type*)
String *src, dst_type;*

WidgetClass **XtSuperclass**(*w*)
Widget *w;*

void **XtTranslateCoords**(*w, x, y, rootx_return, rooty_return*)
Widget *w;*
Position *x, y, *rootx_return, *rooty_return;*

void **XtTranslateKeycode**(*display, keycode, modifiers, modifier_return, keysym_name*)
Display **display;*
KeyCode *keycode;*
Modifiers *modifiers, *modifier_return;*
KeySym **keysym_name;*

void **XtUninstallTranslations**(*w*)
Widget *w;*

void **XtUnmanageChild**(*child*)
Widget *child;*

void **XtUnmanageChildren**(*children, num_children*)
WidgetList *children;*
Cardinal *num_children;*

XtUnmapWidget(*w*)
Widget *w;*

void **XtUnrealizeWidget**(*w*)
Widget *w;*

void **XtWarning**(*message*)
String *message;*

void **XtWarningMsg**(*name, type, class, default, params, num_params*)
String *name, type, class, default, *params;*
Cardinal *num_params;*

XtAppContext **XtWidgetToApplicationContext**(*w*)
Widget *w;*

Window **XtWindow**(*w*)
Widget *w;*

Widget **XtWindowToWidget**(*display, window*)
Display *display;*
Window *window;*

2

Xlib Functions

The items in this table are in alphabetical order, disregarding the type, such as void or int.

FlushGC(*display, gc*)
Display **display;*
GC *gc;*

XActivateScreenSaver(*display*)
Display **display;*

XAddHost(*display, host*)
Display **display;*
XHostAddress **host;*

XAddHosts(*display, hosts, num_hosts*)
Display **display;*
XHostAddress **hosts;*
int *num_hosts;*

XAddPixel(*ximage, value*)
XImage **ximage;*
unsigned long *value;*

XAddToExtensionList(*structure, ext_data*)
struct _XExtData ***structure;*
XExtData **ext_data;*

XAddToSaveSet(*display, w*)
Display **display;*
Window *w;*

Status **XAllocColor**(*display, cmap, screen_in_out*)
Display **display;*
Colormap *cmap;*
XColor **screen_in_out;*

Status **XAllocColorCells**(*display, cmap, contig, plane_masks_return, nplanes, pixels_return, ncolors*)
    Display **display;*
    Colormap *cmap;*
    Bool *contig;*
    unsigned long *plane_masks_return[ ], pixels_return[ ];*
    unsigned int *nplanes, ncolors;*

Status **XAllocColorPlanes**(*display, cmap, contig, pixels_return, ncolors, nreds, ngreens, nblues, rmask_return, gmask_return, bmask_return*)
    Display **display;*
    Colormap *cmap;*
    Bool *contig;*
    unsigned long *pixels_return[ ];*
    int *ncolors, nreds, ngreens, nblues;*
    unsigned long **rmask_return, *gmask_return, *bmask_return;*

Status **XAllocNamedColor**(*display, cmap, color_name, screen_def_return, exact_def_return*)
    Display **display;*
    Colormap *cmap;*
    char **color_name;*
    XColor **screen_def_return, *exact_def_return;*

XAllowEvents(*display, event_mode, time*)
    Display **display;*
    int *event_mode;*
    Time *time;*

unsigned long **XAllPlanes**( )

XAutoRepeatOff(*display*)
    Display **display;*

XAutoRepeatOn(*display*)
    Display **display;*

XBell(*display, percent*)
    Display **display;*
    int *percent;*

int **XBitmapBitOrder**(*display*)
    Display **display;*

int **XBitmapPad**(*display*)
    Display **display;*

int **XBitmapUnit**(*display*);
    Display **display;*

unsigned long **XBlackPixel**(*display, screen_number*)
    Display **display;*
    int *screen_number;*

unsigned long **XBlackPixelOfScreen**(*screen*)
    Screen **screen;*

int **XCellsOfScreen**(*screen*)
    Screen **screen;*

XChangeActivePointerGrab(*display, event_mask, cursor, time*)
    Display **display;*
    unsigned int *event_mask;*
    Cursor *cursor;*
    Time *time;*

XChangeGC(*display, gc, valuemask_change, values*)
   Display **display;*
   GC *gc;*
   unsigned long *valuemask_change;*
   XGCValues **values;*

XChangeKeyboardControl(*display, value_mask, values*)
    Display **display;*
    unsigned long *value_mask;*
    XKeyboardControl **values;*

XChangeKeyboardMapping(*display, first_keycode, keysyms_per_keycode, keysyms, num_codes*)
    Display **display;*
    int *first_keycode, keysyms_per_keycode;*
    KeySym **keysyms;*
    int *num_codes;*

XChangePointerControl(*display, do_accel, do_threshold, accel_numerator, accel_denominator, threshold*)
    Display **display;*
    Bool *do_accel, do_threshold;*
    int *accel_numerator, accel_denominator;*
    int *threshold;*

XChangeProperty(*display, w, property, type, format, mode, data, nelements*)
    Display **display;*
    Window *w;*
    Atom *property, type;*
    int *format, mode, nelements;*
    unsigned char **data;*

XChangeSaveSet(*display, w, change_mode*)
    Display **display;*
    Window *w;*
    int *change_mode;*

XChangeWindowAttributes(*display, w, valuemask, attributes*)
    Display **display;*
    Window *w;*
    unsigned long *valuemask;*
    XSetWindowAttributes **attributes;*

Bool XCheckIfEvent(*display, event_return, predicate, arg*)
    Display **display;*
    XEvent **event_return;*
    Bool "(**predicate*)();
    char **arg;*

Bool XCheckMaskEvent(*display, event_mask, event_return*)
    Display **display;*
    long *event_mask;*
    XEvent **event_return;*

Bool XCheckTypedEvent(*display, event_type, event_return*)
    Display **display;*
    int *event_type;*
    XEvent **event_return;*

Bool **XCheckTypedWindowEvent**(*display, w, event_type, event_return*)
    Display **display;*
    Window *w;*
    int *event_type;*
    XEvent **event_return;*

XCheckWindowEvent(*display, w, event_mask, event_return*)
    Display **display;*
    Window *w;*
    long *event_mask;*
    XEvent **event_return;*

XCirculateSubwindows(*display, w, direction*)
    Display **display;*
    Window *w;*
    int *direction;*

XCirculateSubwindowsDown(*display, w*)
    Display **display;*
    Window *w;*

XCirculateSubwindowsUp(*display, w*)
    Display **display;*
    Window *w;*

XClearArea(*display, w, x, y, width, height, exposures*)
    Display **display;*
    Window *w;*
    int *x, y;*
    unsigned int *width, height;*
    Bool *exposures;*

XClearWindow(*display, w*)
    Display **display;*
    Window *w;*

XClipBox(*r, rect_return*)
    Region *r;*
    XRectangle **rect_return;*

XCloseDisplay(*display*)
    Display **display;*

XConfigureWindow(*display, w, value_mask, values*)
Display **display;*
Window *w;*
unsigned int *value_mask;*
XWindowChanges **values;*

int **XConnectionNumber**(*display*)
Display **display;*

XConvertSelection(*display, selection, target, property, requestor, time*)
Display **display;*
Atom *selection, target, property;*
Window *requestor;*
Time *time;*

XCopyArea(*display, src, desc, gc, src_x, src_y, width, height, dest_x, dest_y*)
Display **display;*
Drawable *src, dest;*
GC *gc;*
int *scr_x, scr_y, dest_x, dest_y;*
unsigned int *width, height;*

Colormap **XCopyColormapAndFree**(*display, cmap*)
Display **display;*
Colormap *cmap;*

XCopyGC(*display, src, valuemask_copy, dest*)
Display **display;*
GC *src, dest;*
unsigned long *valuemask_copy;*

XCopyPlane(*display, src, dest, gc, src_x, src_y, width, height, dest_x, dest_y, plane*)
Display **display;*
Drawable *src, dest;*
GC *gc;*
int *src_x, src_y, dest_x, dest_y;*
unsigned int *width, height;*
unsigned long *plane;*

XAssocTable *XCreateAssocTable(*size*)
int *size;*

Pixmap **XCreateBitmapFromData**(*display, d, data, width, height*)
    Display **display;*
    Drawable *d;*
    char **data;*
    unsigned int *width, height;*

Colormap **XCreateColormap**(*display, w, visual, alloc*)
    Display **display;*
    Window *w;*
    Visual **visual;*
    int *alloc;*

Cursor **XCreateFontCursor**(*display, shape*)
    Display **display;*
    unsigned int *shape;*

GC **XCreateGC**(*display, d, valuemask_create, values*)
    Display **display;*
    Drawable *d;*
    unsigned long *valuemask_create;*
    XGCValues **values;*

Cursor **XCreateGlyphCursor**(*display, source_font, mask_font, source_char, mask_char, foreground_color, background_color*)
    Display **display;*
    Font *source_font, mask_font;*
    unsigned int *source_char, mask_char;*
    XColor **foreground_color, *background_color;*

XImage ***XCreateImage**(*display, visual, depth, format, offset, data, width, height, bitmap_pat, bytes_per_line*)
    Display **display;*
    Visual **visual;*
    unsigned int *depth, width, height;*
    int *format, offset, bitmap_pad, bytes_per_line;*
    char **data;*

Pixmap **XCreatePixmap**(*display, d, width, height, depth*)
    Display **display;*
    Drawable *d;*
    unsigned int *width, height, depth;*

Cursor **XCreatePixmapCursor**(*display, source, mask, foreground_color, background_color*)
Display **display;*
Pixmap *source, mask;*
XColor **foreground_color, background_color;*
unsigned int *x, y;*

Pixmap **XCreatePixmapFromBitmapData**(*display, d, data, width, height, fg, bg, depth*)
Display **display;*
Drawable *d;*
char **data;*
unsigned int *width, height, depth;*
unsigned long *fg, bg;*

Region **XCreateRegion**()

Window **XCreateSimpleWindow**(*display, parent, x, y, width, height, border_width, border, background*)
Display **display;*
Window *parent;*
int *x, y;*
unsigned int *width, height, border_width;*
unsigned long *border, background;*

Window **XCreateWindow**(*display, parent, x, y, width, height, border_width, depth, class, visual, valuemask, attributes*)
Display **display;*
Window *parent;*
int *x, y, depth;*
unsigned int *width, height, border_width, class;*
Visual *visual;
unsigned long *valuemask;*
XSetWindowAttributes **attributes;*

Colormap **XDefaultColormap**(*display, screen_number*)
Display **display;*
int *screen_number;*

Colormap **XDefaultColormapOfScreen**(*screen*)
Screen **screen;*

int **XDefaultDepth**(*display, screen_number*)
    Display **display;*
    int *screen_number;*

int **XDefaultDepthOfScreen**(*screen*)
    Screen **screen;*

GC **XDefaultGC**(*display, screen_number*)
    Display **display;*
    int *screen_number;*

GC **XDefaultGCOfScreen**(*screen*)
    Screen **screen;*

Window **XDefaultRootWindow**(*display*)
    Display **display;*

int **XDefaultScreen**(*display*)
    Display **display;*

Screen ***XDefaultScreenOfDisplay**(*display*)
    Display **display;*

Visual ***XDefaultVisual**(*display, screen_number*)
    Display **display;*
    int *screen_number;*

Visual ***XDefaultVisualOfScreen**(*screen*)
    Screen **screen;*

XDefineCursor(*display, w, cursor*)
    Display **display;*
    Window *w;*
    Cursor *cursor;*

XDeleteAssoc(*display, table, x_id*)
    Display **display;*
    XAssocTable **table;*
    XID *x_id;*

int **XDeleteContext**(*display, w, context*)
    Display **display;*
    Window *w;*
    XContext *context;*

XModifierKeymap ***XDeleteModifiermapEntry**(*modmap, keycode_entry, modifier*)
    XModifierKeymap **modmap;*
    KeyCode *keycode_entry;*
    int *modifier;*

XDeleteProperty(*display, w, property*)
    Display **display;*
    Window *w;*
    Atom *property;*

XDestroyAssocTable(*table*)
    XAssocTable **table;*

int **XDestroyImage**(*ximage*)
    XImage **ximage;*

XDestroyRegion(*r*)
    Region *r;*

XDestroySubwindows(*display, w*)
    Display **display;*
    Window *w;*

XDestroyWindow(*display, w*)
    Display **display;*
    Window *w;*

XDisableAccessControl(*display*)
    Display **display;*

int **XDisplayCells**(*display, screen_number*)
    Display **display;*
    int *screen_number;*

int **XDisplayHeight**(*display, screen_number*)
    Display **display;*
    int screen_number;

int **XDisplayHeightMM**(*display, screen_number*)
    Display **display;*
    int screen_number;

XDisplayKeycodes(*display, min_keycodes_return, max_keycodes_return*)
    Display **display;*
    int **min_keycodes_return, *max_keycodes_return;*

Display *XDisplayOfScreen(*screen*)
    Screen **screen;*

int XDisplayPlanes(*display, screen_number*)
    Display **display;*
    int *screen_number;*

char *XDisplayString(*display*)
    Display **display;*

int XDisplayWidth(*display, screen_number*)
    Display **display;*
    int *screen_number;*

int XDisplayWidthMM(*display, screen_number*)
    Display **display;*
    int screen_number;

int XDoesBackingStore(*screen*)
    Screen **screen;*

Bool XDoesSaveUnders(*screen*)
    Screen **screen;*

Status XDraw(*display, d, gc, vlist, vcount*)
    Display **display;*
    Drawable *d;*
    GC *gc;*
    Vertex **vlist;*
    int *vcount;*

XDrawArc(*display, d, gc, x, y, width, height, angle1, angle2*)
    Display **display;*
    Drawable *d;*
    GC *gc;*
    int *x, y, angle1, angle2;*
    unsigned int *width, height;*

XDrawArcs(*display, d, gc, arcs, narcs*)
    Display **display;*
    Drawable *d;*
    GC *gc;*
    XArc **arcs;*
    int *narcs;*

Status **XDrawFilled**(*display, d, gc, vlist, vcount*)
    Display **display;*
    Drawable *d;*
    GC *gc;*
    Vertex **vlist;*
    int *vcount;*

XDrawImageString(*display, d, gc, x, y, string, length*)
    Display **display;*
    Drawable *d;*
    GC *gc;*
    int *x, y, length;*
    char **string;*

XDrawImageString16(*display, d, gc, x, y, string, length*)
    Display **display;*
    Drawable *d;*
    GC *gc;*
    int *x, y, length;*
    XChar2b **string;*

XDrawLine(*display, d, gc, x1, y1, x2, y2*)
    Display **display;*
    Drawable *d;*
    GC *gc;*
    int *x1, y1, x2, y2;*

XDrawLines(*display, d, gc, points, npoints, mode*)
    Display **display;*
    Drawable *d;*
    GC *gc;*
    XPoint **points;*
    int *npoints, mode;*

XDrawPoint(*display, d, gc, x, y*)
    Display **display;*
    Drawable *d;*
    GC *gc;*
    int *x, y;*

XDrawPoints(*display, d, gc, points, npoints, mode*)
Display **display;*
Drawable *d;*
GC *gc;*
XPoint **points;*
int *npoints, mode;*

XDrawRectangle(*display, d, g, x, y, width, height*)
Display **display;*
Drawable *d;*
GC *gc;*
int *x, y;*
unsigned int *width, height;*

XDrawRectangles(*display, d, gc, rectangles, nrectangles*)
Display **display;*
Drawable *d;*
GC *gc;*
XRectangle *rectangles[];*
int *nrectangles;*

XDrawSegments(*display, d, gc, segments, nsegments*)
Display **display;*
Drawable *d;*
GC *gc;*
XSegment **segments;*
int *nsegments;*

XDrawString(*display, d, gc, x, y, string, length*)
Display **display;*
Drawable *d;*
GC *gc;*
int *x, y, length;*
char **string;*

XDrawString16(*display, d, gc, x, y, string, length*)
Display **display;*
Drawable *d;*
GC *gc;*
int *x, y, length;*
XChar2b **string;*

XDrawText(*display, d, gc, x, y, items, nitems*)
Display **display;*
Drawable *d;*
GC *gc;*
int *x, y, nitems;*
XTextItem **items;*

XDrawText16(*display, d, gc, x, y, items, nitems*)
Display **display;*
Drawable *d;*
GC *gc;*
int *x, y, nitems;*
XTextItem16 **items;*

Bool **XEmptyRegion**(*r*)
Region *r;*

XEnableAccessControl(*display*)
Display **display;*

Bool **XEqualRegion**(*r1, r2*)
Region *r1, r2;*

long **XEventMaskOfScreen**(*screen*)
Screen **screen;*

int **XEventsQueued**(*display, mode*)
Display **display;*
int *mode;*

char ***XFetchBuffer**(*display, nbytes_return, buffer*)
Display **display;*
int **nbytes_return, buffer;*

char ***XFetchBytes**(*display, nbytes_return*)
Display **display;*
int **nbytes_return;*

Status **XFetchName**(*display, w, window_name_return*)
Display **display;*
Window *w;*
char ***window_name_return;*

XFillArc(*display, d, gc, x, y, width, height, angle1, angle2*)
Display **display;*
Drawable *d;*
GC *gc;*
int *x, y, angle1, angle2;*
unsigned int *width, height;*

XFillArcs(*display, d, gc, arcs, narcs*)
Display **display;*
Drawable *d;*
GC *gc;*
XArc **arcs;*
int *narcs;*

XFillPolygon(*display, d, gc, points, npoints, shape, mode*)
Display **display;*
Drawable *d;*
GC *gc;*
XPoint **points;*
int *npoints, shape, mode;*

XFillRectangle(*display, d, gc, x, y, width, height*)
Display **display;*
Drawable *d;*
GC *gc;*
int *x, y;*
unsigned int *width, height;*

XFillRectangles(*display, d, gc, rectangles, nrectangles*)
Display **display;*
Drawable *d;*
GC *gc;*
XRectangle **rectangles;*
int *nrectangles;*

int **XFindContext**(*display, w, context, data_return*)
Display **display;*
Window *w;*
XContext *context;*
caddr_t **data_return;*

XExtData ***XFindOnExtensionList**(*structure, number*)
    struct _XExtData ***structure;*
    int *number;*

XFlush(*display*)
    Display **display;*

XForceScreenSaver(*display, mode*)
    Display **display;*
    int *mode;*

XFree(*data*)
    char **data;*

XFreeColormap(*display, cmap*)
    Display **display;*
    Colormap *cmap;*

XFreeColors(*display, cmap, pixels, npixels, planes*)
    Display **display;*
    Colormap *cmap;*
    unsigned long *pixels[], planes;*
    int *npixels;*

XFreeCursor(*display, cursor*)
    Display **display;*
    Cursor *cursor;*

XFreeFont(*display, font_struct*)
    Display **display;*
    XFontStruct **font_struct;*

XFreeFontInfo(*names, free_info, actual_count*)
    char ***names;*
    XFontStruct **free_info;*
    int *actual_count;*

XFreeFontNames(*list*)
    char **list[];*

XFreeFontPath(*list*)
    char ***list;*

XFreeGC(*display, gc*)
Display **display;*
GC *gc;*

XFreeModifiermap(*modmap*)
XModifierKeymap **modmap;*

XFreePixmap(*display, pixmap*)
Display **display;*
Pixmap *pixmap;*

GContext **XGContextFromGC**(*gc*)
GC *gc;*

int **XGeometry**(*display, screen, position, default_position, bwidth, fwidth, fheight, xadder, yadder, x_return, y_return, width_return, height_return*)
Display **display;*
int *screen, xadder, yadder, x_return, y_return;*
char **position, *default_position;*
unsigned int *bwidth, fwidth, fheight;*
int **width_return, *height_return;*

char ***XGetAtomName**(*display, atom*)
Display **display;*
Atom *atom;*

Status **XGetClassHint**(*display, w, class_hints_return*)
Display **display;*
Window *w;*
XClassHint **class_hints_return;*

char ***XGetDefault**(*display, program, options*)
Display **display;*
char **program, *options;*

XGetErrorDatabaseText(*display, name, message, default_string, buffer_return, length*)
Display **display;*
char **name, *message, *default_string;*
char **buffer_return;*
int *length;*

XGetErrorText(*display, code, buffer_return, length*)
Display **display;*
int *code, length;*
char **buffer_return;*

char ***XGetFontPath**(*display, npaths_return*)
Display **display;*
int **npaths_return;*

Bool **XGetFontProperty**(*font_struct, atom, value_return*)
XFontStruct **font_struct;*
Atom *atom;*
unsigned long **value_return;*

Status **XGetGeometry**(*display, d, root_return, x_return, y_return, width_return, height_return, border_width_return, depth_return*)
Display **display;*
Drawable *d;*
Window **root_return;*
int **x_return, *y_return;*
unsigned int **width_return, *height_return;*
unsigned int **border_width_return, *depth_return;*

Status **XGetIconName**(*display, w, icon_name_return*)
Display **display;*
Window *w;*
char ***icon_name_return;*

Status **XGetIconSizes**(*display, w, size_list_return, count_return*)
Display **display;*
Window *w;*
XIconSize ***size_list_return;*
int **count_return;*

XImage ***XGetImage**(*display, d, x, y, width, height, plane_mask, format*)
Display **display;*
Drawable *d;*
int *x, y, format;*
unsigned int *width, height;*
unsigned long *plane_mask;*

XGetInputFocus(*display, focus_return, revert_to_return*)
Display **display;*
Window **focus_return;*
int **revert_to_return;*

XGetKeyboardControl(*display, values_return*)
Display **display;*
XKeyboardState **values_return;*

KeySym ***XGetKeyboardMapping**(*display, first_keycode_wanted, keycode_count, keysyms_per_keycode_return*)
Display **display;*
KeyCode *first_keycode_wanted;*
int *keycode_count, *keysyms_per_keycode_return;*

XModifierKeymap ***XGetModifierMapping**(*display*)
Display **display;*

XTimeCoord ***XGetMotionEvents**(*display, w, start, stop, nevents_return*)
Display **display;*
Window *w;*
Time *start, stop;*
int **nevents_return;*

Status **XGetNormalHints**(*display, w, hints_return*)
Display **display;*
Window *w;*
XSizeHints **hints_return;*

unsigned long **XGetPixel**(*ximage, x, y*)
XImage **ximage;*
int *x, y;*

XGetPointerControl(*display, accel_numerator_return, accel_denominator_return, threshold_return*)
Display **display;*
int **accel_numerator_return, *accel_denominator_return;*
int *threshold_return;

int **XGetPointerMapping**(*display, map_return, nmap*)
Display **display;*
unsigned char *map_return[ ];*
int *nmap;*

XGetScreenSaver(*display, timeout_return, interval_return, prefer_blanking_return, allow_exposures_return*)
Display **display;*
int **timeout_return, *interval_return;*
int **prefer_blanking_return, *allow_exposures_return;*

Window XGetSelectionOwner(*display, selection*)
Display **display;*
Atom *selection;*

Status XGetSizeHints(*display, w, hints_return, property*)
Display **display;*
Window *w;*
XSizeHints **hints_return;*
Atom *property;*

Status XGetStandardColormap(*display, w, cmap_return, property*)
Display **display;*
Window *w;*
XStandardColormap **cmap_return;*
Atom *property;*

XImage *XGetSubImage(*display, d, x, y, width, height, plane_mask, format, dest_image, dest_x, dest_y*)
Display **display;*
Drawable *d;*
int *x, y, format, dest_x, dest_y;*
unsigned int *width, height;*
unsigned long *plane_mask;*
XImage **dest_image;*

Status XGetTransientForHint(*display, w, prop_window_return*)
Display **display;*
Window *w;*
Window **prop_window_return;*

XVisualInfo *XGetVisualInfo(*display, vinfo_mask, vinfo_template, nitems_return*)
Display **display;*
long *vinfo_mask;*
XVisualInfo **vinfo_template;*
int **nitems_return;*

Status **XGetWindowAttributes**(*display, w, window_attributes_return*)
Display **display;*
Window *w;*
XWindowAttributes **window_attributes_return;*

int **XGetWindowProperty**(*display, w, property, long_offset, long_length, delete, req_type, actual_type_return, actual_format_return, nitems_return, bytes_after_return, prop_return*)
Display **display;*
Window *w;*
Atom *property, req_type, *actual_type_return;*
long *long_offset, long_length;*
Bool *delete;*
int **actual_format_return;*
unsigned long **nitem_return, *bytes_after_return, **prop_return;*

XWMHints ***XGetWMHints**(*display, w*)
Display **display;*
Window *w;*

Status **XGetZoomHints**(*display, w, zhints_return*)
Display **display;*
Window *w;*
XSizeHints **zhints_return;*

XGrabButton(*display, button_grab, modifiers, grab_window, owner_events, event_mask, pointer_mode, keyboard_mode, confine_to, cursor*)
Display **display;*
unsigned int *button_grab, modifiers, event_mask;*
Window *grab_window, confine_to;*
Bool *owner_events;*
int *pointer_mode, keyboard_mode;*
Cursor *cursor;*

XGrabKey(*display, keycode, modifiers, grab_window, owner_events, pointer_mode, keyboard_mode*)
Display **display;*
int *keycode, pointer_mode, keyboard_mode;*
unsigned int *modifiers;*
Window *grab_window;*
Bool *owner_events;*

int **XGrabKeyboard**(*display, grab_window, owner_events, pointer_mode, keyboard_mode, time*)
    Display **display;*
    Window *grab_window;*
    Bool *owner_events;*
    int *pointer_mode, keyboard_mode;*
    Time *time;*

int **XGrabPointer**(*display, grab_window, owner_events, event_mask, pointer_mode, keyboard_mode, confine_to, cursor, time*)
    Display **display;*
    Window *grab_window, confine_to;*
    Bool *owner_events;*
    unsigned int *event_masks;*
    int *pointer_mode, keyboard_mode;*
    Cursor *cursor;*
    Time *time;*

XGrabServer(*display*)
    Display **display;*

int **XHeightOfScreen**(*screen*)
    Screen **screen;*

int **XHeightMMOfScreen**(*screen*)
    Screen **screen;*

XHPAcknowledge(*display, deviceid, acknowledge*)
    Display **display;*
    XID *deviceid;*
    unsigned int *acknowledge;*

XHPChangeDeviceControl(*display, deviceid, value_mask, values*)
    Display **display;*
    XID *deviceid;*
    unsigned long *value_mask;*
    XHPDeviceControl **values;*

XHPChangeDeviceKeyMapping(*display, deviceid, first_keycode, keysyms_per_keycode, keysyms, num_codes*)
    Display **display;*
    XID *deviceid;*
    int *first_keycode, keysyms_per_keycode, num_codes;*
    KeySyms **keysyms;*

XHPConvertLookup(*event_struct, buffer_return, bytes_buffer, keysym_return, status_in_out*)
Keyevent **event_struct;*
char **buffer_return;*
int *bytes_buffer;*
Keysym **keysym_return;*
XComposeStatus **status_in_out;*

XHPDeviceAutoRepeatOff(*display, deviceid*)
Display **display;*
XID *deviceid;*

XHPDeviceAutoRepeatOn(*display, deviceid, mode*)
Display **display;*
XID *deviceid;*
unsigned int *mode;*

XHPDisableReset(*display*)
Display **display;*

XHPEnableReset(*display*)
Display **display;*

int **XHPFileToPixmap**(*display, pixmap, cmap, gc, src_x, src_y, dst_x, dst_y, width, height, filename*)
Display **display;*
Pixmap *pixmap;*
Colormap *cmap;*
GC *gc;*
int *src_x, src_y, dst_x, dst_y;*
unsigned int *width, height;*
char *filename;*

int **XHPFileToWindow**(*display, w, modify_cmap, gc, src_x, src_y, dst_x, dst_y, width, height, filename*)
Display **display;*
Window *w;*
int *modify_cmap, src_x, src_y, dst_x, dst_y;*
GC *gc;*
unsigned int *width, height;*
char *filename;*

void **XHPFreeDeviceList**(*list*)
XHPDeviceList **list;*

XFontStruct **XHPGet16bitMixedFont**(*font*)
XFontStruct *font;

XHPGetCurrentDeviceMask(*display, window, deviceid, mask_return*)
Display **display;*
Window *window;*
XID *deviceid;*
Mask **mask_return;*

XHPGetDeviceControl(*display, deviceid, values_return*)
Display **display;*
XID *deviceid;*
XHPDeviceState **values_return;*

XHPGetDeviceFocus(*display, deviceid, focus_return, revert_to_return*)
Display **display;*
XID *deviceid;*
Window **focus_return;*
int **revert_to_return;*

KeySym ***XHPGetDeviceKeyMapping**(*display, deviceid, first_keycode_wanted, keycode_count, keysyms_per_keycode_return*)
Display **display;*
XID *deviceid;*
KeyCode *first_keycode_wanted;*
int *keycode_count, *keysyms_per_keycode_return;*

XModifierKeyMap ***XHPGetDevideModifierMapping**(*display, deviceid*)
Display **display;*
XID *deviceid*i;

XHPTimeCoord ***XHPGetDeviceMotionEvents**(*display, deviceid, w, start, stop, nevents_return*)
Display **display;*
XID *deviceid;*
Window *w;*
Time *start, stop;*
int **nevents_return;*

int **XHPGetExtEventMask**(*display, event_constant, event_type, mask*)
Display **display;*
long *event_constant, *event_type, *mask;*

XHPGetServerMode(*display, screen*)
Display **display;*
int *screen;*

XHPGrabDevice(*display, deviceid, grab_window, pointer_mode, device_mode, owner_events, time*)
Display **display;*
char *deviceid;*
Window *grab_window;*
int *pointer_mode, device_mode;*
Bool *owner_events;*
Time *time;*

XHPGrabDeviceButton(*display, deviceid, button, modifiers, grab_window, owner_events, event_mask, pointer_mode, device_mode*)
Display **display;*
XID *deviceid;*
unsigned int *button, modifiers, event_mask;*
Window *grab_window;*
Bool *owner_events;*
int *pointer_mode, device_mode;*

XHPGrabDeviceKey(*display, deviceid, keycode, modifiers, grab_window, owner_events, pointer_mode, device_mode*)
Display **display;*
XID *deviceid;*
unsigned int *keycode, modifiers;*
Window *grab_window;*
Bool *owner_events;*
int *pointer_mode, device_mode;*

XHPInputChinese_s(*display, keysym, modifiers, buffer_return, bytes_buffer, status_in_out*)
Display **display;*
KeySym *keysym;*
unsigned int *modifiers;*
char **buffer_return;*
int *bytes_buffer;*
XComposeStatus **status_in_out;*

XHPInputChinese_t(*display, keysym, modifiers, buffer_return, bytes_buffer, status_in_out*)
Display **display;*
KeySym *keysym;*
unsigned int *modifiers;*
char **buffer_return;*
int *bytes_buffer;*
XComposeStatus **status_in_out;*

XHPInputISO7sub(*display, keysym, modifiers, buffer_return, bytes_buffer, status_in_out*)
Display **display;*
KeySym *keysym;*
unsigned int *modifiers;*
char **buffer_return;*
int *bytes_buffer;*
XComposeStatus **status_in_out;*

XHPInputJapanese(*display, keysym, modifiers, buffer_return, bytes_buffer, status_in_out*)
Display **display;*
KeySym *keysym;*
unsigned int *modifiers;*
char **buffer_return;*
int *bytes_buffer;*
XComposeStatus **status_in_out;*

XHPInputKorean(*display, keysym, modifiers, buffer_return, bytes_buffer, status_in_out*)
Display **display;*
KeySym *keysym;*
unsigned int *modifiers;*
char **buffer_return;*
int *bytes_buffer;*
XComposeStatus **status_in_out;*

XHPInputRoman8(*display, keysym, modifiers, buffer_return, bytes_buffer, status_in_out*)
Display **display;*
KeySym *keysym;*
unsigned int *modifiers;*
char **buffer_return;*
int *bytes_buffer;*
XComposeStatus **status_in_out;*

Bool **XHPIs16bitCharacter**(*font, byte1, byte2*)
    Font *font;*
    unsigned char *byte1, byte2;*

int **XHPKeysymToRoman8**(*keysym, r8_return*)
    Keysym *keysym;*
    char **r8_return;*

XHPDeviceList ***XHPListInputDevices**(*display, ndevices*)
    Display **display;*
    int **ndevices;*

Status **XHPNlioctl**(*display, status_in_out, command, arg*)
    Display **display;*
    XComposeStatus **status_in_out;*
    int *command;*
    char **arg;*

int **XHPPixmapToFile**(*display, pixmap, color_w, x, y, width, height, plane_mask, format, filename*)
    Display **display;*
    Pixmap *pixmap;*
    Window *color_w;*
    int *x, y, format;*
    unsigned int *width, height;*
    long *plane_mask;*
    char *filename;*

XHPPrompt(*display, deviceid, prompt*)
    Display **display;*
    XID *deviceid;*
    unsigned int *prompt;*

int **XHPQueryImageFile**(*filename, xwd_header_return*)
    char *filename;*
    XWDFileHeader *xwd_header_return;*

Keysym **XHPRoman8ToKeysym**(*r8_char*)
    char *r8_char;*

XHPSelectExtensionEvent(*display, window, deviceid, mask*)
Display **display;*
Window *window;*
XID *deviceid;*
Mask *mask;*

XHPSetDeviceFocus(*display, deviceid, focus, revert_to, time*)
Display **display;*
XID *deviceid;*
Window *focus;*
int *revert_to;*
Time *time;*

XHPSetDeviceModifierMapping(*display, deviceid, modmap*)
Display **display;*
XID *deviceid;*
XModifierKeymap **modmap;*

PFI XHPSetErrorHandler(*display, routine*)
Display **display;*
int *(*routine) ();*

int XHPSetInputDevice(*display, deviceid, mode*)
Display **display;*
XID *deviceid;*
int *mode;*

Status XHPSetKeyboardMapping(*display, kbd_id*)
Display **display;*
KEYBOARD_ID *kbd_id;*

*XHPUngrabDevice(*display, deviceid, time*)
Display **display;*
XID *deviceid;*
Time *time;*

XHPUngrabDeviceButton(*display, deviceid, button, modifiers, ungrab_window*)
Display **display;*
XID *deviceid;*
unsigned int *button, modifiers;*
Window *ungrab_window;*

XHPUngrabDeviceKey(*display, deviceid, keycode, modifiers, ungrab_window*)
Display **display;*
XID *deviceid;*
unsigned int *keycode, modifiers;*
Window *ungrab_window;*

int **XHPWindowToFile**(*display, w, x, y, width, height, format, filename*)
Display **display;*
Window *w;*
int *x, y, format;*
unsigned int *width, height;*
char *filename;*

XIfEvent(*display, event_return, predicate, arg*)
Display **display;*
XEvent **event_return;*
Bool "(**predicate*)();
char **arg;*

int **XImageByteOrder**(*display*)
Display **display;*

XExtCodes ***XInitExtension**(*display, name*)
Display **display;*
char **name;*

XModifierKeymap ***XInsertModifiermapEntry**(*modmap, keycode_entry, modifier*)
XModifierKeymap **modmap;*
KeyCode *keycode_entry;*
int *modifier;*

XInstallColormap(*display, cmap*)
Display **display;*
Colormap *cmap;*

Atom **XInternAtom**(*display, atom_name, only_if_exists*)
Display **display;*
char **atom_name;*
Bool *only_if_exists;*

XIntersectRegion(*sra, srb, dr_return*)
Region *sra, srb, dr_return;*

IsCursorKey(*keysym*)
KeySym *keysym;*

IsFunctionKey(*keysym*)
KeySym *keysym;*

IsKeypadKey(*keysym*)
KeySym *keysym;*

IsMiscFunctionKey(*keysym*)
KeySym *keysym;*

IsModifierKey(*keysym*)
KeySym *keysym;*

IsPFKey(*keysym*)
KeySym *keysym;*

KeySym XKeycodeToKeysym(*display, keycode, index*)
Display **display;*
KeyCode *keycode;*
int *index;*

KeyCode XKeysymToKeycode(*display, keysym*)
Display **display;*
KeySym *keysym;*

char *XKeysymToString(*keysym*)
KeySym *keysym;*

XKillClient(*display, resource*)
Display **display;*
XID *resource;*

unsigned long XLastKnownRequestProcessed(*display*)
Display **display;*

char **XListExtensions(*display, nextensions_return*)
Display **display;*
int **nextentions_return;*

char **XListFonts(*display, pattern, maxnames, actual_count_return*)
Display **display;*
char **pattern;*
int *maxnames, **actual_count_return;*

char **XListFontsWithInfo(*display, pattern, maxnames, count_return, info_return*)
    Display *display;
    char *pattern;
    int *maxnames, *count_return;
    XFontStruct **info_return;

XHostAddress *XListHosts(*display, nhosts_return, state_return*)
    Display *display;
    int *nhosts_return;
    Bool *state_return;

Colormap *XListInstalledColormaps(*display, w, num_return*)
    Display *display;
    Window *w*;
    int *num_return;

Atom *XListProperties(*display, w, num_prop_return*)
    Display *display;
    Window *w*;
    int *num_prop_returned;

Font XLoadFont(*display, name*)
    Display *display;
    char *name;

XFontStruct *XLoadQueryFont(*display, name*)
    Display *display;
    char *name;

LockDisplay(*display*)
    Display *display;

char *XLookUpAssoc(*display, table, x_id*)
    Display *display;
    XAssocTable *table;
    XID *x_id;

Status XLookupColor(*display, cmap, color_name, exact_def_return, screen_def_return*)
    Display *display;
    Colormap *cmap*;
    char *color_name;
    XColor *exact_def_return, *screen_def_return;

KeySym **XLookupKeysym**(*key_event, index*)
    XKeyEvent **key_event;*
    int *index;*

int **XLookupString**(*event_struct, buffer_return, bytes_buffer, keysym_return, status_in_out*)
    XKeyEvent **event_struct;*
    char **buffer_return;*
    int *bytes_buffer;*
    KeySym **keysym_return;*
    XComposeStatus **status_in_out;*

XLowerWindow(*display, w*)
    Display **display;*
    Window *w;*

XMakeAssoc(*display, table, x_id, data*)
    Display **display;*
    XAssocTable **table;*
    XID *x_id;*
    char **data;*

XMapRaised(*display, w*)
    Display **display;*
    Window *w;*

XMapSubwindows(*display, w*)
    Display **display;*
    Window *w;*

XMapWindow(*display, w*)
    Display **display;*
    Window *w;*

XMaskEvent(*display, event_mask, event_return*)
    Display **display;*
    long *event_mask;*
    XEvent **event_return;*

Status **XMatchVisualInfo**(*display, screen, depth, class, vinfo_return*)
    Display **display;*
    int *screen, depth, class;*
    XVisualInfo **vinfo_return;*

int **XMaxCmapsOfScreen**(*screen*)
    Screen **screen;*

int **XMinCmapsOfScreen**(*screen*)
    Screen **screen;*

XMoveResizeWindow(*display, w, x, y, width, height*)
    Display **display;*
    Window *w;*
    int *x, y;*
    unsigned int *width, height;*

XMoveWindow(*display, w, x, y*)
    Display **display;*
    Window *w;*
    int *x, y;*

XNextEvent(*display, event_return*)
    Display **display;*
    XEvent **event_return;*

unsigned long **XNextRequest**(*display*)
    Display **display;*

XNoOp(*display*)
    Display **display;*

XOffsetRegion(*r, dx, dy*)
    Region *r;*
    int *dx, dy;*

Display ****XOpenDisplay**(*display_name*)
    char **display_name;*

Status **XParseColor**(*display, cmap, spec, exact_def_return*)
    Display **display;*
    Colormap *cmap;*
    char **spec;*
    XColor **exact_def_return;*

int **XParseGeometry**(*parsestring, x_return, y_return, width_return, height_return*)
    char **parsestring;*
    int **x_return, *y_return;*
    unsigned **width_return, *height_return;*

XPeekEvent(*display, event_return*)
    Display **display;*
    XEvent **event_return;*

XPeekIfEvent(*display, event_return, predicate, arg*)
    Display **display;*
    XEvent **event_return;*
    Bool (**predicate*)();
    char **arg;*

int **XPending**(*display*)
    Display **display;*

char ***Xpermalloc**(*size*)
    unsigned int *size;*

int **XPlanesOfScreen**(*screen*)
    Screen **screen;*

Bool **XPointInRegion**(*r, x, y*)
    Region *r;*
    int *x, y;*

Region **XPolygonRegion**(*points, n, fill_rule*)
    XPoint *points[ ];*
    int *n, fill_rule;*

int **XProtocolRevision**(*display*)
    Display **display*);

int **XProtocolVersion**(*display*)
    Display **display;*

XPutBackEvent(*display, event*)
    Display **display;*
    XEvent **event;*

XPutImage(*display, d, gc, image, src_x, src_y, dst_x, dst_y, width, height*)
    Display **display;*
    Drawable *d;*
    GC *gc;*
    int *src_x, src_y, dst_x, dst_y;*
    unsigned int *width, height;*

int **XPutPixel**(*ximage, x, y, pixel*)
    XImage **ximage;*
    int *x, y;*
    unsigned long *pixel;*

int **XQLength**(*display*)
    Display **display*);

Status **XQueryBestCursor**(*display, d, width, height, width_return, height_return*)
    Display **display;*
    Drawable *d;*
    unsigned int *width, height;*
    unsigned int **width_return, *height_return;*

Status **XQueryBestSize**(*display, class, which_screen, width, height, width_return, height_return*)
    Display **display;*
    int *class;*
    Drawable *which_screen;*
    unsigned int *width, height, *width_return, *height_return;*

Status **XQueryBestStipple**(*display, which_screen, width, height, width_return, height_return*)
    Display **display;*
    Drawable *which_screen;*
    unsigned int *width, height, *width_return, *height_return;*

Status **XQueryBestTile**(*display, which_screen, width, height, width_return, height_return*)
    Display **display;*
    Drawable *which_screen;*
    unsigned int *width, height, *width_return, *height_return;*

XQueryColor(*display, cmap, def_in_out*)
    Display **display;*
    Colormap *cmap;*
    XColor **def_in_out;*

XQueryColors(*display, cmap, defs_in_out, ncolors*)
    Display **display;*
    Colormap *cmap;*
    XColor *defs_in_out[ ];*
    int *ncolors;*

Bool **XQueryExtension**(*display, name, major_opcode_return, first_event_return, first_error_return*)
    Display **display;*
    char **name;*
    int **major_opcode_return;*
    int **first_event_return, *first_error_return;*

XFontStruct ***XQueryFont**(*display, font_ID*)
    Display **display;*
    XID *font_ID;*

XQueryKeymap(*display, keys_return*)
    Display **display;*
    char *keys_return[32];*

Bool **XQueryPointer**(*display, w, root_return, child_return, root_x_return, root_y_return, win_x_return, win_y_return, mask_return*)
    Display **display;*
    Window *w, *root_return, *child_return;*
    int **root_x_return, *root_y_return;*
    int **win_x_return, *win_y_return;*
    unsigned int **mask_return;*

XQueryTextExtents(*display, font_ID, string, nchars, direction_return, font_ascent_return, font_descent_return, overall_return*)
    Display **display;*
    XID *font_ID;*
    char **string;*
    int *nchars, *direction_return;*
    int **font_ascent_return, *font_descent_return;*
    XCharStruct **overall_return;*

XQueryTextExtents16(*display, font_ID, string, nchars, direction_return, font_ascent_return, font_descent_return, overall_return*)
    Display **display;*
    XID **font_ID;*
    XChar2b **string;*
    int *nchars, *direction_return;*
    int **font_ascent_return, *font_descent_return;*
    XCharStruct **overall_return;*

Status **XQueryTree**(*display, w, root_return, parent_return, children_return, nchildren_return*)
    Display **display;*
    Window *w, *root_return, *parent_return, **children_return;*
    unsigned int **nchildren_return;*

XRaiseWindow(*display, w*)
    Display **display;*
    Window *w;*

int **XReadBitmapFile**(*display, d, filename, width_return, height_return, bitmap_return, x_hot_return, y_hot_return*)
    Display **display;*
    Drawable *d;*
    char **filename;*
    unsigned int **width_return, *height_return;*
    Pixmap **bitmap_return;*
    int **x_hot_return, *y_hot_return;*

XRebindKeysym(*display, keysym, list, mod_count, string, bytes_string*)
    Display **display;*
    KeySym *keysym, list[ ];*
    int *mod_count, bytes_string;*
    unsigned char **string;*

XRecolorCursor(*display, cursor, foreground_color, background_color*)
    Display **display;*
    Cursor *cursor;*
    XColor **foreground_color, *background_color;*

int **XRectInRegion**(*r, x, y, width, height*)
    Region *r;*
    int *x, y;*
    unsigned int *width, height;*

XRefreshKeyboardMapping(*event_map*)
    XMappingEvent **event_map;*

XRemoveFromSaveSet(*display, w*)
    Display **display;*
    Window *w;*

XRemoveHost(*display, host*)
Display **display;*
XHostAddress **host;*

XRemoveHosts(*display, hosts, num_hosts*)
Display **display;*
XHostAddress **hosts;*
int *num_hosts;*

XReparentWindow(*display, w, parent, x, y*)
Display **display;*
Window *w, parent;*
int *x, y;*

XResetScreenSaver(*display*)
Display **display;*

XResizeWindow(*display, w, width, height*)
Display **display;*
Window *w;*
unsigned int *width, height;*

XRestackWindows(*display, windows, nwindows*)
Display **display;*
Window *windows[ ];*
int *nwindows;*

XrmDatabase **XrmGetFileDatabase**(*filename*)
char **filename;*

Bool **XrmGetResource**(*database, str_name, str_class, str_type_return, str_value_return*)
XrmDatabase *database;*
char **str_name, *str_class, **str_type_return;*
XrmValue **value_return;*

XrmDatabase **XrmGetStringDatabase**(*string*)
char **data;*

void **XrmInitialize**()

void **XrmMergeDatabases**(*source_db, target_db*)
XrmDatabase *source_db, target_db;*

void **XrmParseCommand**(*db, table, table_count, name, argc_in_out, argv_in_out*)
XrmDatabase **db;*
XrmOptionDescList *table;*
int *table_count, *argc_in_out;*
char **name, **argv_in_out;*

void **XrmPutFileDatabase**(*database, stored_db*)
XrmDatabase *database;*
char **stored_db;*

void **XrmPutLineResource**(*database, line*)
XrmDatabase **database;*
char **line;*

void **XrmPutResource**(*database, specifier, type, value*)
XrmDatabase **database;*
char **specifier, type;*
XrmValue **value;*

void **XrmPutStringResource**(*database, specifier, value*)
XrmDatabase **database;*
char **specifier, *value;*

Bool **XrmQGetResource**(*database, quark_name, quark_class, quark_type_return, value_return*)
XrmDatabase *database;*
XrmNameList *quark_name;*
XrmClassList *quark_class;*
XrmRepresentation **quark_type_return;*
XrmValue **value_return;*

Bool **XrmQGetSearchList**(*database, names, classes, list_return, list_length*)
XrmDatabase *database;*
XrmNameList *names;*
XrmClassList *classes;*
XrmSearchList *list_return;*
int *list_length;*

Bool **XrmQGetSearchResource**(*list, name, class, type, type_return, value_return*)
XrmSearchList *list;*
XrmName *name;*
XrmClass *class;*
XrmRepresentation **type_return;*
XrmValue **value_return;*

void **XrmQPutResource**(*database, bindings, quarks, type, value*)
XrmDatabase **database;*
XrmBindingList *bindings;*
XrmQuarkList *quarks;*
XrmRepresentation *type;*
XrmValue **value;*

void **XrmQPutStringResource**(*database, bindings, quarks, value*)
XrmDatabase **database;*
XrmBindingList *bindings;*
XrmQuarkList *quarks;*
char **value;*

char ***XrmQuarkToString**(*quark*)
XrmQuark *quark;*

XrmStringToBindingQuarkList(*string, bindings_return, quarks_return*)
char **string;*
XrmBindingList *bindings_return;*
XrmQuarkList *quarks_return;*

XrmQuark **XrmStringToQuark**(*string*)
char **string;*

void **XrmStringToQuarkList**(*string, quarks_return*)
char **string;*
XrmQuarkList *quarks_return;*

XrmQuark **XrmUniqueQuark**()

Window **XRootWindow**(*display, screen_number*)
Display **display;*
int *screen_number;*

Window **XRootWindowOfScreen**(*screen*)
Screen **screen;*

XRotateBuffers(*display, rotate*)
    Display **display;*
    int *rotate;*

XRotateWindowProperties(*display, w, properties, num_prop, npositions*)
    Display **display;*
    Window *w;*
    Atom *properties[ ];*
    int *num_prop, npositions;*

int **XSaveContext**(*display, w, context, data*)
    Display **display;*
    Window *w;*
    XContext *context;*
    caddr_t *data;*

int **XScreenCount**(*display*)
    Display **display;*

Screen ***XScreenOfDisplay**(*display, screen_number*)
    Display **display;*
    int *screen_number;*

XSelectInput(*display, w, event_mask*)
    Display **display;*
    Window *w;*
    long *event_mask;*

Status **XSendEvent**(*display, w, propagate, event_mask, event_send*)
    Display **display;*
    Window *w;*
    Bool *propagate;*
    long *event_mask;*
    XEvent **event_send;*

char ***XServerVendor**(*display*)
    Display **display;*

XSetAccessControl(*display, mode*)
    Display **display;*
    int *mode;*

int(***XSetAfterFunction**(*display, proc*))()
    Display **display;*
    int "(**proc*)();

XSetArcMode(*display, gc, arc_mode*)
    Display **display;*
    GC *gc;*
    int *arc_mode;*

XSetBackground(*display, gc, background*)
    Display **display;*
    GC *gc;*
    unsigned long *background;*

XSetClassHint(*display, w, class_hints*)
    Display **display;*
    Window *w;*
    XClassHint **class_hints;*

XSetClipMask(*display, gc, pixmap*)
    Display **display;*
    GC *gc;*
    Pixmap *pixmap;*

XSetClipOrigin(*display, gc, clip_x_origin, clip_y_origin*)
    Display **display;*
    GC *gc;*
    int *clip_x_origin, clip_y_origin;*

XSetClipRectangles(*display, gc, clip_x_origin, clip_y_origin, rectangles, n, ordering*)
    Display **display;*
    GC *gc;*
    int *clip_x_origin, clip_y_origin, n, ordering;*
    XRectangle *rectangles[ ];*

XSetCloseDownMode(*display, close_mode*)
    Display **display;*
    int *close_mode;*

XSetCommand(*display, w, argv, argc*)
Display **display;*
Window *w;*
char ***argv;*
int *argc;*

XSetDashes(*display, gc, dash_offset, dash_list, n*)
Display **display;*
GC *gc;*
int *dash_offset, n;*
char *dash_list[ ];*

XSetErrorHandler(*handler*)
int "(**handler*) (Display *, XErrorEvent *);

XSetFillRule(*display, gc, fill_rule*)
Display **display;*
GC *gc;*
int *fill_rule;*

XSetFillStyle(*display, gc, fill_style*)
Display **display;*
GC *gc;*
int *fill_style;*

XSetFont(*display, gc, font*)
Display **display;*
GC *gc;*
Font *font;*

XSetFontPath(*display, directories, ndirs*)
Display **display;*
char ***directories;*
int *ndirs;*

XSetForeground(*display, gc, foreground*)
Display **display;*
GC *gc;*
unsigned long *foreground;*

XSetFunction(*display, gc, function*)
Display **display;*
GC *gc;*
int *function;*

XSetGraphicsExposures(*display, gc, graphics_exposures*)
Display **display;*
GC *gc;*
Bool *graphics_exposures;*

XSetIconName(*display, w, icon_name*)
Display **display;*
Window *w;*
char **icon_name;*

XSetIconSizes(*display, w, size_list, count*)
Display **display;*
Window *w;*
XIconSize **size_list;*
int *count;*

XSetInputFocus(*display, focus, revert_to, time*)
Display **display;*
Window *focus;*
int *revert_to;*
Time *time;*

XSetIOErrorHandler(*handlers*)
int (**handler*)(Display *);

XSetLineAttributes(*display, gc, line_width, line_style, cap_style, join_style*)
Display **display;*
GC *gc;*
unsigned int *line_width;*
int *line_style, cap_style, join_style;*

in **XSetModifierMapping**(*display, modmap*)
Display **display;*
XModifierKeymap **modmap;*

void **XSetNormalHints**(*display, w, hints*)
    Display **display;*
    Window *w;*
    XSizeHints **hints;*

XSetPlaneMask(*display, gc, plan_mask*)
    Display **display;*
    GC *gc;*
    unsigned long *plane_mask;*

int **XSetPointerMapping**(*display, map, nmap*)
    Display **display;*
    unsigned char *map[ ];*
    int *nmap;*

XSetRegion(*display, gc, r*)
    Display **display;*
    GC *gc;*
    Region *r;*

XSetScreenSaver(*display, timeout, interval, prefer_blanking, allow_exposures*)
    Display **display;*
    int *timeout, interval, prefer_blanking, allow_exposures;*

XSetSelectionOwner(*display, selection, owner, time*)
    Display **display;*
    Atom *selection;*
    Window *owner;*
    Time *time;*

XSetSizeHints(*display, w, hints, property*)
    Display **display;*
    Window *w;*
    XSizeHints **hints;*
    Atom *property;*

void **XSetStandardColormap**(*display, w, cmap, property*)
    Display **display;*
    Window *w;*
    XStandardColormap **cmap;*
    Atom *property;*

XSetStandardProperties(*display, w, window_name, icon_name, icon_pixmap, argv, argc, hints*)
Display **display;*
Window *w;*
char **window_name, *icon_name, **argv;*
Pixmap *icon_pixmap;*
int *argc;*
XSizeHints **hints;*

XSetState(*display, gc, foreground, background, function, plane_mask*)
Display **display;*
GC *gc;*
unsigned long *foreground, background, plane_mask;*
int *function;*

XSetStipple(*display, gc, stipple*)
Display **display;*
GC *gc;*
Pixmap *stipple;*

XSetSubwindowMode(*display, gc, subwindow_mode*)
Display **display;*
GC *gc;*
int *subwindow_mode;*

XSetTile(*display, gc, tile*)
Display **display;*
GC *gc;*
Pixmap *tile;*

XSetTransientForHint(*display, w, prop_window*)
Display **display;*
Window *w;*
Window *prop_window;*

XSetTSOrigin(*display, gc, ts_x_origin, ts_y_origin*)
Display **display;*
GC *gc;*
int *ts_x_origin, ts_y_origin;*

XSetWindowBackground(*display, w, background_pixel*)
Display **display;*
Window *w;*
unsigned long *background_pixel;*

XSetWindowBackgroundPixmap(*display, w, background_pixmap*)
Display **display;*
Window *w;*
Pixmap *background_pixmap;*

XSetWindowBorder(*display, w, border_pixel*)
Display **display;*
Window *w;*
unsigned long *border_pixel;*

XSetWindowBorderPixmap(*display, w, border_pixmap*)
Display **display;*
Window *w;*
Pixmap *border_pixmap;*

XSetWindowBorderWidth(*display, w, width*)
Display **display;*
Window *w;*
unsigned int *width;*

XSetWindowColormap(*display, w, cmap*)
Display **display;*
Window *w;*
Colormap *cmap;*

XSetWMHints(*display, w, wmhints*)
Display **display;*
Window *w;*
XWMHints **wmhints;*

XSetZoomHints(*display, w, zhints*)
Display **display;*
Window *w;*
XSizeHints **zhints;*

XShrinkRegion(*r, dx, dy*)
Region *r;*
int *dy, dy;*

XStoreBuffer(*display, bytes, nbytes, buffer*)
Display **display;*
char **bytes;*
int *nbytes, buffer;*

XStoreBytes(*display, bytes, nbytes*)
Display **display;*
char **bytes;*
int *nbytes;*

XStoreColor(*display, cmap, color*)
Display **display;*
Colormap *cmap;*
XColor *color;*

XStoreColors(*display, cmap, color, ncolors*)
Display **display;*
Colormap *cmap;*
XColor *color[ ];*
int *ncolors;*

XStoreName(*display, w, window_name*)
Display **display;*
Window *w;*
char **window_name;*

XStoreNamedColor(*display, cmap, color, pixel, flags*)
Display **display;*
Colormap *cmap;*
char **color;*
unsigned long *pixel;*
int *flags;*

KeySym **XStringToKeysym**(*string*)
char **string;*

XImage ***XSubImage**(*ximage, x, y, subimage_width, subimage_height*)
XImage **ximage;*
int *x, y;*
unsigned int *subimage_width, subimage_height;*

XSubtractRegion(*sra, srb, dr_return*)
Region *sra, srb, dr_return;*

XSync(*display, discard*)
Display **display;*
Bool *discard;*

int (*XSynchronize(*display, onoff*))()
    Display **display;*
    int *onoff;*

XTextExtents(*font_struct, string, nchars, direction_return, font_ascent_return, font_descent_return, overall_return*)
    XFontStruct **font_struct;*
    char **string;*
    int *nchars, *directional_return;*
    int **font_ascent_return, *font_descent_return;*
    XCharStruct **overall_return;*

XTextExtents16(*font_struct, string, nchars, direction_return, font_ascent_return, font_descent_return, overall_return*)
    XFontStruct **font_struct;*
    XChar2b **string;*
    int *nchars, *direction_return;*
    int **font_ascent_return, *font_descent_return;*
    XCharStruct **overall_return;*

int **XTextWidth**(*font_struct, string, count*)
    XFontStruct **font_struct;*
    char **string;*
    int *count;*

int **XTextWidth16**(*font_struct, string, count*)
    XFontStruct **font_struct;*
    XChar2b **string;*
    int *count;*

Bool **XTranslateCoordinates**(*display, src_w, dest_w, src_x, src_y, dest_x_return, dest_y_return, child_return*)
    Display **display;*
    Window *src_w, dest_w, *child_return;*
    int *src_x, src_y, *dest_x_return, *dest_y_return;*

XUndefineCursor(*display, w*)
    Display **display;*
    Window *w;*

XUngrabButton(*display, button_ungrab, modifiers, ungrab_window*)
Display **display;*
unsigned int *button_ungrab, modifiers;*
Window *ungrab_window;*

XUngrabKey(*display, keycode, modifiers, ungrab_window*)
Display **display;*
int *keycode;*
unsigned int *modifiers;*
Window *ungrab_window;*

XUngrabKeyboard(*display, time*)
Display **display;*
Time *time;*

XUngrabPointer(*display, time*)
Display **display;*
Time *time;*

XUngrabServer(*display*)
Display **display;*

XContext **XUniqueContext**()

XUninstallColormap(*display, cmap*)
Display **display;*
Colormap *cmap;*

XUnionRectWithRegion(*rectangle, src_region, dest_region_return*)
Rectangle **rectangle;*
Region *src_region, dest_region_return;*

XUnionRegion(*sra, srb, dr_return*)
Region *sra, srb, dr_return;*

XUnloadFont(*display, font*)
Display **display;*
Font *font;*

UnlockDisplay(*display*)
Display **display;*

XUnmapSubwindows(*display, w*)
Display **display;*
Window *w;*

XUnmapWindow(*display, w*)
Display **display;*
Window *w;*

int **XVendorRelease**(*display*)
Display **display;*

VisualID **XVisualIDFromVisual**(*visual*)
Visual **viaual;*

XWarpPointer(*display, src_w, dest_w, src_x, src_y, src_width, src_height, dest_x, dest_y*)
Display **display;*
Window *src_w, dest_w;*
int *src_x, src_y, dest_x, dest_y;*
unsigned int *src_width, src_height;*

unsigned long **XWhitePixel**(*display, screen_number*)
Display **display;*
int *screen_number;*

unsigned long **XWhitePixelOfScreen**(*screen*)
Screen **screen;*

int **XWidthMMOfScreen**(*screen*)
Screen **screen;*

int **XWidthOfScreen**(*screen*)
Screen **screen;*

XWindowEvent(*display, w, event_mask, event_return*)
Display **display;*
Window *w;*
long *event_mask;*
XEvent **event_return;*

int **XWriteBitmapFile**(*display, filename, bitmap, width, height, x_hot, y_hot*)
Display **display;*
char **filename;*
Pixmap *bitmap;*
unsigned int *width, height;*
int *x_hot, y_hot;*

XXorRegion(*sra, srb, dr_return*)
Region *sra, srb, dr_return;*

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HP Motif Widgets, Gadgets, and Convenience Functions

For more information about widgets, gadgets, and convenience functions, refer to *HP Motif Programmer's Guide* or *HP Motif Programmer's Reference.*

Resource Sets

The following resource sets may be used by widgets or gadgets.

Class Name	Widget Class	Resources
ApplicationShell	applicationShellWidgetClass	Core Composite Shell WMShell VendorShell TopLevelShell
Composite	compositeWidgetClass	Core
Constraint	constraintWidgetClass	Core Composite
Core	coreWidgetClass	
Object	objectWidgetClass	
OverrideShell	overrideShellWidgetClass	Core Composite Shell

Class Name	Widget Class	Resources
RectObj	rectObjWidgetClass	Object
Shell	shellWidgetClass	Core Composite
TopLevelShell	topLevelShellWidgetClass	Core Composite Shell WMShell VendorShell
TransientShell	transientShellWidgetClass	Core Composite Shell WMShell
VendorShell	vendorShellWidgetClass	Core Composite Shell WMShell
WMShell	wmShellWidgetClass	Core Composite Shell

Widgets

The widgets in this table are listed in alphabetical order by widget class name.

Class Name	Widget Class	Resources
XmArrowButton	xmArrowButtonWidgetClass	Core Primitive
XmBulletinBoard	xmBulletinBoardWidgetClass	Core Composite XmManager
XmCommand	xmCommandWidgetClass	Core Composite XmManager XmBulletinBoard XmSelectionBox
XmDialogShell	xmDialogShellWidgetClass	Core Composite Shell WMShell VendorShell TransientShell
XmDrawingArea	xmDrawingAreaWidgetClass	Core Composite XmManager
XmDrawnButton	xmDrawnButtonWidgetClass	Core XmPrimitive XmLabel
XmFileSelectionBox	xmFileSelectionBoxWidgetClass	Core Composite XmManager XmBulletinBoard XmSelectionBox

Class Name	Widget Class	Resources
XmForm	xmFormWidgetClass	Core Composite XmManager XmBulletinBoard
XmFrame	xmFrameWidgetClass	Core Composite XmManager
XmLabel	xmLabelWidgetClass	Core XmPrimitive
XmList	xmListWidgetClass	Core XmPrimitive
XmMainWindow	xmMainWindowWidgetClass	Core Composite XmManager XmScrolledWindow
XmManager	xmManagerWidgetClass	Core Composite
XmMenuShell	xmMenuShellWidgetClass	Core Composite Shell OverrideShell
XmMessageBox	xmMessageBoxWidgetClass	Core Composite XmManager XmBulletinBoard
XmPanedWindow	xmPanedWindowWidgetClass	Core Composite XmManager
XmPrimitive	xmPrimitiveWidgetClass	Core
XmPushButton	xmPushButtonWidgetClass	Core XmPrimitive XmLabel

Class Name	Widget Class	Resources
XmRowColumn	xmRowColumnWidgetClass	Core Composite XmManager
XmScale	xmScaleWidgetClass	Core Composite XmManager
XmScrollBar	xmScrollBarWidgetClass	Core XmPrimitive
XmScrolledWindow	xmScrolledWindowWidgetClass	Core Composite XmManager
XmSelectionBox	xmSelectionBoxWidgetClass	Core Composite XmManager XmBulletinBoard
XmSeparator	xmSeparatorWidgetClass	Core XmPrimitive
XmText	xmTextWidgetClass	Core XmPrimitive
XmToggleButton	xmToggleButtonWidgetClass	Core XmPrimitive XmLabel
XmVendorShell	xmVendorShellWidgetClass	Core Composite Shell WMShell

Gadgets

The gadgets in this table are listed in alphabetical order by gadget class name.

Class Name	Gadget Class	Resources
XmArrowButtonGadget	xmArrowButtonGadgetClass	Object RectObj XmGadget XmLabelGadget
XmGadget	xmGadgetClass	Object RectObj
XmLabelGadget	xmLabelGadgetClass	Object RectObj XmGadget
XmPushButtonGadget	xmPushButtonGadgetClass	Object RectObj XmGadget XmLabelGadget
XmSeparatorGadget	xmSeparatorGadgetClass	Object RectObj XmGadget
XmToggleButtonGadget	xmToggleButtonGadgetClass	Object RectObj XmGadget XmLabelGadget

Convenience Functions

Convenience functions all use the same format:

Widget `Function-name`(*parent, name, arglist, argcount*)
Widget *parent;*
String *name;*
ArgList *arglist;*
Cardinal *argcount;*

Function Name	Function Name
XmCreateArrowButton	XmCreateFrame
XmCreateArrowButtonGadget	XmCreateInformationDialog
XmCreateBulletinBoard	XmCreateLabel
XmCreateBulletinBoardDialog	XmCreateLabelGadget
XmCreateCascadeButton	XmCreateMainWindow
XmCreateCascadeButtonGadget	XmCreateList
XmCreateCommand	XmCreateMenuBar
XmCreateDialogShell	XmCreateMenuShell
XmCreateDrawnButton	XmCreateMessageBox
XmCreateDrawingArea	XmCreateMessageDialog
XmCreateErrorDialog	XmCreateOptionMenu
XmCreateFileSelectionBox	XmCreatePanedWindow
XmCreateFileSelectionDialog	XmCreatePopupMenu
XmCreateForm	XmCreatePromptDialog
XmCreateFormDialog	XmCreatePushButton

Function Name	Function Name
XmCreatePushButtonGadget	XmCreateScrolledText
XmCreatePulldownMenu	XmCreateScrolledWindow
XmCreateQuestionDialog	XmCreateSelectionBox
XmCreateRadioBox	XmCreateSelectionDialog
XmCreateRowColumn	XmCreateSeparatorGadget
XmCreateScale	XmCreateText
XmCreateSeparator	XmCreateToggleButton
XmCreateScrollBar	XmCreateToggleButtonGadget
XmCreateScrolledList	XmCreateWarningDialog

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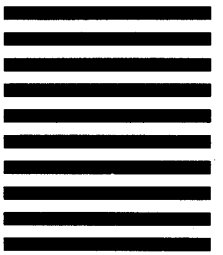

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