

NAME

XGetDeviceControl, XChangeDeviceControl - query and change input device controls

SYNOPSIS

```
#include <X11/extensions/XInput.h>
```

```
XDeviceControl *XGetDeviceControl( Display *display,
                                   XDevice *device,
                                   int *controlType);
```

```
int XChangeDeviceControl( Display *display,
                          XDevice *device,
                          int controlType,
                          XDeviceControl *control);
```

display

Specifies the connection to the X server.

device

Specifies the device whose control is to be interrogated or modified.

controlType

Specifies the type of control to be interrogated or changed.

control

Specifies the address of an XDeviceControl structure that contains the new values for the Device.

DESCRIPTION

These requests are provided to manipulate those input devices that support device control. A BadMatch error will be generated if the requested device does not support any device controls.

Valid device control types that can be used with these requests include the following:

DEVICE_RESOLUTION: Queries or changes the resolution of valuator on input devices.

The XGetDeviceControl request returns a pointer to an XDeviceControl structure.

XGetDeviceControl can generate a BadDevice or BadMatch error.

The XChangeDeviceControl request modifies the values of one control on the specified device. The control is identified by the id field of the XDeviceControl structure that is passed with the request.

XChangeDeviceControl can generate a BadDevice, BadMatch, or BadValue error.

STRUCTURES

Each control is described by a structure specific to that control. These structures are defined in the file XInput.h.

XDeviceControl is a generic structure that contains two fields that are at the beginning of each class of control:

```
typedef struct {
    XID class;
    int length;
} XDeviceControl;
```

The XDeviceResolutionState structure defines the information that is returned for device resolution for devices with valuator.

```
typedef struct {
    XID control;
    int length;
    int num_valuators;
    int* resolutions;
    int* min_resolutions;
    int* max_resolutions;
} XDeviceResolutionState;
```

The XDeviceResolutionControl structure defines the attributes that can be controlled for keyboard Devices.

```
typedef struct {
    XID control;
    int length;
    int first_valuator;
    int num_valuators;
    int* resolutions;
} XDeviceResolutionControl;
```

DIAGNOSTICS

BadDevice

An invalid device was specified. The specified device does not exist or has not been opened by this client via `XOpenInputDevice`. This error may also occur if some other client has caused the specified device to become the X keyboard or X pointer device via the `XChangeKeyboardDevice` or `XChangePointerDevice` requests.

BadMatch

This error may occur if an `XGetDeviceControl` request was made specifying a device that has no controls or an `XChangeDeviceControl` request was made with an `XDeviceControl` structure that contains an invalid Device type. It may also occur if an invalid combination of mask bits is specified (`DvKey` but no `DvAutoRepeatMode` for keyboard Devices), or if an invalid `KeySym` is specified for a string Device.

BadValue

Some numeric value falls outside the range of values accepted by the `XChangeDeviceControl` request. Unless a specific range is specified for an argument, the full range defined by the argument's type is accepted. Any argument defined as a set of alternatives can generate this error.