# VioGetPhysBuf

**Bindings**: C, MASM

This call gets addressability to the physical display buffer.

*VioGetPhysBuf* (DisplayBuf, Reserved)

*DisplayBuf*(**PVIOPHYSBUF**) - input/output Address of the data structure that contains the physical display buffer address and length on input and returns the selectors used to address the display buffer.

*displaybufaddr* (**PBYTE**) Address of the 32 bit start address (selector:offset) of the physical display buffer passed as input. If *displaybuflen* is 0, then *displaybufaddr* is the far address of the PhysBuf Block described below.

*displaybuflen* (**ULONG**) 32 bit length of the physical display buffer. If *displaybuflen* is 0, then *displaybufaddr* is treated as the far address of the PhysBuf Block described below and the Selector List is not present.

*selectors* (**SEL**) Selector list.

Returns the selectors (each of word-length) that address the physical display buffer. The first selector returned in the list, addresses the first 64KB of the physical display buffer or *displaybuflen*, whichever is smaller. If *displaybuflen* is greater than 64KB, the second selector addresses the second 64KB.

The last selector returned in the list, addresses the remainder of the display buffer. The application is responsible for ensuring enough space is reserved for the selector list to accommodate the specified buffer length.

PhysBuf Block (PhysBuf) Address of the data structure. The PhysBuf Block is a variable length data structure. The first word is the Length of the PhysBuf Block in bytes. The remaining words of the structure are the selectors that address the physical video buffer. If Length is specified as 2, the required length of the PhysBuf Block is returned in its place.

PhysBuf Block (**USHORT**) Length of PhysBuf structure in bytes

*selector* (**SEL**) First selector

*selector* (**SEL**) Next selector

*selector* (**SEL**) ... ...

*selector* (**SEL**) Last selector

*Reserved* (**USHORT**) - input Reserved word of 0s.

*rc* (**USHORT**) - return Return code descriptions are:

| | |
|---|---|
| 0 | NO_ERROR |
| 350 | ERROR_VIO_PTR |
| 429 | ERROR_VIO_IN_BG |

| | |
|---|---|
| 430 | ERROR_VIO_ILLEGAL_DURING_POPUP |
| 436 | ERROR_VIO_INVALID_HANDLE |
| 465 | ERROR_VIO_DETACHED |
| 494 | ERROR_VIO_EXTENDED_SG |

### Remarks

If *displaybuflen* = 0, VioGetPhysBuf returns a selector that addresses the physical display buffer corresponding to the current mode. One selector is returned in Selector List. If a VioGetPhysBuf is issued after a VioGetBuf, then all *VioWrtXX* calls will on longer be written to the LVB. They will only be written to the physical display buffer. An application uses VioGetPhysBuf to get addressability to the physical display buffer. The selector returned by VioGetPhysBuf may be used only when an application program is executing in the foreground. When an application wants to access the physical display buffer, the application must call VioScrLock. VioScrLock either waits until the program is running in the foreground or returns a warning when the program is running in the background. For more information refer to VioScrLock and VioScrUnLock.

The buffer range specified for the physical screen buffer must fall between hex 'A0000' and 'BFFFF' inclusive. An application may issue VioGetPhysBuf only when it is running in the foreground. An application may issue VioGetPhysBuf more than once.

### C bindings

```
typedef struct _VIOPHYSBUF {   /* viopb */
  PBYTE    pBuf;               /* Buffer start address */
  ULONG    cb;                 /* Buffer length */
  SEL      asel[1];            /* Selector list */
} VIOPHYSBUF;

#define INCL_VIO

USHORT  rc = VioGetPhysBuf(Structure, Reserved);

PVIOPHYSBUF      Structure;     /* Data structure */
USHORT           Reserved;      /* Reserved (must be zero) */

USHORT           rc;            /* return code */
```

### MASM bindings

```
VIOPHYSBUF struc
  viopb_pBuf dd  ? ;Buffer start address
  viopb_cb   dd  ? ;buffer length
  viopb_asel dw  1 dup (?) ;selector list
VIOPHYSBUF ends

EXTRN  VioGetPhysBuf:FAR
INCL_VIO            EQU 1
```

```
PUSH@  OTHER   Structure     ;Data structure
PUSH   WORD    Reserved      ;Reserved (must be zero)
CALL   VioGetPhysBuf

Returns WORD
```

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