DRIVEBOARD INTERFACE FOR CUSTOMIZED SOFTWARE DEVELOPMENT

1. Introduce

1.1 Brief introduce

1.2 Reader

   Software programmer

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2.2 The list for function

Number	Function	Function name
1	Turn on drive board	Open
2	Turn off drive board	Close
3	Get the version of drive board	GetVersions
4	Open box	OpenBox
5	Turn on sensor	OpenLaunchingTube
6	Get statue of item	GetArticleState
7	Get statue of door	GetOpenState
8	Get statue of alarm	GetWarningState
9	Get statue of power	GetPowerState
10	Get statue of needed detection	GetNeedState

3 Each function description

3.1 Turn on drive board

Function prototype: LONG Open(BSTR sPort)

Parameter type: BSTR

Parameter: sPort

Return value: 0: success, except 0: failure

Function description: turn on the COM(cluster communication port) of drive board

Note: sPort is the COM number of drive board,like "COM1"

3.2 Turn off drive board

Function prototype: void Close(void)

Parameter type:

Parameter:

Return value:

Function description: turn off the COM(cluster communication port) of drive board

Note:

3.3 Get the vision of drive board

Function prototype: LONG GetVersions(BYTE uBoardNo, BSTR* sVersions)

Parameter type: BYTE, BSTR*

Parameter: uBoardNo, sVersions

Return value: -5:unexcept error, -4:COM error, -3:frame structure error, -2:overtime, -1:execute failure, 0: execute success

Function description: get the vision of drive board

Note: uBoardNo is the address of the drive board; execute success, sVersions is the vision

3.4 Open box

Function prototype: LONG OpenBox(BYTE uBoardNo, BYTE uBoxNo, BYTE* puArticle)

Parameter type: BYTE, BYTE, BYTE*

Parameter: uBoardNo, uBoxNo, puArticle

Return value: -5:unexcept error, -4:COM error, -3:frame structure error, -2:overtime, -1:execute failure, 0: execute success

Function description: open the box

Note: uBoardNo is the address of the drive board; uBoxNo is the box number need to open, 0<box number<32. puArticle is the statue of item (have item in box or not) returned after box is open.

3.5 Turn on the sensor

Function prototype: LONG OpenLaunchingTube(BYTE uBoardNo, VARIANT_BOOL bArticle, VARIANT_BOOL bOpen)

Parameter type: BYTE, VARIANT_BOOL, VARIANT_BOOL

Parameter: uBoardNo，bArticle，bOpen

Return value: -5:unexcept error, -4:COM error, -3:frame structure error, -2:overtime, -1:execute failure, 0: execute success

Function description: turn on the sensor

Note: uBoardNo is the address of the drive board;

When bArticle is true, turn on the sensor in the box. When bOpen is true,turn on the sensor on lock (for detect door is open or close). To get the statue of item/door,use this function could improve the efficiency. Need to turn on the sensor 200MS before get the statue of item/door theoretically.

3.6 Get the statue of item by sensor in the box(have item or no item in box)

Function prototype: LONG GetArticleState(BYTE uBoardNo, SAFEARRAY** pArticleState)

Parameter type: BYTE, SAFEARRAY**

Parameter: uBoardNo, pArticleState

Return value: -5:unexcept error, -4:COM error, -3:frame structure error, -2:overtime, -1:execute failure, 0: execute success

Function description: Get the statue of item by sensor in the box(have item or no item in box) which contact to the drive board

Note: uBoardNo is the address of the drive board;

When 1Result is 0, pArticleState return a one-dimensional array with 32 element.

When pArticleState[0] is 0 mean No.1 box don't have item inside, if it's 1, means No.1 box has item inside, and so on.

3.7 Get the statue of door (door is open or close)

Function prototype: LONG GetOpenState(BYTE uBoardNo, SAFEARRAY** pOpenState)

Parameter type: BYTE, SAFEARRAY**

Parameter: uBoardNo, pOpenState

Return value: -5:unexcept error, -4:COM error, -3:frame structure error, -2:overtime, -1:execute failure, 0: execute success

Function description: Get the statue of door (door is open or close) which contact to the drive board

Note: uBoardNo is the address of the drive board;

When 1Result is 0,pOpenState returned a one-dimensional array with 32 element.

When pOpenState[0] is 0 mean No.1 box door is open, if it's 1, means No.1 box door is close, and so on.

3.8 Get the statue of warning alarm

Function prototype: LONG GetWarningState(BYTE uBoardNo, SAFEARRAY** pWarningState)

Parameter type: BYTE, SAFEARRAY**

Parameter: uBoardNo, pWarningState

Return value: -5:unexcept error, -4:COM error, -3:frame structure error, -2:overtime, -1:execute failure, 0: execute success

Function description: get the statue of waring alarm connect to the drive board

Note: uBoardNo is the address of the drive board;

When Result is 0, output parameter pWarningState is assigned to a one-dimensional array with 2 element.

When pWarningState[0] is 0 mean is normal,1 means box has been pried.

When pWarningState[1] is 0 mean is normal,1 means locker is sharked abnormal.

3.9 Get the statue of power

Function prototype: LONG GetPowerState(BYTE uBoardNo, SAFEARRAY** pPowerState)

Parameter type: BYTE, SAFEARRAY**

Parameter: uBoardNo, pPowerState

Return value: -5:unexcept error, -4:COM error, -3:frame structure error, -2:overtime, -1:execute failure, 0: execute success

Function description: turn off the COM(cluster communication port) of drive board

Note: uBoardNo is the address of the drive board

When 1Result is 0, output parameter pPowerState is assigned to a one-dimensional array with 2 element.

When pPowerState[0] is 0 mean is back-up battery,1 means standard battery.

When pPowerState[1] is 0 mean is low voltage,1 means battery is full.

3.10 Get the statue needed
Function prototype: LONG GetNeedState (BYTE uBoardNo, VARIANT_BOOL bArticle, VARIANT_BOOL bOpen, VARIANT_BOOL bWarning, VARIANT_BOOL bPower，SAFEARRAY** pState)

Parameter type: BYTE，VARIANT_BOOL ，VARIANT_BOOL ，VARIANT_BOOL，VARIANT_BOOL ，SAFEARRAY**

Parameter: uBoardNo, bArticle，bOpen，bWarning，bPower，pState

Return value: -5:unexcept error, -4:COM error, -3:frame structure error, -2:overtime, -1:execute failure, 0: execute success

Function description: according to the requirement, get the statue of detection

Note: uBoardNo is the address of the drive board

When bArticle is true, means need to get the statue of item; when bOpen is true, means need to get the statue of door; when bWarning is true,means need to get the statue of warm alarm; when bPower is true,means need to get the statue of power.

When 1Result is 0,pState return a two-dimensional array with 32+32+2+2 element.

   [0][0] - [0][31] (please refer get the statue of item)

  [1][0] - [1][31] (please refer get the statue of door)

  [2][0] - [2][2] (please refer get the statue of warm alarm)

   [3][0] - [3][2] (please refer get the statue of power)