

Windows SDK

This is an SDK for Windows to control DotPad devices (such as braille displays). The SDK is provided as a DLL and must be used with the header files.

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- SDK Configuration File

File	Description
DotPadSDK.dll	<ul style="list-style-type: none">• SDK library• Place in the same directory as the executable file• Used via dynamic loading
DotSDKAPI.h	<ul style="list-style-type: none">• API declarations, enums, function pointer type definitions

- Loading Order

1. Load the DLL with `LoadLibrary("DotPadSDK.dll")`
2. Obtain each API's address using `GetProcAddress(hDLL, "function_name")` and store it in a function pointer
3. Before use, verify the function pointer is not `NULL`, then call
4. Unload the DLL with `FreeLibrary` when the app terminates (recommended to first disconnect the connected device using `DOT_PAD_DISCONNECT`)

- Enum

export	Description	value
DOT_DATA_CODE	Indicates the type of event/response occurring during communication with the device.	<ul style="list-style-type: none">• DOT_DATA_CODE_CONNECTED : Connection successful• DOT_DATA_CODE_DISCONNECTED : Connection disconnected• DOT_DATA_CODE_DEVICE_NAME : Device name lookup result

	<ul style="list-style-type: none"> • DOT_DATA_CODE_DEVICE_FW_VERSION : Firmware version lookup result • DOT_DATA_CODE_DEVICE_HW_VERSION : Hardware version lookup result • Others : Refer to the `DOT_DATA_CODE` enum in `DotSDKAPI.h`
DOT_KEY_CODE	<p>Indicates the type of key event sent by the device.</p> <ul style="list-style-type: none"> • DOT_KEY_CODE_FUNCTION1 : Function 1 key input • DOT_KEY_CODE_FUNCTION2 : Function 2 key input • DOT_KEY_CODE_FUNCTION3 : Function 3 key input • DOT_KEY_CODE_FUNCTION4 : Function 4 key input • DOT_KEY_CODE_FUNCTION12 : Function 1 key and Function 2 key input • DOT_KEY_CODE_FUNCTION13 : Function 1 key and Function 3 key input • DOT_KEY_CODE_FUNCTION14 : Function 1 key and Function 4 key input • DOT_KEY_CODE_FUNCTION23 : Function 2 and 3 keys pressed • DOT_KEY_CODE_FUNCTION24 : Function 2 and 4 keys pressed • DOT_KEY_CODE_FUNCTION34 : Function 3 and 4 keys pressed • DOT_KEY_CODE_ELSE : Input of key combinations not defined in KeyCodes • DOT_KEY_CODE_PANNING_ALL : Input of Panning Left and Right keys • DOT_KEY_CODE_PANNING_LEFT : Input for Panning Left key • DOT_KEY_CODE_PANNING_RIGHT : Input for Panning Right key • DOT_KEY_CODE_LPF1 : Input for Panning Left key and Function 1 key • DOT_KEY_CODE_RPF4 : Input for Panning Right key and Function 4 key

- Function

4.1 Device Connection and Disconnection

Function Name	Description
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DOT_PAD_BLE_SCAN(void(CALLBACK* cb)(const wchar_t*))	<ul style="list-style-type: none"> Start BLE scan Call `callback(const wchar_t* deviceName)` when discovered
DOT_PAD_BLE_SCAN_STOP()	<ul style="list-style-type: none"> Stops BLE scanning
DOT_PAD_USB_SCAN(void(CALLBACK* cb)(const wchar_t*))	<ul style="list-style-type: none"> Start USB scan Call `callback(const wchar_t* portName)` when discovered
DOT_PAD_CONNECT_BLE(const wchar_t* deviceName)	<ul style="list-style-type: none"> Connects to BLE Returns the DotDevice attempting to connect; returns null if connection attempt fails Connection is complete only when the DOT_DATA_CODE_CONNECTED response arrives in the CALLBACK
DOT_PAD_CONNECT_SERIAL(const wchar_t* portName)	<ul style="list-style-type: none"> USB connection Returns the DotDevice attempting to connect; returns null if connection attempt fails Connection is complete only when the DOT_DATA_CODE_CONNECTED response arrives in the CALLBACK
DOT_PAD_DISCONNECT(void* deviceHandle)	<ul style="list-style-type: none"> Disconnect If dotDevice == nullptr, disconnect all devices and initialize the internal list If a specific dotDevice is specified, disconnect only that device and remove it from the list <p>Disconnect all: DOT_PAD_DISCONNECT(nullptr)</p> <p>Disconnect only a specific device: DOT_PAD_DISCONNECT(targetDevice)</p>
DOT_PAD_GET_CONNECTED_DEVICE_COUNT()	<ul style="list-style-type: none"> Query the number of connected devices
DOT_PAD_GET_CONNECTED_DEVICE_HANDLE(int index, void** deviceHandle)	<ul style="list-style-type: none"> Retrieve handle of connected device (index: starts at 0) Returns via parameter deviceHandle, returns true if successful

4.2 Device Output

Function Name	Description
DOT_PAD_DISPLAY_FILE(displayFile, deviceHandle)	<ul style="list-style-type: none"> Display graphic data from a file path

DOT_PAD_DISPLAY_DATA(data, len, deviceHandle)	<ul style="list-style-type: none"> Display graphic data as a byte array
DOT_PAD_RESET_DISPLAY(deviceHandle)	<ul style="list-style-type: none"> Reset graphic display
DOT_PAD_BRAILLE_DISPLAY(strInput, language, grade, englishGradelfKorean, deviceHandle, callback)	<ul style="list-style-type: none"> Display text converted to Braille. <p>Receive conversion result via callback</p>
DOT_PAD_BRAILLE_DISPLAY_DATA(brailleData, dataSize, deviceHandle)	<ul style="list-style-type: none"> Directly displays braille data
DOT_PAD_BRAILLE_ASCII_DISPLAY(brailleASCII, deviceHandle)	<ul style="list-style-type: none"> Display as Braille ASCII string
DOT_PAD_RESET_BRAILLE_DISPLAY(deviceHandle)	<ul style="list-style-type: none"> Reset braille display

4.3 Settings

Function Name	Description
DOT_PAD_SET_LANGUAGE(language, grade)	<ul style="list-style-type: none"> Set braille language and grade <p>1 = ARABIC 2 = CHINESE_TRADITIONAL 3 = CHINESE_SIMPLIFIED 4 = DUTCH 5 = ENGLISH 6 = FRENCH 7 = GERMAN 8 = ITALIAN 9 = JAPANESE 10 = KOREAN 11 = RUSSIAN 12 = SPANISH 13 = VIETNAMESE 14 = BULGARIAN 15 = PORTUGUESE 16 = CZECH 17 = POLISH 18 = NORWEGIAN</p>
DOT_PAD_SET_ENGLISH_GRADE_IF_KOREAN(grade)	<ul style="list-style-type: none"> English Braille Grade when using Korean

4.4 Information Lookup

Function Name	Description
DOT_PAD_GET_DEVICE_NAME(deviceHandle)	<ul style="list-style-type: none"> Query device name (result received via message callback)

DOT_PAD_GET_FW_VERSION(deviceHandle)	<ul style="list-style-type: none"> Get Firmware Version (Result received via message callback)
DOT_PAD_GET_HW_VERSION(deviceHandle)	<ul style="list-style-type: none"> Hardware Version
DOT_PAD_GET_DISPLAY_INFO(deviceHandle, &width, &height, &braille)	<ul style="list-style-type: none"> Display size and braille availability

4.5 Listener

Function Name	Description
DOT_PAD_REGISTER_KEY_CALLBACK(cb)	<ul style="list-style-type: none"> Key input callback. (deviceHandle, DOT_KEY_CODE, message)
DOT_PAD_REGISTER_MESSAGE_CALLBACK(cb)	<ul style="list-style-type: none"> Message callback (deviceHandle, DOT_DATA_CODE, message)
DOT_PAD_REGISTER_DISPLAY_CALLBACK(cb)	<ul style="list-style-type: none"> Display completion callback (deviceHandle)