Vaunix Technology Corporation
Lab Brick® Microwave Frequency Synthesizer
Windows x64 SDK Release Notes

Overview

The Lab Brick Microwave Frequency Synthesizer ("LMS") x64 SDK supports developers who want to control LMS devices from Windows programs on 64 bit Intel or AMD platforms, or who want to control the synthesizers from LabVIEW[1] or other National Instruments programming environments running on 64 bit versions of Microsoft Windows[2]. The SDK includes an x64 dll which provides an API to find, initialize, and control the synthesizers, along with header files and an example x64 C program which demonstrates the use of the API. The API is unchanged from the Win32 version of the LMS API except for the addition of a couple of functions described below. The x64 version of the LMS DLL uses Microsoft's standard x64 dll linkage, which includes standard Microsoft style function name decoration.

Changes in the SDK

The x64 SDK includes vnx_fmsynth.dll, the 64bit dll, vnx_fmsynth.lib, the library for linking, and vnx_LMS_api.h, an include file with the function declarations for the dll.

New x64 API functions in the SDK

The Win32 dll function fnLMS_GetModelName which returned a C style ASCII string ModelName has been replaced with two functions, one which returns a C style ASCII string, the other which returns a Unicode (wchar_t) string. The function names end in A or W to indicate their string output type:

VNX_FSYNSTH_API int fnLMS_GetModelNameA(DEVID deviceID, char *ModelName)

This new function is used to get the model name of the synthesizer as an ASCII string. If the function is called with a null pointer, it returns just the length of the model name string. If the function is called with a non-null string pointer it copies the model name into the string and returns the length of the string. The string length will never be greater than the constant MAX_MODELNAME which is defined in vnx_LMS_api.h This function can be used regardless of whether or not the synthesizer has been initialized with the fnLMS_InitDevice function.

VNX_FSYNSTH_API int fnLMS_GetModelNameW(DEVID deviceID, wchar_t *ModelName)

This new function is used to get the model name of the synthesizer as a Unicode string. If the function is called with a null pointer, it returns just the length of the model name string. If the function is called with a non-null string pointer it copies the model name into the string and returns the length of the string. The string length will never be greater than the constant

MAX_MODELNAME which is defined in vnx_LMS_api.h This function can be used regardless of whether or not the synthesizer has been initialized with the fnLMS_InitDevice function.

VNX_FSYNSTH_API int fnLMS_GetDLLVersion()

This function returns the version of the dll. It is also present in the Win32 SDK.

VNX_FSYNSTH_API int fnLMS_GetAbsPowerLevel(DEVID deviceID);

This new function returns the current absolute output power level setting as an integer number of .25 db units. As an example, an output power level of +3 dbm would result in the value 12 being returned, while an output power level of +3.5 dbm would result in the value 14 being returned. The output power resolution is .5 db. Note that the fnLMS_GetPowerLevel returns the power output relative to the maximum output power level.