

## AES Product Description:

# Naples USB Lamp, Reel & Switch Controller

### What is the Naples PC Game Interface?

The Naples USB interface from Aardvark Embedded Solutions provides a PC with all the functionality that a traditional "Amusement With Prizes" (AWP) game uses.

Using proven USB communications technology, the unit provides a very high-level and high-speed interface to:

- ? Up to 8 mechanical reels.
- ? Up to 256 lamps.
- ? Up to 128 switches.
- ? A Vacuum Fluorescent (Starburst) Display.

### Why would I wish to use it?

The use of a standard PC as a game platform brings many advantages to the game manufacturer.

However, many players still like the style of a more traditional AWP machine with reels, lamps and switches. The problem is that driving these requires a level of real-time control that is impossible for a PC to achieve without external assistance.

The Naples Game Interface solves this problem, allowing these peripherals to be easily interfaced to your PC, providing the ideal platform for hybrid games.

### How easy will I find it to use?

We are very proud of our reputation for producing systems that make life **very** easy for the PC programmer.

The Naples interface is no exception and appears as a standard DLL to the game writer. Simple calls provide high-level control and status information.

### Reel Control Features

The board handles up to 8 reels.

Reel "commands" are issued via simple DLL calls and current reel status information is always available.

It is easy to spin, nudge and "twitch" reels in either direction. "Twitching" gives the appearance of mechanically *locking* or being mechanically *coupled* to other reels in the game.

### Lamp Control Features

The board handles up to 256 lamps (or LEDs) and the DLL allows each of these to be set to a programmable brightness.

You can program the bulb brightnesses to fully cater for the different physical characteristics of filament bulbs and LEDs.

The lamps are updated at high speed by the game, knowing that the DLL and Naples Interface will introduce no significant delay.

This allows complex attract or skill sequences to be generated and, of course, very quickly halted in response to player interaction.

### Switches

The board provides support for up to 128 switches.

Simple DLL calls allow the PC to determine both the *state* of these switches and the *number of times* that they have been operated.

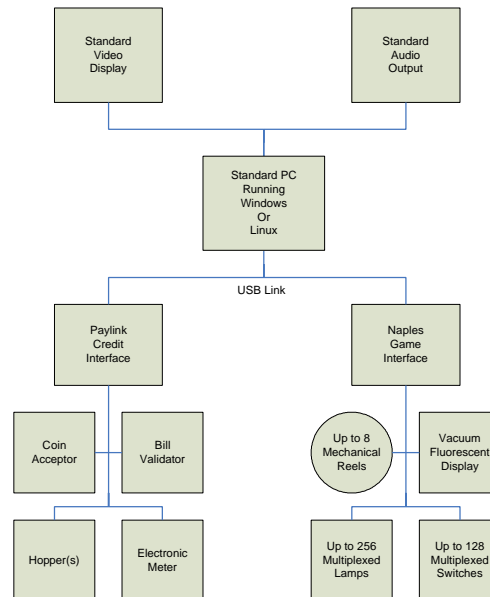
### VFD (Starburst) Display

Simple DLL calls allow VFD brightness to be set and text strings to be displayed.

## A Complete AWP System

In order to produce a **complete** game, the PC also needs to interface to money handling peripherals, such as coin acceptors, bill validators, hoppers and electronic meters.

An AES sister product, Paylink, supports all the financial peripherals required to build a complete game.



## A Complete PC-Based AWP System

### Technical Specifications

#### Reels

Supported reels can have *any* standard stepper motor, including both 48-step and 200-step motors, running at 12 volts or 24 volts.

Each reel needs a “ramp table” to define its characteristics. (The reel manufacturer typically supplies this information.)

The DLL allows the ramp tables to be easily updated from the PC and there are no restrictions on how these ramp tables are used. The reels can all have different characteristics or, if you wish, the game can even update the ramp tables dynamically.

#### Lamps

Part of the lamp array is mapped onto the lamps within the reel mechanisms to facilitate integrated attract and skill sequences.

*Note that only reel mechanisms with the common **anode** bulb assembly option should be specified.*

### Communications Interface

USB: Type B connectivity – V1.1 interface

### Supported Operating Systems

Microsoft Windows 98/ 2000/ XP/ XP Embedded  
Linux (Fedora Core 3 / 5, Gentoo 2006.0)

PC support software is available free of charge.

### RoHS Compliance

The Naples board is fully RoHS-compliant.

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