

SmartSwitch Engineering  
Development Kits  
Product Training Module

# Introduction

## Purpose:

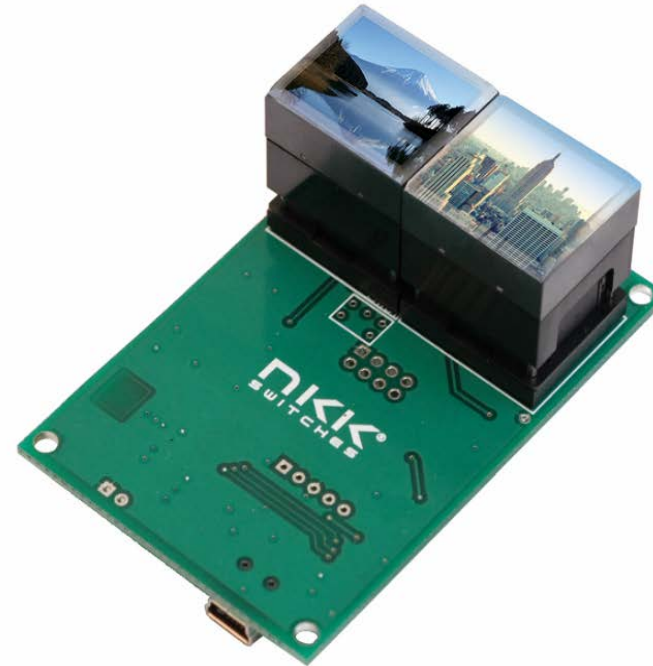
- To introduce the SmartSwitch® Engineering Development Kits

## Objective:

- Present features and benefits
- Discuss kit options available

## Contents

- 10 pages



## SmartSwitch Engineering Development Kits

- Simplified Development Kit designed to accelerate the incorporation of SmartSwitch into applications
- Controls up to two SmartSwitches/SmartDisplays or one OLED Rocker
- Ready to go – preprogrammed for demonstration
- Schematics and firmware provided
- Available in 10 different configurations





# Features

- 1M or 16M on-board NOR flash memory to store images, attributes or any other information
- Serial communication via USB (115.2K, 1 start bit, 8 bit, 1 stop bit)
- Auxiliary port with 7 I/O pins of microcontroller to control/sense other applications
- Stand alone or real time operation
- Reports via USB the switch closures, releases, timer expirations, and addresses of the images displayed
- Programmed to change the displayed images based on a switch actuation and user defined timers for stand-alone operation

## SmartSwitch Engineering Development Kits

I want to experiment with SmartSwitch without building my own board.

The SmartSwitch Kits provide a complete package of engineering tools to interact and design in the SmartSwitch products.

I want to add my own inputs and outputs to the SmartSwitch kit.

The SmartSwitch Kits have 7 I/O pins for user-designed additions. Firmware can be altered by user.

I want to control my SmartSwitch kit with a computer.

The SmartSwitch Kit reports activities via USB and can process both commands and images in real time.

Why should I use SmartSwitch?

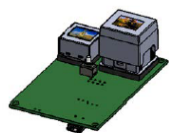
SmartSwitch is a space-saving, multi-function programmable device. It simplifies processes and improves operator interface by reducing the number of switches for multi-function operations.

# Part Numbers and Product Description

Part Number	Switch 1 / Display		Switch 2	
IS-ENG-KIT-7-DS	ISC01P	OLED 52x36 Display	ISC15ANP4	OLED 64x48 Standard
IS-ENG-KIT-7-FS	ISF15ACP4	OLED 96x64 Frameless	ISC15ANP4	OLED 64x48 Standard
IS-ENG-KIT-7-FF	ISF15ACP4	OLED 96x64 Frameless	ISF15ACP4	OLED 96x64 Frameless
IS-ENG-KIT-6-DH	IS01EBFRGB	LCD 64x32 Display	IS15EBFP4RGB-09YN	LCD 64x32 Hybrid
IS-ENG-KIT-6-SH	IS15EBFP4RGB	LCD 64x32 Standard	IS15EBFP4RGB-09YN	LCD 64x32 Hybrid
IS-ENG-KIT-6-CH	IS15ESBFP4RGB	LCD 64x32 Compact	IS15EBFP4RGB-09YN	LCD 64x32 Hybrid
IS-ENG-KIT-5-DC	IS01BBFRGB	LCD 36x24 Display	IS15BSBFP4RGB	LCD 36x24 Compact
IS-ENG-KIT-5-SC	IS15BBFP4RGB	LCD 36x24 Standard	IS15BSBFP4RGB	LCD 36x24 Compact
IS-ENG-KIT-5-BC	IS15BAFP4CF	LCD 36x24 Bicolor Standard	IS15BSAFP4CF	LCD 36x24 Bicolor Compact
IS-ENG-KIT-8-R	IS18WWC1W	OLED 96x64 Rocker		

# Kit Sets and Corresponding Controllers

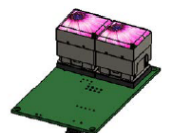
NKK's **S02L1 Controller** is used for all **OLED SmartSwitch Engineering Kits**. S02L1 has 16M NOR flash memory



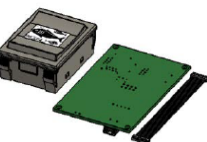
IS-ENG-KIT-7-DS  
ISC01P OLED 52x36 Display  
ISC15ANP4 OLED 64x48 Standard



IS-ENG-KIT-7-FS  
ISF15ACP4 OLED 96x64 Frameless  
ISC15ANP4 OLED 64x48 Standard

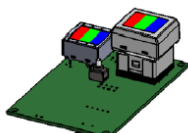


IS-ENG-KIT-7-FF  
ISF15ACP4 OLED 96x64 Frameless  
ISF15ACP4 OLED 96x64 Frameless

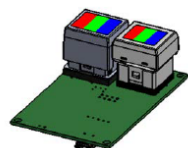


IS-ENG-KIT-8-R  
IS18WWC1W OLED 96x64 Rocker

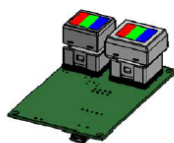
NKK's **S02G1 Controller** is used for all **LCD 64x32 SmartSwitch Engineering Kits**. S02G1 has 1M NOR flash memory.



IS-ENG-KIT-6-DH  
IS01EBFRGB LCD 64x32 Display  
IS15EBFP4RGB-09YIN LCD 64x32 Hybrid

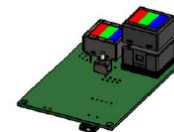


IS-ENG-KIT-6-SH  
IS15EBFP4RGB LCD 64x32 Standard  
IS15EBFP4RGB-09YIN LCD 64x32 Hybrid

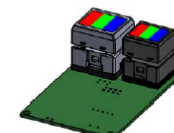


IS-ENG-KIT-6-CH  
IS15ESBFP4RGB LCD 64x32 Compact  
IS15EBFP4RGB-09YIN LCD 64x32 Hybrid

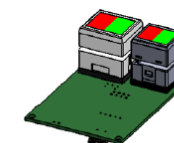
NKK's **S0205 Controller** is used for all **LCD 36x24 SmartSwitch Engineering Kits**. S0205 has 1M NOR flash memory.



IS-ENG-KIT-5-DC  
IS01BBFRGB LCD 36x24 Display  
IS15BSBFP4RGB LCD 36x24 Compact

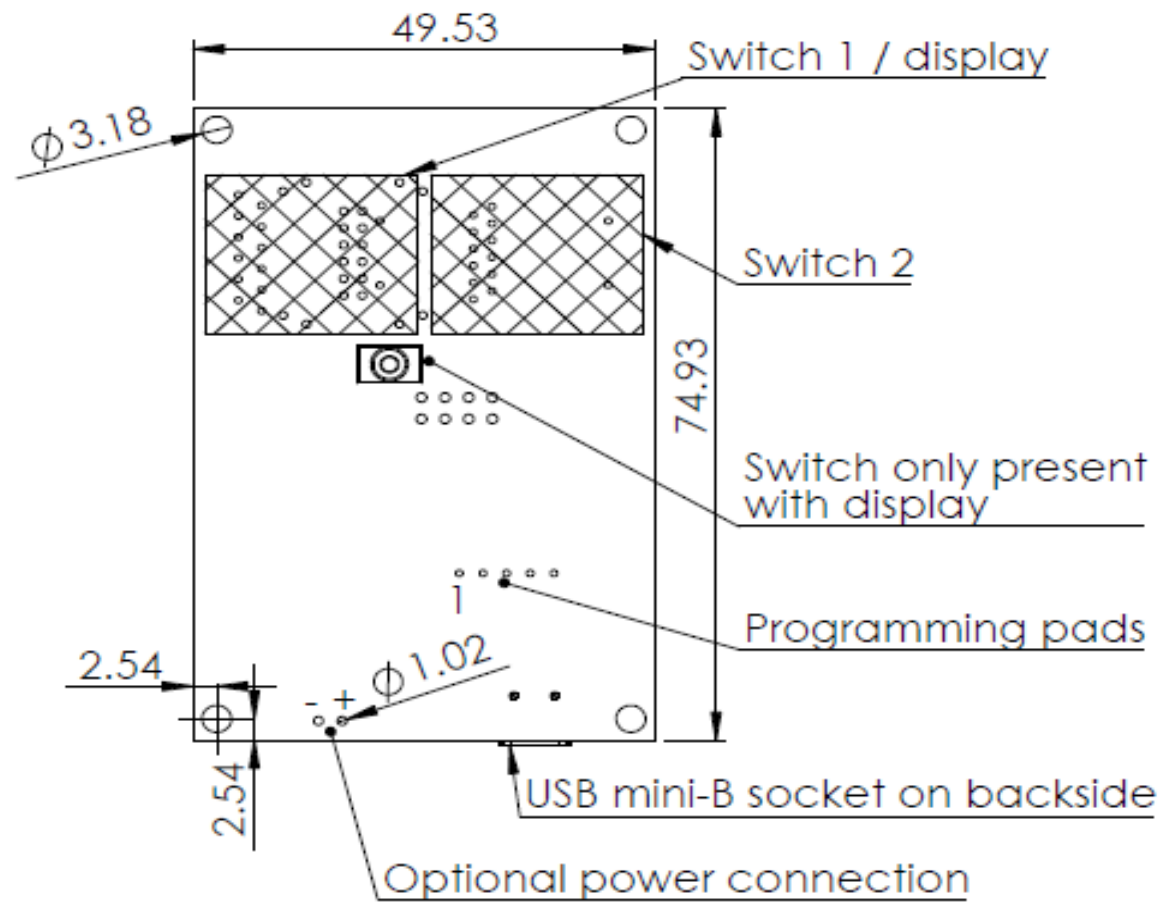


IS-ENG-KIT-5-SC  
IS15BBFP4RGB LCD 36x24 Standard  
IS15BSBFP4RGB LCD 36x24 Compact



IS-ENG-KIT-5-BC  
IS15BAFP4CF LCD 36x24 Bicolor Standard  
IS15BSAFP4CF LCD 36x24 Bicolor Compact

# Dimensions



Dimensions in mm.

\*All controllers have the same dimensions





# Summary

- Introduced the Engineering SmartSwitch Development Kits
- Simplified Development Kit designed to accelerate the incorporation of SmartSwitch into applications.
- Ready to go – preprogrammed for demonstration
- USB mini-B connection for power and communication
- Schematics and firmware provided
- Communication software provided
- 7 I/O Pins available



# Additional Resources

With over half of a century of passion for innovation, NKK has continued to elevate the standard for switch solutions while maintaining an unwavering emphasis on quality, stability and reliability.

For additional information visit the NKK Switches website:

[www.nkkswitches.com](http://www.nkkswitches.com)

