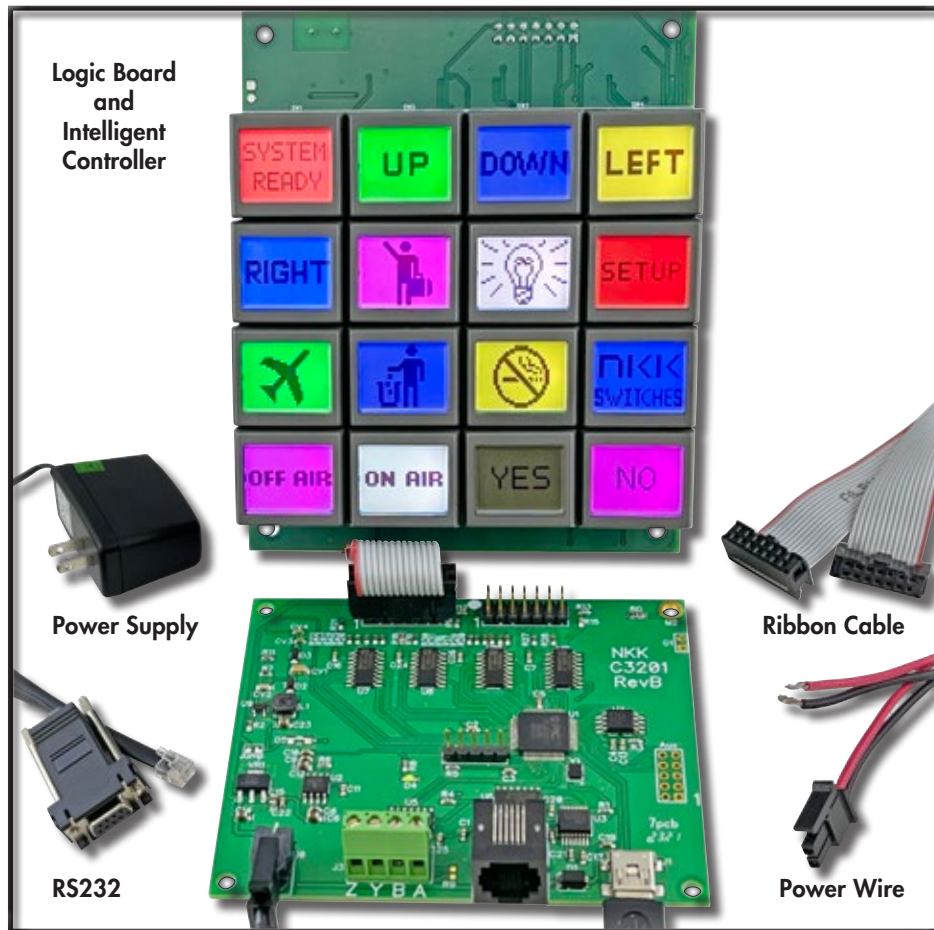


IS-71005-1 System for 36 x 24 SmartDisplay Devices

The IS-71005-1 System consists of the IS-C3201 Intelligent Controller to use with LCD 36 x 24 SmartDisplay switches, the IS-L1602-CS Logic Board, and accessories. The components are a brilliant solution to enhance HMI and simplify the user's management. The table below displays all of the components included with the standard system. NKK can customize the controller or the logic board based on individual customer requirements.



Part Number	Quantity	Part Description
IS-C3201	1	Switch Controller that supports as many as 32 SmartDisplay LCD 36 x 24 switches. Has two banks that drive up to 16 switches.
IS-L1602-CS	1	Logic Board: 4 x 4, LCD 36 x 24 RGB, IS15BBFP4RGB, 16 switches. Side-by-side stackable. Switches are mounted on the socket.
ISDCB824	1	24" Ribbon Cable, 14 Conductors, 28 AWG, .050"
IS-USB1	1	Cable, USB 2.0, A to Mini B, 6'
IS-SERIAL-CABLE	1	RS232 Serial Cable with Adaptor, DB9S to RJ11
IS-POWER SUPPLY-9V-2.1	1	Power Supply
IS-PCA01	1	Power Cable Adaptor
IS-PC01-12	1	Cable, Power, Two Positions, 12" long, CN2560

*For other systems in standard or custom configurations, contact NKK Switches.*

**DISTINCTIVE CHARACTERISTICS**

- Govern as many as 32 SmartDisplay LCD 36 x 24 switches or displays in two banks of 16 switches
- Flexible design conducive to programming for specific applications as defined by user
- Data and setup are stored in non-volatile memory and specify system's behavior; memory capacities 16,000 images, backlights, attributes
- Firmware can be customized based on user's requirements
- Communication is with USB, RS232 or RS422
- Downloadable images and backlight colors specified by user
- Look up tables for fonts 5 x 7 and 7 x 10
- Eight LED brightness settings
- Stand-alone operation or real time control by host
- Ten pin auxiliary port with seven MC pins for control or to sense other devices
- Switch activity report from controller to host: on switch press/release status change, the new statuses are sent over the last communication interface
- Flexibility of mounting switches in any location or configuration to accommodate user and application



IS-C3201 Intelligent Controller

**BENEFITS**

This controller is designed to be used in many various applications, with complete flexibility for the user. The SmartDisplay configuration is ideal for promoting real time operation features. Graphic image data can be downloaded to a switch, and any selected image from flash memory can be displayed on the switch, delivering versatility to the user. Font strings in 6 x 8 or 9 x 12 arrangements can be created for a specified row on a stated switch. The ability to change the backlight color as well as the brightness of a color on any switch further expands options.

The IS-L1602-CS Logic Board may employ up to 16 LCD 36 x 24 SmartDisplay switches or displays and can be daisy chained.

**GENERAL SPECIFICATIONS**



*ESD handling procedure must be followed.*

- Power Requirement:** 6.5V to 12V Maximum Current is 170mA without Switches and 900mA with 32 Switches
- Intelligent Controller Board Dimensions:** 3.6" x 3.0" (91.44mm x 76.2mm)
- Logic Board Dimensions:** 4.5" x 3.67" (114.3mm x 93.22mm). Height of Switch with Socket: 1.05" (26.67mm)
- Mounting Hole Dimension:** 0.125" (3.175mm)
- Operating Temperature Range:** -20°C ~ +70°C (-4°F ~ +158°F)

See IS-C3201 Intelligent Controller User Manual for complete setup and operation, LED backlighting, commands, schematics, etc.  
See LCD 36 x 24 Logic Boards User Manual for comprehensive instructions, dimensioned drawings, schematics, etc.

**APPLICATIONS**

The IS-71005-1 System can be used wherever a human machine interface is required. Just a few examples follow, but function and utilization are not limited to the list, and possibilities are virtually endless.

- Test and measurement equipment
- Commercial building access control
- Industrial application monitoring and control
- Factory automation control
- Broadcasting
- Computer keypad
- Simulation
- Robotics
- Gaming

**NKK Switches is a Reliable Source for Design Solution Support**

To help simplify development, NKK offers Engineering Kits with schematics and source code for all of the SmartDisplays. Engineering Kits Communicator, a free Windows based software, is available to test and download images for communication to various controllers. All pertinent documentation to get started is on NKK's website:  
<https://www.nkkswitches.com/SmartDisplay-resources/>

NKK Switches provides a full suite of design solutions for upgrading and enhancing user interface. A team of experts can provide system design, ongoing application support, value added services and product assembly.

*For different functionality or questions, contact [engineering@nkkswitches](mailto:engineering@nkkswitches).*