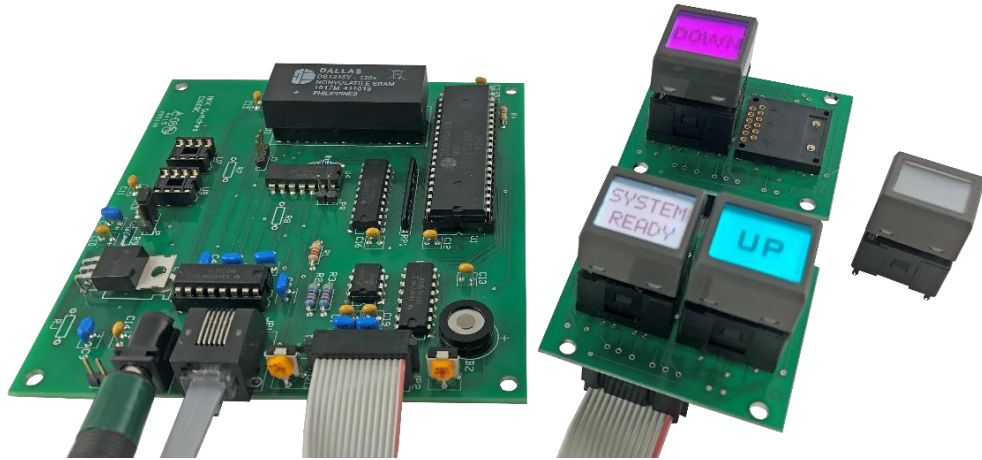


# Modular HMI System



The purpose of the Modular HMI System is to allow flexibility of placement of switches on control panels. The system is made up of a controller and several SmartDisplay populated PCBs connected by ribbon cables.

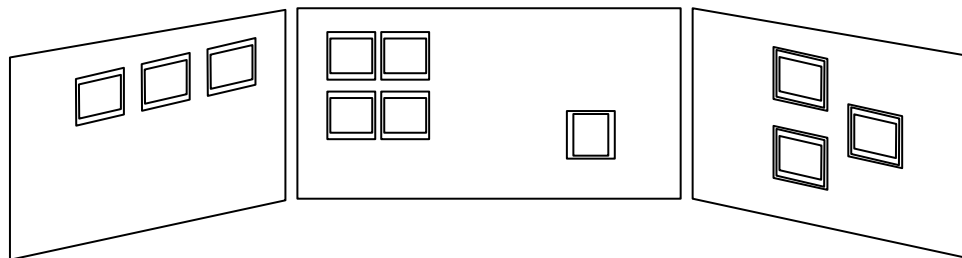
The control board can communicate to a host such as a computer or other controller through the RS232 or RS422/485. The controller can operate in one of two ways or in a combination of both. It can operate on its own while only sending reports of switch activations and timer expirations. It can also be passive and only act when given a command from the host.

The switch boards (also known as Logic Boards) can have one or several LCD SmartDisplays in a lattice type configuration. Several of these boards can be linked together via the ribbon cables. This allows flexibility of switch placement on control panels. These boards are mounted beneath the panel with one to several switches accessible through holes in the panel. The exception is the panel mount board for a single switch which snaps directly into the panel.

There are two types of LCD SmartDisplays, 36x24 and 64x32, which operate in different ways. Each has their own set of controller and switch boards.

The modular design allows for designers to mount the switches on panels that are not all on the same plane. Also, the switches can be grouped by their function in the product.

Illustration of panel layout using modular switch boards all controlled by a single controller.



NKK can supply subsystems with any configuration, number, and type of SmartDisplays with various communication protocols. Custom firmware is also available. Please contact [engineering@nkkswitches.com](mailto:engineering@nkkswitches.com) with requirements.