

# Datasheet

Display Board

RS Product Code: 755-8944



## Introduction

The Synergy DisplayBoard contains a line of six 56mm high 7-segment display modules controlled from an mbed LPC1768 microcontroller module (supplied separately). The digits are separated by a ':' composed of two single LEDs. A typical application might be to display numerical data such as a stock market price taken from the Internet via the LAN socket.



## Features

- Six 56mm 7-segment red LED modules driven by four PCA9635 I2C bus LED drivers
- Socket for mbed LPC1768 module
- RJ-45 Ethernet LAN socket for connection to the Internet
- USB Mini-B socket
- 2 x push buttons for digital control/event input
- 1 x Potentiometer for analogue control input
- 13 x mbed GPIO brought out to screw terminals
- +12Vdc @ 2A socket to power the LED displays
- Overall dimensions: 82 x 280 x 15mm

A separately available mbed LPC1768 module is required to operate this board, RS Product Code 703-9238.



A PC with an Internet connection and a USB port is required to use the Display Board and mbed module. The mbed module is programmed using on-line tools available from <http://mbed.org/> once your module has been registered.

**Getting Started with the Display Board on mbed**

<http://mbed.org/cookbook/RS-Display-Board>

**PCA9635 LED Driver library for mbed module**

<http://mbed.org/cookbook/PCA9635-I2C-IO-Expander>

**mbed Pin Assignments**

Function	mbed Pin
Push button SW1	30
Push button SW2	29
I2C serial data	28
I2C serial clock	27
PCA9635 Output Enable	26
Upper screw terminal block	25
	24
	23
	22
	21
Potentiometer	20
Lower screw terminal block	19
	18
	17
	16
	15
	14
	13
12	