

BlinkenArea Kits 36C3

RESOURCE EXHAUSTION

Kits for Beginners



Continuity Tester

A simple continuity tester with audible and visual indication.

- Includes enclosure (80 x 40 x 20 mm)
- Detects only true continuity < 50 Ω, not semiconductor junctions or higher resistances
- · Beeps and lights up
- Simple circuit without ICs
- Battery not included (1x AAA needed)
- · Requires two standard test leads with 4 mm plugs

Difficulty: very easy

SMD: no

12,–€



Light Chaser Ring

20 LEDs in a ring with a simple light chaser circuit in the middle. LEDs can be chosen from 6 different colours (colours can be mixed).

- Size: 50 mm diameter
- Logic ICs only (no microcontroller)
- 2 holes for hanging
- · CR2032 button cell battery included

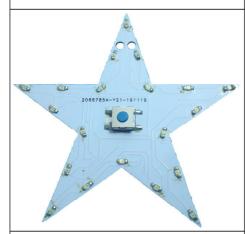
Difficulty: very easy

SMD: no LED:

> red orange yellow

green blue white

5,–€



LED Star

20 orange LEDs in a **star** shape which display several animations, some with fading.

- Size approx. **67 x 63 mm**
- Pre-programmed controller (ATtiny13)
- Animations hardcoded, can only be changed with knowledge of AVR assembly language
- 2 holes for hanging
- · CR2032 button cell battery included



Difficulty: fairly easy

SMD: yes LED: orange

5,–€



DUCK Mini

34 yellow LEDs in **duck** shape plus speaker. The LEDs play several animations, some with fading.

- · Quacks on button press
- Size approx. 56 x 43 mm
- Pre-programmed controller (ATtiny88)
- Animations programmable (requires AVR programmer)
- Sound replaceable (< 200 ms, requires AVR programmer)
- Batteries not included (3x AAA needed)

Difficulty: fairly easy

SMD: yes LED: **yellow**

10,-€

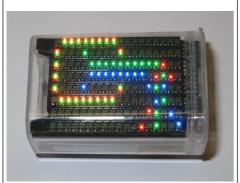


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Kits for Experts

The projects below use the "BlinkenPlus" firmware. It supports playing animation files from an MMC/SD/SDHC card (FAT16 or FAT32, file formats BIN, BBM, BLM and BML described in the BlinkenArea wiki) or an RS232 or USB (using a virtual serial port) MCUF stream (format documented in the BlinkenArea wiki). They also output a stream of all displayed frames (regardless of source), so one project can act as a master for others (if they have the same resolution). Animation files can be created with "Blimp", a "Paint"-like GUI where you can draw and set the display duration for each frame. Alternatively you can use the available converters from "BlinkenLib" and the "bl" output plugin for mplayer, or write your own scripts that generate BlinkenStreams or BlinkenMovies.



TicTacLights Nano Colour

Tiny BlinkenLights clone (18 x 8 = **144 pixels**, aspect ratio 0.55) with size 0404 RGB LEDs. Fits into a mini TicTac box. **Reflow soldering required.**

- Size: approx. 31 x 20 mm, doesn't tile
- Plays animations from Micro-SD card or USB stream.
- Powered from USB or rechargeable battery (included!).
- Pre-programmed controller (ATmega162)
- · Micro-USB cable included
- · Clear Mini TicTac box included

Workshop

Difficulty:
very difficult,
steady hand and
many hours of
patience
required

SMD: 0.5 mm LED: **RGB**

45,-€



ArcadeNano

ARCADE clone (26 x 20 pixels = **520 pixels**, aspect ratio 0.5) with size 0603 SMD LEDs. Fits into a regular TicTac box.

- Size: approx. **33 x 57 mm** (fits into a small TicTac box)
- Plays animations on Micro-SD card or USB MCUF stream
- Powered from USB or rechargeable battery (included!).
- Pre-programmed controller (Atmega162)
- Mini-USB cable included

Difficulty: difficult

SMD: 0.65 mm LED: orange

60,-€



ArcadeNano Colour

Same as ArcadeNano, but with RGB LEDs.

Reflow soldering required (for LEDs). Stencil can be borrowed from BlinkenArea.

- Size: approx. **33 x 57 mm** (fits into a small TicTac box)
- Plays animations on Micro-SD card or USB MCUF stream
- · Powered from USB only (no battery).
- Pre-programmed controller (Atmega644)
- Mini-USB cable included



Difficulty: very difficult, can take several days to make and debug

SMD: 0.65 mm LED: **RGB**

80,–€