

DC2026_Type2.odt

12jan26

22may26

ref1: <https://hackaday.io/project/175182-simple-add-ons-sao> - SAO Connector

LEVEL 2 - PREVIOUS SYNSHOP BADGE

- This was good for a semi-advanced badge, we just make more.
- Solder pads are increased to make soldering easier.
- The AAA battery holder and batteries is replaced with a coin cell holder and 2032 coin cell.
- A diode is needed to isolate the battery from SAO connector power.

Options

1. Offer a selection of RED, YELLOW, or GREEN LEDs.

Screen Print:

- Syn Shop Logo
- DefCon 34 – 2026
- URLs for sites.

22may26 SAO change update to 3v.

Remove D7. Update Sch, PCB, BOM, User

Parts – BOM – Type2 Badge

Quan	Ref	Part #	Description	Cost/100	Extended
6	D1,D2,D3, D4,D5,D6	754-1173-1-ND	LED RED SMD BOTTOM ENT	0.1073	0.64
1	J1	SAM10790-ND	1x03_2.54mm_R/A_SMD	0.30	0.30
1	J2	732-5394-ND	HDR VERT 6POS 2.54MM	0.47	0.47
1	J4	SAM15897-ND	1x06_P2.54mm_R/A_SMD	0.735	0.74
3	R1,R2,R3	RMCF0805FT68R0CT-ND	RES 68 ohm 0805 SMD	0.0081	0.03
1	BT1	36-1059-ND	HOLDER COIN 20MM PC	0.65	0.65
1	B1	490-18646-ND	LITHIUM 3V COIN 20MM	0.2929	0.30
1	U1	ATTINY814-SSNRCT-ND	MCU 8KB FLASH 14SOIC	0.67	0.67
1	PCB		Printed Circuit Board		

Appendix I – Ordering Information

MCU

ATTINY814-SSNRCT-ND	IC MCU 8BIT 8KB FLASH 14SOIC	0.81/ea	0.67/100
---------------------	------------------------------	---------	----------

LEDs

Bottom Entry - SMD

754-1173-1-ND	APTR3216SURCK	LED RED CLR CHIP SMD BOTTOM ENT	0.21/ea	0.1000/100
754-1174-1-ND	APTR3216SYCK	LED YELLOW CLEAR CHIP SMD	0.21/ea	0.1000/100

Resistors

RMCF1206JT68ROCT-ND	RMCF1206JT68R0	RES 68 OHM 5% 1/4W 1206	0.10/ea	0.0068/500
---------------------	----------------	-------------------------	---------	------------

Battery

Battery – Coin Cell

490-18646-ND	CR2032	LITHIUM 3V COIN 20MM	0.33/ea	0.212/250	220mAh
--------------	--------	----------------------	---------	-----------	--------

Holder – Coin Cell

36-106-ND	106	HOLDER COIN 20MM PC PIN	0.94/ea	0.65/100
-----------	-----	-------------------------	---------	----------

SAO Connector

732-5394-ND	CONN HEADER VERT 6POS 2.54MM	0.43/ea	0.405/50	
S9717-ND	SFH11-NBPC-D03-ST-BK	CONN HDR 6POS 0.1 GOLD PCB	0.55/ea	0.398/100

Connectors

SAM10790-ND	TSM-103-01-T-SH	CONN HEADER SMD R/A 3POS 2.54MM	0.48/ea	0.30/100
SAM15897-ND	TSM-106-01-F-SH	CONN HEADER SMD R/A 6POS 2.54MM	1.03/ea	0.735/100

Appendix II - Support

Programming

Use SNAP pod - \$11 Supports all micros used.

Appendix III - Revisions

DC2026_Type2a: Minor upgrades to original design.

Copy SynShopTagNoBatt.kicad_pro project to DC2026_Type2a. Original badge.

Increase R1,R2,R3 resistor size to 1206.

Increase pad sizes to make hand soldering easier.

Reposition TP1,TP2 for easier access.

Reposition JP2,JP3,JP4,JP5 for easier access.

Reposition J1 to not extend past board edge.

Reposition J4 to not extend past board edge.

DC2026_Type2b: Add 2032 holder.

Copy DC2026_Type2a project to use changes.

Remove B1 mounting holes.

Add coin cell holder pattern to PCB.

Combine changes into DC2026_Type2 badge.

22may26 SAO update

Update KiCad – remove D7 rev2

DC2026_Type2_PCB_B.pdf

DC2026_Type2_PCB_F.pdf
DC2026_Type2_SCH.pdf
DC2026_Type2_BOM.ods
DC2026_Type2.odt
DC2026_Type2_User.odt
DC2026_Type2_KiCad.zip
SAO_T2_260506.zip
DC2026_Type2.zip – All files
Composite_BOM_List.ods – updated