

Modern Beagle design comparison

updated 4/13/2025 problematic spec

Board	Cost Q1 USD	Available?	SoC	Arch	CPU	DRAM	eMMC	sd card
BBB/G	\$47 Seeed	yes	AM3359	ARM-32	1x A8 1G	512M DDR3 x16	4G	yes
AI		no	AM5729	ARM-32	2x A15 1G	1G DDR3 x16	16G	yes
AI-64	\$228 DK	yes	TDA4VM	ARM-64	2x A72 2G	4G DDR4 x32	16G	yes
Play	\$95 Mouser	yes	AM6254	ARM-64	4x A53 1.4G	2G DDR4 x16	16G	yes
BV Ahead	\$148 Mouser	yes	TH1520	RISC-V-64	4x C910 1.85G	4G DDR4 x32	16G	yes
BV Fire	\$149 Seeed	yes	MPFS025T	RISC-V-64	4x RV64GC 667M	2G DDR4 x32	16G	yes
Y-AI	\$70 Seeed	yes	AM67	ARM-64	4x A53 1.4G	4G DDR4 x32	NO	yes
Pocket 2	\$28 Mouser	yes	AM6232	ARM-64	2x A53 1G	512M DDR4 x16	opt	y hidden
OSD MP2	TBD maybe high	new unkown	STM32MP2	ARM-64	2x A35 1.5G	unknown	(pcb)	(pcb)
OSD 62x	TBD maybe high	new unkown	AM6254	ARM-64	4x A53 1.4G	1G DDR4 x16	(pcb)	(pcb)
B Violet	<= \$70?	new unknown	AM6254	ARM-64	4x A53 1.4G	4G DDR4 x16	32G	yes

Board	PCIe	Enet	WiFi	I/O headers	Mech	cooling	Info link	Summary
BBB/G	no	dual	no	BB 2x23	BBB 86x56	passive	BBB/G	old, slow
AI	no	tri	yes	BB 2x23	BBB 86x56	forced air req'd	AI	not available
AI-64	M.2 keyE	tri	yes	BB 2x23	huge 104x83x37	large heatsink incl	AI-64	huge, \$\$\$
Play	no	tri	yes	mikroBUS	large 80x80	? cpu on pcb bot	Play	bad I/O
BV Ahead	no	tri	yes	FPGA 2x23	BBB 86x56	4x heatsink attach	BV Ahead	non-ARM
BV Fire	M.2 keyE	tri	via M.2	FPGA 2x23	BBB 86x56	1x heatsink attach?	BV Fire	non-ARM
Y-AI	1x gen3 hdr	tri	yes	R Pi 2x20	R Pi 85x56	Pi5 active	Y-AI	maybe? adapter board
Pocket 2	no	RGMII	no	BB Lite 2x18	Pocket 55x35	passive?	Pocket 2	maybe? adapter board
OSD MP2	1x gen2	(pcb)	(pcb)	(pcb)	SiP 2x2	required	OSD MP2	availability? pcb req'd
OSD 62x	no	(pcb)	(pcb)	(pcb)	SiP 2x2	required	OSD 62x	availability? pcb req'd
B Violet	no	tri + RGMII	yes? design opt	BB 2x23	BBB 86x56	custom active?	BBV	availability? BEST OPTION