

Comparison of the ANAN G2/G2 Ultra, ANAN G2E and ANAN G2E-20

Feature	ANAN-G2	ANAN-G2E 100W	ANAN-G2E-20 Ultra 20W
Basic design	High-end G2 platform	Simplified/value G2 derivative	Direct-sampling SDR transceiver; DDC/DUC architecture
Onboard Computer	Raspberry Pi (CM4 or CM5)	No	No
RF output	100 W	100 W	20 W HF / 15 W 6m
HF/6 m	Yes	Yes	Yes
ADC	Dual 16-bit	16-bit	16-bit
DAC	16-bit	16-bit	Not Specified
FPGA	Large FPGA/SoC G2 architecture	Intel Cyclone 10 LP	Intel Cyclone 10
Independent receivers	Up to 10 hardware-supported	4 software receivers	2 fully independent receivers sharing same antenna
ADC architecture	Two phase-synchronous ADCs	Single ADC architecture	Direct-sampling; RF is digitized directly; no analog down-conversion
Antenna inputs	Much more extensive RF routing	3 switched BNC	3 switched BNC
Full duplex	Yes	Yes	Yes
PureSignal	Yes	Yes	Yes
10 MHz reference	Yes	Yes	Yes
Open-collector outputs	7	7	7
Ethernet	Gigabit	Gigabit	Gigabit
Display	7" or 8" touchscreen on G2 Ultra version	No built-in display	No built-in display
HDMI	2 × HDMI 4K	No	No
USB	3 × USB on G2 Ultra, 2 × USB on G2	No	No
Size	~12.3 x 5.4 x 14.5 in (W x H x D)	~10.4 × 3.1 × 10.9 in (W x H x D)	~6.5 x 2 x 6.3 in (W x H x D)
Weight	~11 lb	~15.8 lb	Not Specified
Current	~25 A TX	~25 A TX	Not Specified
Approx. current price	~\$3,645 headless / \$4,145 display	\$1,995 preorder	\$995 preorder, \$1,295 regular price
Target	Maximum-performance station SDR	Lower-cost 100 W SDR	Compact high-dynamic-range SDR. ANAN-10 successor.

The G2 is the flagship SDR platform with dual-ADC, 10-DDC, 100-W SDR. The G2 has two ADC paths and considerably more internal RF routing. That is particularly important if you're interested in multiple receivers, diversity, sophisticated antenna routing, full-duplex operation, and advanced SDR experimentation. The G2 also has a substantially more capable onboard computing/FPGA architecture. Apache describes the G2 platform as having a large FPGA and onboard quad-core SoC, providing the processing required for its advanced receiver architecture.

G2E is a midrange SDR platform with 100-W. It has a simpler architecture but is not a stripped-down, low performance radio. It retains some very important G2 characteristics: 16-bit conversion, 100 W output, HF through 6 m, direct-sampling architecture, PureSignal capability, four simultaneous receivers, Ethernet/Protocol 2, excellent dynamic-range, Thetis compatibility.

G2E-20 Ultra is a compact 20-W high-dynamic-range SDR derived conceptually from the ANAN-10, but redesigned. Apache Labs specifically calls the G2E-20 a “ground-up reimagining of the ANAN-10” with a redesigned receive and transmit chain. The G2E-20 Ultra is not simply the existing G2E 100W with its output power turned down to 20 W. Apache Labs describes it as a different, redesigned radio, although it shares some of the G2E concept and architecture.