

WHY AN INTEGRATED 1 kW SDR

- ◆ **True one-box high-power solution** — no separate transceiver, amplifier, or extra interconnects to manage.
- ◆ **Optimized exciter-to-amplifier chain** — SDR and 1 kW PA engineered together; no guesswork on drive levels.
- ◆ **Better protection** — monitors temperature, current, SWR, reflected power and drive as one system, reacting instantly.
- ◆ **Reduced cabling and clutter** — no extra RF jumpers, ALC lines, CAT control, or amplifier keying cables.
- ◆ **A more professional platform** — behaves as one purpose-built high-power SDR, not two products patched together.

1000W+

PEP output, SSB/CW
across HF & 400W+ on 6M

116dB

RMDR @ 2 kHz
direct-sampling RX

-62dBc

IMD3 with PureSignal
at full 1 kW output

APACHE·LABS

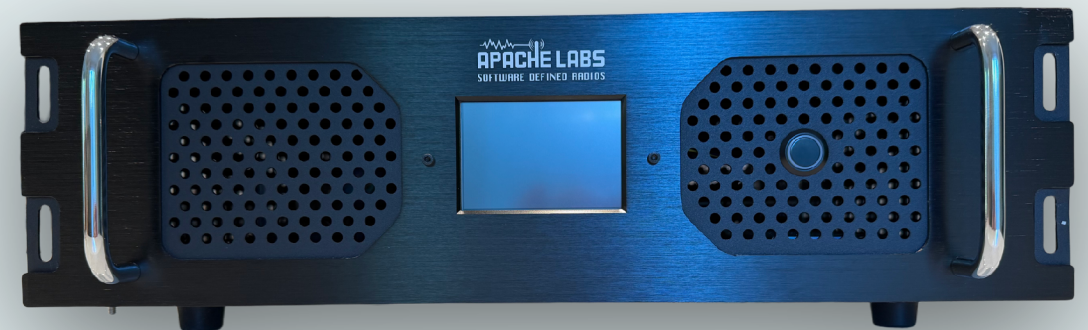
\$7,495

HF + 6M · 1 kW

ANAN-G2-1K

1000W+ HF & 6M DIRECT-SAMPLING SDR

A high-end SDR and a **1000W+ amplifier** in one tightly integrated platform — delivering superior protection, simplified operation, and an optimized signal chain that a 100W radio plus external amp can't match.



GEN2 PLATFORM

The G2 carries forward the acclaimed receiver and transmitter performance of earlier ANAN radios, while taking a major leap in processing power and flexibility. A large FPGA with 930 GMAC/s of capability and an on-board quad-core SoC drive advanced features and stand-alone operation.

DIRECT-SAMPLING RECEIVER

A direct down-conversion front end pairs dual 16-bit phase-synchronous ADCs with independent filter banks, dedicated 10/6M LNAs, and a 1–30 dB step attenuator. Hardware supports up to seven independent receivers, freely assignable to either ADC.

CLEAN 1 kW TRANSMITTER

Direct up-conversion with a 16-bit DAC delivers 1000W PEP on SSB/CW. PureSignal predistortion keeps IMD3 typically at -62 dBc at full output on 20M, with harmonics better than -45 dBc on HF and -60 dBc on 6M.

SYSTEM-WIDE PROTECTION

Microprocessor-controlled protection continuously watches SWR, temperature, and voltage/current — over and under — across the entire integrated system, responding faster than separate radio-and-amp pairings can.

RICH CONNECTIVITY

Three software-configurable SO-239 antenna ports plus a BNC for RX2, Gigabit Ethernet, two HDMI outputs, two USB ports, an SMA transverter output and 10 MHz reference input, and seven configurable open-collector outputs on DB9.

STAND-ALONE OR NETWORKED

A built-in Linux desktop on the quad-core Arm platform allows operation without a connected PC, while the Ethernet interface and HDMI/USB I/O support flexible desktop and future remote workflows.

KEY SPECIFICATIONS

Architecture Direct-sampling DDC / DUC

RX coverage 9 kHz – 60 MHz

Modes CW, SSB, NFM, AM, Digital

RF output 1000W PEP SSB/CW · 500 W FM/RTTY/Digital · 275 W AM · 6M: 400 W SSB/CW

RMDR 116 dB @ 2 kHz

Phase noise -149 dBc/Hz @ 10 kHz offset

Image rej. 100 dB

ADC / DAC Dual 16-bit ADC · 16-bit DAC

Stability TCXO ±0.1 ppm typ.

Tuning res. 1 Hz

Antenna Ports SO-239

Power 48-53.5 V DC, 40 A

Size 49.7 × 38.4 × 13.8 cm

Weight ~15 kg

INTEGRATED VS. RADIO + EXTERNAL AMP	
System design	Single integrated platform
Setup	One-box, fewer failure points
Drive matching	Optimized internally
Band switching	Automatic & coordinated
T/R sequencing	Designed as one system
Protection	Centralized & fast
Predistortion	Consistent integration
Cabling	Minimal

REMOTE OPERATION — TCI REMOTE BY ON7OFF YOUR SDR. ALWAYS ON. ANYWHERE.

The G2 runs Thetis with a built-in TCI server, so it pairs directly with **TCI Remote** — putting full control of the radio in your pocket. Operate the station from anywhere over WiFi, LAN, VPN, or 4G/5G: a 192 kHz IQ panadapter and waterfall, analog S-meter, full PTT transmit, and built-in QSO logging, all over a single TCI WebSocket connection.

IQ PANADAPTER

192 kHz wideband spectrum, 12× zoom, greyline map, synced real-time waterfall.

QSO LOGGING

Built-in notepad with call/name/RST, Worked-B4, ADIF export, QRZ lookup.

FULL TRANSMIT

PTT push-to-talk & toggle, mic gain, SWR & TX power meters, 3-min safety timer.

SAFETY FIRST

PTT & TUNE watchdogs auto-release on dropout, VFO lock, out-of-band TX block.

+ TCI REMOTE COMPACTOR

Optional Windows bridge for true 4G/5G remote: **95%+ bandwidth reduction** (<100 kbps via Opus), zero-config tunnel — no port forwarding or static IP — plus multi-user access with password levels and intercom.