Vaunix LPA-103V – Lab Brick Programmable Gain Amplifier

0.5–10 GHz · 30 dB Gain Control · 0.1 dB Steps · USB / Ethernet · Product Datasheet

KEY SPECIFICATIONS

Parameter	Min	Typ	Max
Frequency Range (GHz)	0.5	–	10
Gain Control Range (dB)	30	33	–
Gain Control Step Size (dB)	0.1	–	–
Gain Accuracy @25°C (dB)	–	0.25	1.5
Gain Flatness / 100 MHz (dB)	–	0.25	–
P1dB (dBm)	–	31	–
Psat (dBm)	–	33	–
Input IP3 (dBm)	–	43.5	–
Switching Speed (µs)	–	15	–
VSWR	–	1.5:1	–

DETAILED SPECIFICATIONS

Electrical	Control, Power & Mechanical
• **Frequency** 0.5–10 GHz • **Impedance** 50 Ohm • **Gain (typ)** 34.5 dB <1 GHz, 32 dB <6 GHz, 30 dB <8 GHz, 27.5 dB <10 GHz • **Gain Control Range** 30 dB (33 dB typ) • **Step Size** 0.1 dB • **Gain Accuracy** <0.25 dB typ @25°C • **Gain Flatness** 0.25 dB / 100 MHz • **P1dB / Psat** 31 dBm / 33 dBm • **Input IP3** 43.5 dBm • **VSWR** 1.5:1 • **Switching Speed** 15 µs • **Max Input Level** 15 dBm @ max gain	• **Control** USB-C / Ethernet • **Power** PoE / USB-PD / +15 VDC (12 W) • **Network** Static IP or DHCP, password-protected • **Operating Modes** Fixed / Swept (uni/bi, once/repeat) / Gain Sequence • **Software** Windows GUI + SDK, Linux SDK, LabVIEW, Python, WebUI • **RF Connectors** SMA female • **Expansion Bus** 10-pin (link multiple units) • **Size** 101.6 x 76.2 x 25.4 mm (4.0 x 3.0 x 1.0 in) • **Weight** 136 g (0.3 lb) • **Operating Temp.** -30 to +55 °C

APPLICATIONS

Engineering & Production Test Labs Calibrated, programmable gain control on the microwave test bench	**Automated Test Equipment (ATE)** Remote gain/level control via USB or Ethernet, scriptable from Python/LabVIEW
Microwave Test Bench Affordable, simple gain setting with 0.1 dB resolution from 0.5 to 10 GHz	**Level & Gain Control** Fixed, swept or sequenced gain for repeatable test setups