



## AADPCB AOM Driver



The MOGLabs AADPCB is a low-cost yet versatile VCO-based RF driver for AOMs, with frequency stability and modulation capabilities comparable with much more expensive alternatives. Running from a single +24 volt supply it provides RF output up to 4 watts (+36 dBm) at frequencies from 65 to 115 MHz. Two external analogue inputs provide FM and AM with 650 kHz bandwidth for laser noise-eating and frequency locking applications. A third input provides fast on/off TTL control of the RF output.

The AAD is an all-in-one replacement for a tuneable oscillator (VCO), variable attenuator (VVA), RF switch, and output coupler, all running from a single +24V supply.

### *Features*

- High output power: up to +36 dBm per channel
- Wide frequency range: 65 to 115 MHz
- High modulation bandwidth >650 kHz (FM and AM)
- RF power out + monitoring out ( -22 dBc)
- External digital input for fast on/off
- 10-turn frequency, single-turn power controls
- High stability VCO, low phase noise

# AOM Driver

## Specifications AADPCB r3

### RF characteristics

RF output power	+18 dBm minimum, +36 dBm (4 watts) maximum
Frequency	65 to 115 MHz
Frequency stability	< 500 Hz/hr
Phase noise	- 85 dBc/Hz @ 100 kHz
Signal to noise	TBD
First harmonic	- 12 dBc at +36 dBm out
RF monitor output	< - 22 ± 1.5 dBc

### Inputs

Amplitude	0 to +5 V, zero at +1.25 V
AM bandwidth	750 kHz
Frequency	0 to +5 V, zero at +1.25 V
FM bandwidth	650 kHz
On/off	TTL (5 V or 3.3 V) 10MHz bandwidth, LOW = off
TTL response time	40 ns
TTL off extinction	< - 60 dBc

### Controls

On/off toggle	Enables power to board
RF power	Single turn (270°)
RF frequency	10-turn

### Dimensions and power

Dimensions	260x70 mm
Power	24 ± 0.5 Vdc, 0.5 A
Fan connector	Provides +24 Vdc to fan

Note: active airflow over both sides of the entire PCB is required to dissipate approximately 6 W thermal load.