



# 3910 Series RF Driver

## Next Generation AO Modulator Driver

### PRELIMINARY DATA SHEET

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The 3910 series RF drivers offer a significant upgrade over our 2910 series while maintaining backwards compatibility.

The 2910 series RF driver has been a workhorse for powering AO modulator applications over the last decade. The line has received a complete makeover to further enhance the success of this signature driver. All of its functions have been improved and a few key features have been added while maintaining its affordable price.

The 3910 modulation input now allows the user to switch from three modulation schemes: Digital, Analog and Digital + Analog. This function will be standard on all models.

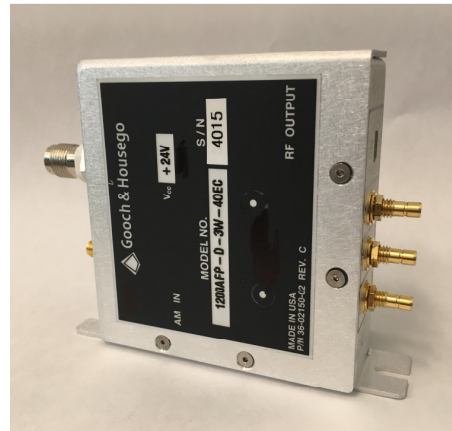
The RF power has been doubled from 4 Watts to 8 Watts (at +28 Vcc). The 3910 features more efficient power consumption than its predecessor.

The Frequency range has been increased up to 500MHz, making it able to control any of the currently available AO modulator models.

The rise time is < 4ns at all power levels and frequencies  $\geq$  250MHz.

Another new feature is the optional ability to synchronize the driver to an external clock reference.

The 3910 RF driver offers more power, higher frequencies, faster rise times, more modulation choices, synchronization capabilities and the latest electronic components over the 2910 series driver while maintaining the same footprint and pricing.



#### Key Features

- Up to 500MHz center frequency
- Selectable modulation input
- Adjustable RF power up to 8 Watts
- Rise time as low as 4 ns
- Optional external clock synchronization

#### Key Benefits

- Proven reliability
- Consistent performance
- Lower power consumption
- Test documentation
- One year limited warranty

#### Applications

- Micromachining
- Materials processing
- Laser displays
- Printing
- Heterodyne interferometry
- Pulse picking

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### 3910 Preliminary Driver Specifications

Parameter	Performance
Center frequency	45 - 500 MHz fixed
RF output	0.25 - 8.0 Watts adjustable (at +28 V)
Input voltage +Vcc	+24 to +28 V
2 <sup>nd</sup> harmonic level	< -20dBc
Output VSWR	1.5:1 max
Output waveform	Sinusoidal
Rise / fall time	4 nsec max (frequencies $\geq$ 250 MHz)
Contrast ratio	50 dB min
Analog input voltage	0 - 1 V
Analog input impedance	50 Ohms
Digital input voltage	Standard TTL levels
Digital input impedance	10 kOhms
Frequency stability	+/- 1.5 ppm over temp
Frequency accuracy	+/- 1%
Thermal management	Conduction cooled heat sink
Operating temperature range	10°C to 60°C

**Model Code Generation:**

The model code will be entered as the description field.

Sample: 1200AFP-AD-2.5-40EC-24V

