

# Automatic Mach Zehnder BIAS Control

## Features

- ✓ software configurable support of single & dual-pol IQ or Intensity Mach Zehnder Modulators
- ✓ **No dependency on applied modulation format and RF amplitude**
- ✓ supporting all higher level modulation formats
- ✓ No user tweaking for optimal setting required
  - ✓ Fast and simple switching between modulation formats
- ✓ Zero Noise feature
- ✓ No external Tap Photodiode required
- ✓ Extremely wide dynamic range of feedback tap
- ✓ Easy-to-Use GUI provided
- ✓ USB, Ethernet & UART interface for remote control
- ✓ SCPI Style remote control command set, LabView® drivers supplied

## Applications

- ✓ LiNbO<sub>3</sub>, InP, GaAs modulators
- ✓ Generation of advanced modulation formats (QPSK, 8-PSK, 16-QAM, ...)



The ID Photonics automatic bias controller (ABC) is designed to lock the operating point of Mach-Zehnder modulators to ensure stable optimal performance over time and environmental conditions.

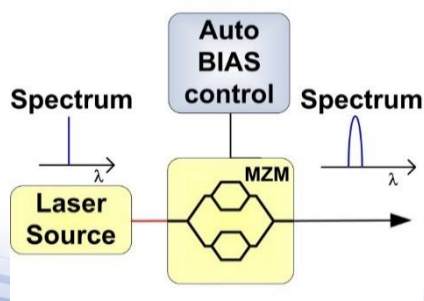
It covers a wide variety of applications from single polarization Intensity Modulators to polarization multiplexed IQ Modulators by simple user reconfiguration in software.

For IQ modulators, this unique design provides a **stable tracking of optimal operating point for arbitrary RF input signals** such as QPSK, QAM-xx or Nyquist shaped signals without requiring manual tweaking of parameters. This enables stable operation especially when switching between modulation formats.

A zero noise feature allows achieving optimal and repeatable performance.

A GUI is provided for instant access and a SCPI style command set provides extensive control status information and configurations such as locking status.

Inquire with us for a detailed specification sheet and performance results.



Application Example

# Specifications

Parameter	Specification
Supported modulator Types	(Single & Dual Pol.) - IQ or Intensity Mach Zehnder
Supported modulation formats	All, No dependency
Max. BIAS Voltage, differential	Up to +/-30V, limit customer settable
Feedback detector type	MZM internal or external tap, 1 detector per Polarization possible
Feedback detector current range	1uA - 2mA
Feedback detector dynamic range	26dB
Required feedback detector bandwidth, 3dB	>100kHz
Interfaces	USB, Ethernet, UART
Operating Temperature	+5 to +60°C non-condensing
Storage Temperature	-20°C to 60°C
Size of device (H x W x D)	300 x 140 mm (19 x 4 inch)
Power Supply	Primary 9V – 36V, 3A AC Adaptor 10-240 VAC, 0.8A, 50/60Hz

**Inquire with us for an extended data sheet**

## Ordering Information

ABC	-BPC	-XX	-X
Article	-	Type	AC adaptor cable type
Automatic BIAS control	-	13: benchtop version, 1 optical feedback channel	C: Europe A: US, Asia D: UK

### Contact information

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