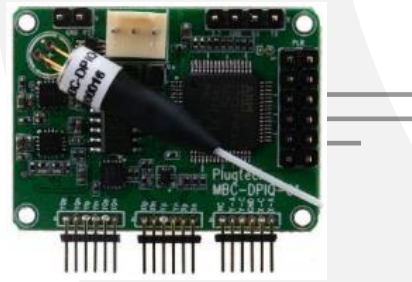




# BCB-DPIQ



## Ultra Compact DP-IQ Modulator Bias Controller

### OVERVIEW

Optilab BCB-DPIQ is specially designed Automatic Bias Controller for DP-IQ modulator. It is compact in volume and ensure a stable operation state in various operating environments as well as for communication systems. Based on its fully digitized signal processing method, the controller can provide ultra stable performance. The controller injects a low frequency, low amplitude dither signal together with a bias voltage into the modulator. It keeps reading the output from the modulator and determines the condition of the bias voltage and the related error. A compensate bias voltage will be applied afterwards according to the previous measurements ensuring the DP-IQ modulator to work under a proper bias voltage. Contact Optilab for more information.

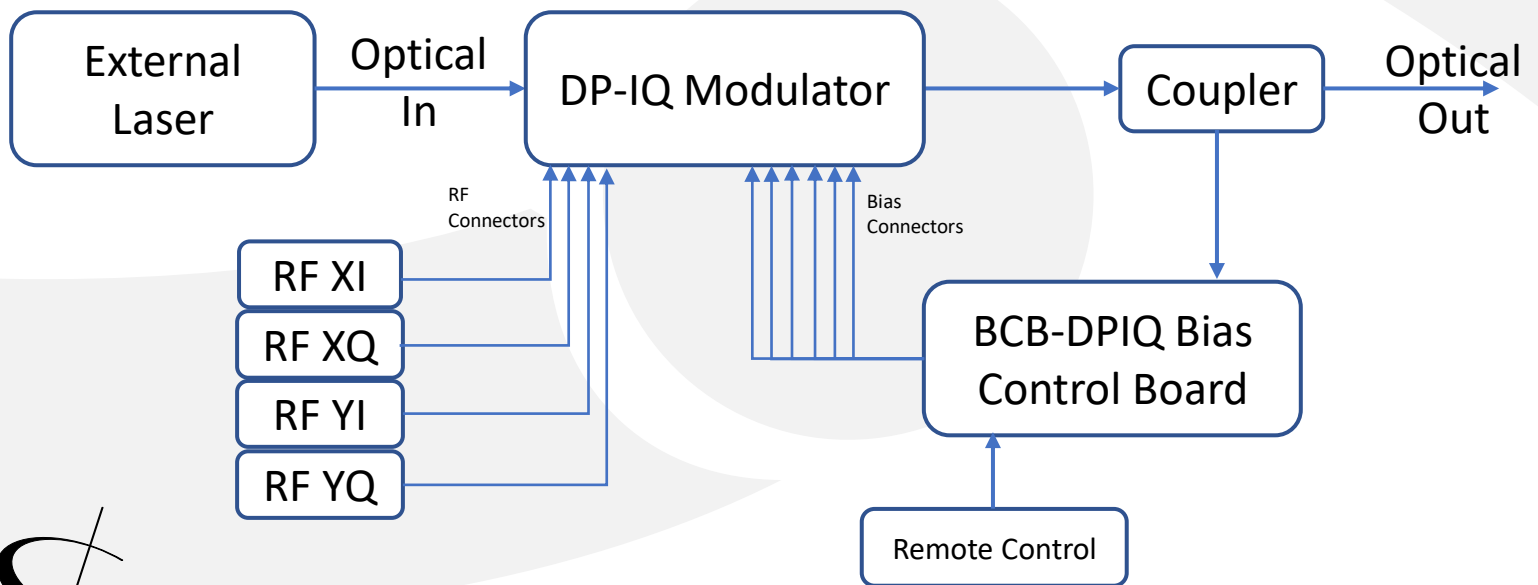
### FEATURES

- Six bias voltages maintained and monitored for DP-IQ modulators.
- Modulation format independent for QPSK, QAM, OFDM, SSB
- Fully automatic biasing, with optional manual bias feature
- Low profile: 40mm(W) x 29mm(D) x 8mm(H)

### USE IN

- Coherent Transmission
- LiNbO3 and other DP-IQ modulators
- Research & Development
- Optical communications

### APPLICATION DIAGRAM





# BCB-DPIQ

## SPECIFICATIONS

Modulator Type	Bias Controller
I, Q arms are controlled on Null(Minimum) or Peak(Maximum) point	
Extinction Ratio	50 dB Max
P arm is controlled on Q+(right quadrature) or Q-( left quadrature) point	
Accuracy at Quad	-2° to +2°
Stabilization time	50 s typ. 55 s max
Positive power voltage	+15 typ. +15.5V max
Positive power current	30 mA max
Negative power voltage	-15.5 to -14.5 V
Negative power current	15 mA
Output voltage range of YI/YQ/XI/XQ	+14.5 V max
Output voltage range of YP/XP	+13 V max
Dither amplitude	1%V <sub>r</sub> typ.
Input optical power <sup>3</sup>	-30 to -8 dBm
Input wavelength	1650nm max

## GENERAL

## MECHANICAL

Operating Temperature	-10°C to +50°C
Storage Temperature	-20°C to +80°C
Dimensions (W x D x H)	40mm x 29mm x 8mm

