

nicslab

XSOM[®]

System-on-Module for Driving Photonic Integrated Circuits



Simplify System Design, Reduces Costs

Wide Voltage and Current Range (± 20 V, 300 mA)

Scalable for High-Density Integrated Photonics

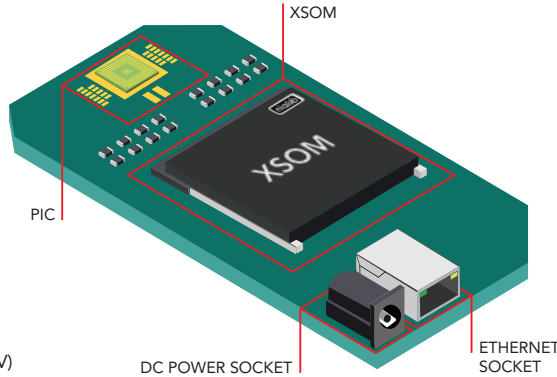
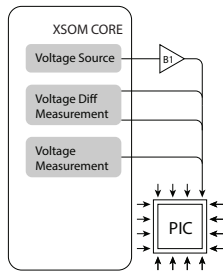
High Channel Count per Module (16 Channels)

Faster Update and Sampling Rate (100 KHz)

XSOM

A versatile electronic component designed for seamless integration, helping innovators develop advanced photonic devices.

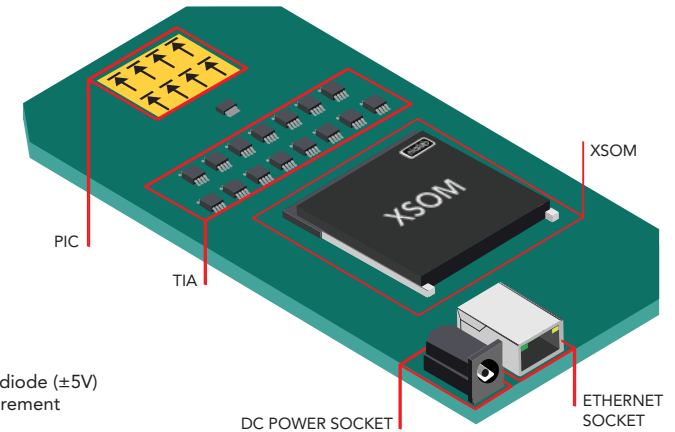
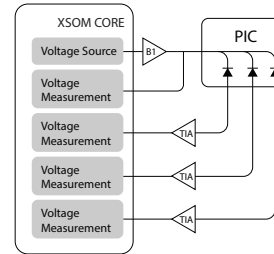
CIRCUIT DIAGRAM:



SPECIFICATIONS:

16 Channels 16-bit Voltage Output ($20\text{ V} \pm 20\text{ V}$)
 16 Channels 16-bit Voltage Measurement ($20\text{ V} \pm 20\text{ V}$)
 16 Channels 16-bit Current Measurement ($10\text{ mA} \pm 10\text{ mA}$)

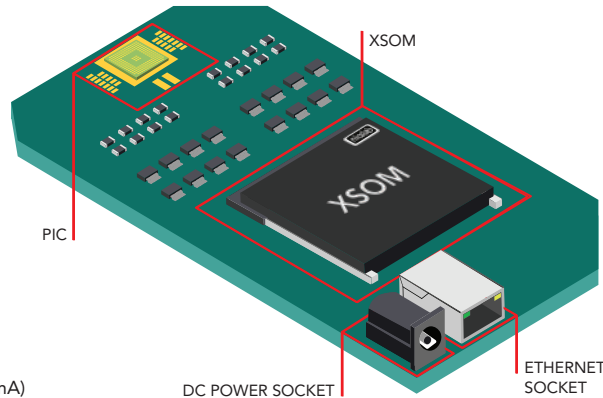
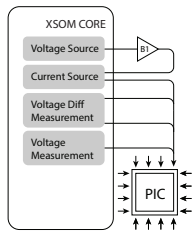
CIRCUIT DIAGRAM:



SPECIFICATIONS:

1 Channel 16-bit Voltage Bias for Photodiode ($\pm 5\text{ V}$)
 15 Channels 16-bit Photocurrent Measurement by measuring Voltage from TIA

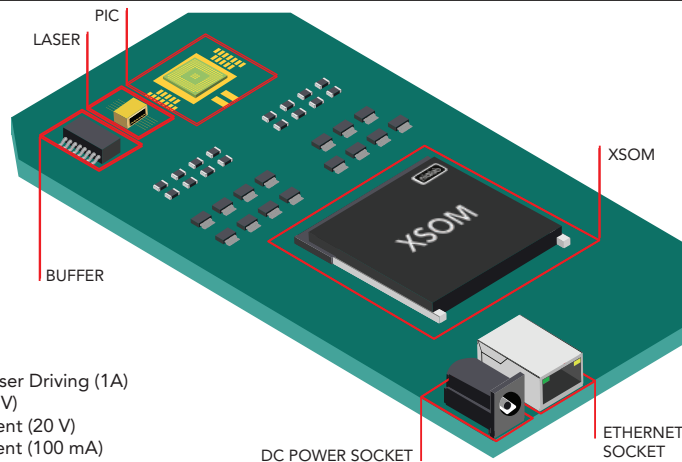
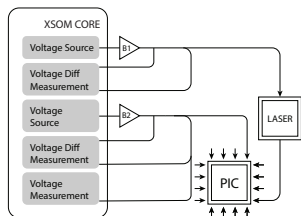
CIRCUIT DIAGRAM:



SPECIFICATIONS:

16 Channels 16-bit Voltage Output (20 V)
 16 Channels 16-bit Current Output (200 mA)
 16 Channels 16-bit Voltage Measurement (20 V)
 16 Channels 16-bit Current Measurement (200 mA)

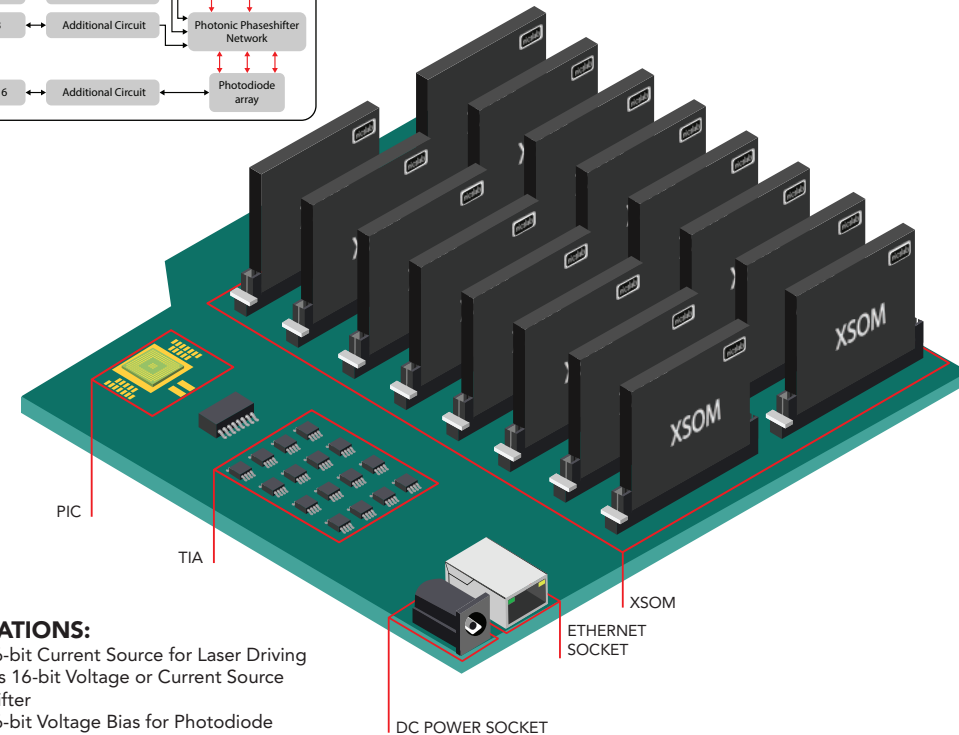
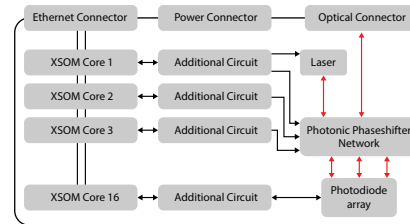
CIRCUIT DIAGRAM:



SPECIFICATIONS:

1 Channel 16-bit Current Source for Laser Driving (1 A)
 15 Channels 16-bit Voltage Source (20 V)
 15 Channels 16-bit Voltage Measurement (20 V)
 15 Channels 16-bit Current Measurement (100 mA)

CIRCUIT DIAGRAM:



SPECIFICATIONS:

1 Channel 16-bit Current Source for Laser Driving
 254 Channels 16-bit Voltage or Current Source for Phase Shifter
 1 Channel 16-bit Voltage Bias for Photodiode
 16 Channels 16-bit Photocurrent Measurement

DEFAULT SPECIFICATIONS:

INDICATOR	SPECIFICATION		NOTES
Communication Port	Ethernet/UART	Installed on extension board	
Connector	SO-DIMM	Connection to extension board	
Voltage Output	20 V/±20 V	16-bit resolution 2 feedback control options for integrating with other circuit. (max. current 10 mA)	
Current Output	300 mA @ 30 V	16-bit resolution, require external buffer	
Voltage Measurement	20 V/±20 V	16-bit resolution	
Differential Voltage Measurement	$V_{diff} = 0.05\text{ V}$ $V_{COM} = \pm 20\text{ V}$	16-bit resolution	
Sampling/Update Rate	100 KHz		
Dimension	82×127 mm		

Our team provides custom expansion board design and manufacturing services based on your unique specifications



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