nicslab

XDAC®
MULTICHANNEL SOURCE MEASUREMENT UNIT

nicslab

XDAC-120U-R4G8

ETHERNET   USB

PRODUCT
See more details on:
www.nicslab.com

VARIED OUTPUT	MULTI-PLATFORM	INTEGRATED OPERATION

Available in various channel outputs :

4, 8, 40, 80 120, 1000+

Compatible with many operating systems :

Windows, MacOS, & Linux

Stackable with other types of XDAC

XDAC-U, XDAC-MUB, & XDAC-DIFF

Featured in various of output system options :

Unipolar, Bipolar, & Differential output

Programmable code via SCPI, support multiple programming languages :
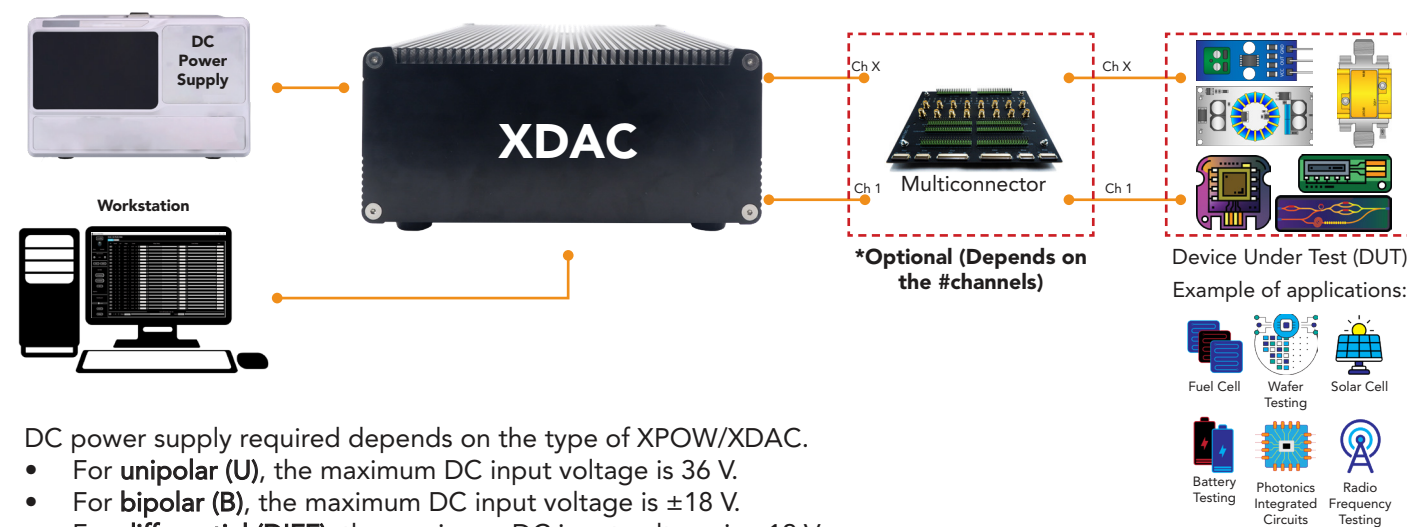
Python, C#, Matlab, & LabVIEW

Featured in various control system with just only a single software.

20X MORE COMPACT, 3X COST EFFICIENT AND SCALABLE UP TO 1000+

XDAC®

HOW TO USE XDAC ?

DC Power Supply

Workstation

XDAC

Ch X
Ch 1   Multiconnector   Ch X
Ch 1

*Optional (Depends on the #channels)

Device Under Test (DUT)
Example of applications:

Fuel Cell   Wafer Testing   Solar Cell

Battery Testing   Photonics Integrated Circuits   Radio Frequency Testing
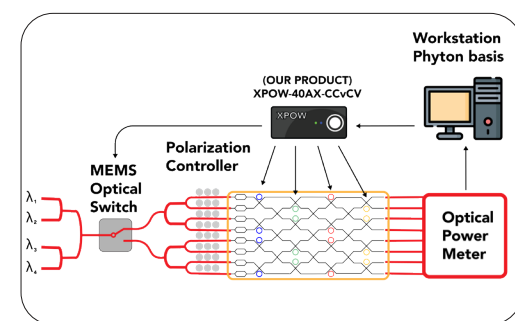
DC power supply required depends on the type of XPOW/XDAC.
- For **unipolar (U)**, the maximum DC input voltage is 36 V.
- For **bipolar (B)**, the maximum DC input voltage is ±18 V.
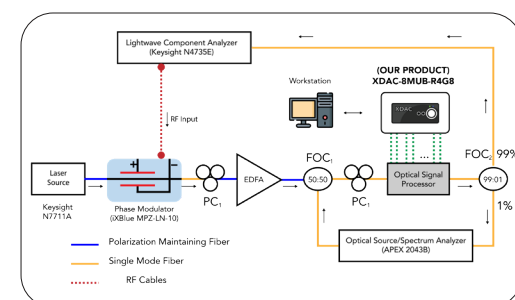- For **differential (DIFF)**, the maximum DC input voltage is ±12 V.

Typical minimum current for power up is ~3A, depending on the channel density.
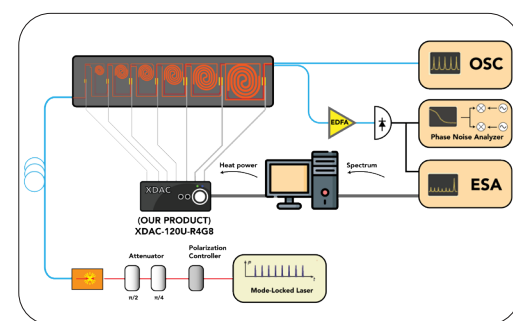
USE CASES

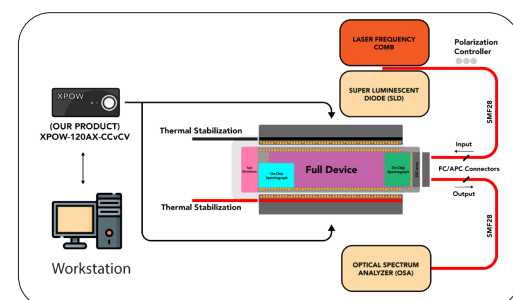### Deep Learning Accelerator
AIST & University of Tokyo

Aerospace & Communication
EPFL

Photonic Wafer Testing

Photonic Based RF Filter for 5G
IIT Madras

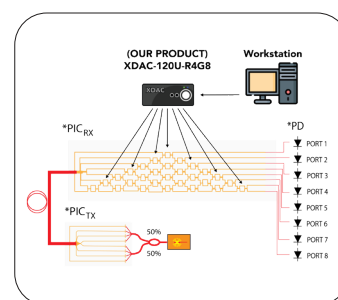### Spectrograph for Exoplanet Exploration
NASA & Caltech

Fiber Optic Transceivers
The University of Hongkong

SOFTWARE FEATURES

Basic Features
- Slider
- Enable SCPI Command
- Voltage Reading
- Current Reading

Premium Features
- Basic Features +
- Notes
- Lock
- Save & Load
- Record

- Sequence
- Programming Template
- Range Span Configuration
- Settings (Voltage & Current Limit, Voltage Range, Reading Speed)

Scan the QR-code in the cover page **for the highlight of XDAC's software**.

TESTIMONIES

" This product is incredibly convenient and straightforward. We especially appreciate the realtime voltage display alongside set values in the GUI, the efficiency of ribbon cable connections for swift board/chip swapping, and compatibility with Python for parameter setting and querying

Gregory P. Sercel & Nemanja Jovanovic Ph.D
Caltech/JPL NASA

" I appreciate the Python API, the seamless plug-and-play functionality, ease of use, reliability, and quality - reasons why I've chosen to use it for several projects.

Kees Franken,
Fellow in Applied Physics, Harvard University

" The device is nice and working well. It was easy to program it with Python using my custom code.

Hitesh Rahangdale, Postdoc,
University of Tennessee, Knoxville

" I use a 3-channel XPOW as bias controller for an IQ optical modulator and it works wonderfully. Because XPOW is so compact, I can package it in the same box as my modulator. The software user interface is simple yet so good and intuitive. These features are critical for me in the device prototyping project I have with a few defense contractors in the US. I ended up purchasing a couple of XPOW units and shipping them to these contractors together with the prototype. It is definitely a powerful solution for the control of optical modulators.
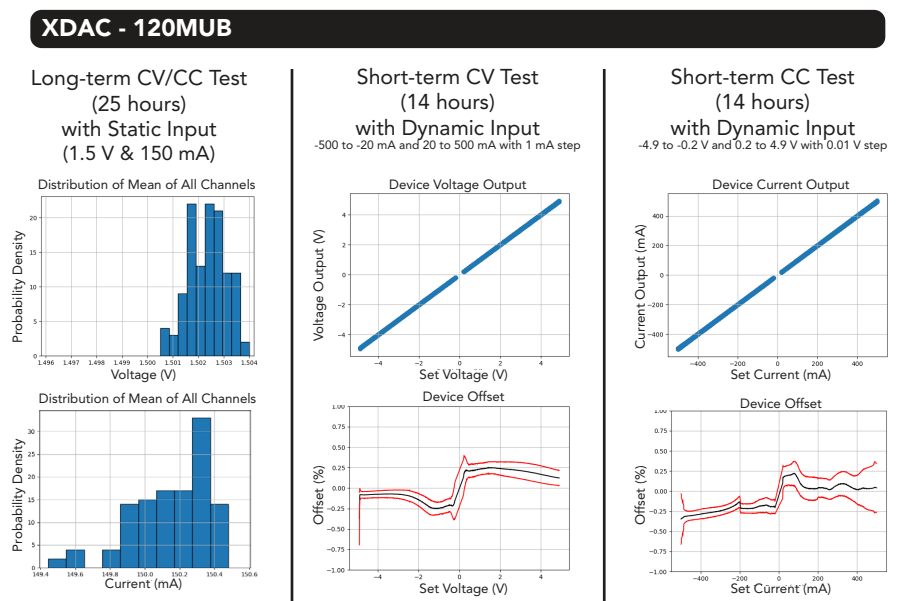
Dr. David Marpaung,
Professor at University of Twente

CUSTOMERS

Trusted by technology leaders in 15+ countries

Instrumentation

NASA, SMART PHOTONICS, 東京大学 THE UNIVERSITY OF TOKYO, THE UNIVERSITY OF ARIZONA, R·I·T, NeoPhotonics, HYPERLIGHT, UNIVERSITY OF TWENTE, Caltech

Quantum & AI

PETRA, EPFL, AIST, 中国航天, MIT Lincoln Laboratory, LUMINOUS, Keio University 慶應義塾大学, XANADU

Telecommunication & Data Center

NTT, NVIDIA, Mellanox, HARVARD UNIVERSITY, NICT 情報通信研究機構, MITSUBISHI ELECTRIC, KDDI, cudos, FUJITSU, DEVCOM, OKI, NOKIA, Bell Labs, Hewlett Packard Labs

TYPICAL PERFORMANCE

XDAC - 120MUB

Long-term CV/CC Test (25 hours) with Static Input (1.5 V & 150 mA)

Short-term CV Test (14 hours) with Dynamic Input -500 to -20 mA and 20 to 500 mA with 1 mA step

Short-term CC Test (14 hours) with Dynamic Input -4.9 to -0.2 V and 0.2 to 4.9 V with 0.01 V step

SPECIFICATIONS

INDICATOR	XDAC		
	MUB	U	DIFF
Voltage & Current Resolution	16-bit	16-bit	16-bit
Output	Bipolar	Unipolar	Differential
Output Range	±16 V ±500 mA	0–34 V 0–300 mA	±18 V ±500 mA
Intuitive GUI	Yes	Yes	Yes
SCPI command support (Python, C#, Matlab, and Labview)	Yes	Yes	Yes
Sharing Ground	Yes	Yes	No
Premium Range	±2.5 V ±5 V ±10 V	0–5 V, 0–10 V, 0–20 V, 0–200 mA, 0–100 mA, 0–50 mA	±2.5 V ±5 V ±10 V
Processor	Quad Core Cortex 64-bit ARM v8		
Port	Ethernet		

We are also open for **custom requirement** for your needs.

PRODUCT DIMENSIONS

	XDAC-U			XDAC-MUB			XDAC-DIFF	
Number of Channels	8	40	120	8	40	120	8	40
W (mm)	106	232	232	106	232	232	141	232
L (mm)	164+37.68 (Front Board)	333	450	186.99+35 (Front Board)	333	450	186.99+35 (Front Board)	450
H (mm)	61.1	102	102	91	102	102	91	102

www.nicslab.com

We also available at :

amazon
DigiKey

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