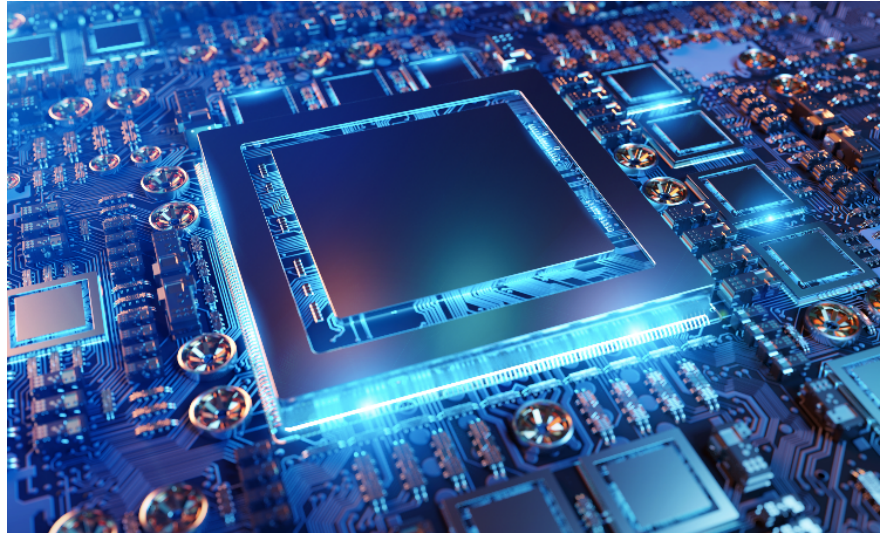


nicslab

## UNLOCKING THE POWER OF PHOTONICS



Nicslab, a fabless chip company, developing electronic and photonic integrated circuits for future optical solutions in data centers, AI and quantum computing. Our solution controls the light to process information, transfer data faster and more efficiently.

[sales@nicslab.com](mailto:sales@nicslab.com)  
[www.nicslab.com](http://www.nicslab.com)

Nicslab Ops, Inc. USA



## OUR PRODUCTS & SERVICE

- Scalable photonic integrated circuits controller
  - XDAC
  - XPOW
  - Custom / OEM / ODM /Integration
- FPGA - ASIC electronic photonic design service
  - RTL verification / IP integration
  - Silicon photonic heterogeneous integration

The Nicslab logo consists of the word "nicslab" in a white, lowercase, sans-serif font, centered within a black rounded rectangle with a thin white border.A red ribbon graphic with the words "NEW PRODUCT" in white, uppercase, sans-serif font, angled upwards from left to right.

# XDAC

## SCALABLE PHOTONIC INTEGRATED CIRCUIT CONTROLLER

The XDAC system is a complete, compact, programmable, affordable and easy to use multichannel source measurement system for low power applications from simple electronic circuits to complex photonic integrated circuits.



[sales@nicslab.com](mailto:sales@nicslab.com)  
[www.nicslab.com](http://www.nicslab.com)

## Better control, more accurate with rich features



- Enable range span configuration through software
- High-resolution control with 16-bit standard
- High scalability 120 channels in a box
- Flexible unipolar and bipolar output
- Gigabit Ethernet
- Functional GPIO
- USB ports

# Your new source measurement system

The scalability, flexibility, and performance of the XDAC revolutionize the conventional source measurement unit. For the first time, we've built a complete scalable source measurement system experience. Whether you're sourcing devices, measuring parameters, automating experiments or analyzing data, you'll find the easy to use and flexible experience - but on a compact and much more cost-effective instrument.

## Real-time monitoring



XDAC equipped with high responsivity sensors per channel and high resolution converter combine with high-speed real-time voltage and current reading.

## Easy to use GUI



We are making the graphical user interface simple with many features depend on what you need.

## Flexible output range



Your XDAC comes with range span configuration technology that enables the user to select the output range with software without loose control of the high-resolution feature.

## High scalability



Start from 8 channels output per unit to 120 channels in a single box. It also enables distributed control for the larger channels.

# Graphical User Interface (GUI)

The screenshot displays the Nicslab XDAC-120MUB-R4G8 GUI. The interface is dark-themed and includes a sidebar on the left with a power button, 'SAVE' and 'UPLOAD' buttons, and a vertical menu with 'Auto Mode', 'CV SEQUENCE', 'CC SEQUENCE', 'RUN', 'RECORD', and 'SETTING' buttons. Below the menu is a 'Value Increment' section with a dropdown set to '0.001' and a 'Status: Connected' indicator. The main area features a table with 20 channels, each with a lock checkbox, voltage and current readouts, and sliders for voltage and current settings. The 'Upgrade' button is in the top right corner.

| Channel | Lock                     | Voltage | Current  | Voltage Settings | Current Settings | Notes |
|---------|--------------------------|---------|----------|------------------|------------------|-------|
| 1       | <input type="checkbox"/> | 0.000 V | 0.000 mA | 0.000            | 0.000            |       |
| 2       | <input type="checkbox"/> | 0.000 V | 0.000 mA | 0.000            | 0.000            |       |
| 3       | <input type="checkbox"/> | 0.000 V | 0.000 mA | 0.000            | 0.000            |       |
| 4       | <input type="checkbox"/> | 0.000 V | 0.000 mA | 0.000            | 0.000            |       |
| 5       | <input type="checkbox"/> | 0.000 V | 0.000 mA | 0.000            | 0.000            |       |
| 6       | <input type="checkbox"/> | 0.000 V | 0.000 mA | 0.000            | 0.000            |       |
| 7       | <input type="checkbox"/> | 0.000 V | 0.000 mA | 0.000            | 0.000            |       |
| 8       | <input type="checkbox"/> | 0.000 V | 0.000 mA | 0.000            | 0.000            |       |
| 9       | <input type="checkbox"/> | 0.000 V | 0.000 mA | 0.000            | 0.000            |       |
| 10      | <input type="checkbox"/> | 0.000 V | 0.000 mA | 0.000            | 0.000            |       |
| 11      | <input type="checkbox"/> | 0.000 V | 0.000 mA | 0.000            | 0.000            |       |
| 12      | <input type="checkbox"/> | 0.000 V | 0.000 mA | 0.000            | 0.000            |       |
| 13      | <input type="checkbox"/> | 0.000 V | 0.000 mA | 0.000            | 0.000            |       |
| 14      | <input type="checkbox"/> | 0.000 V | 0.000 mA | 0.000            | 0.000            |       |
| 15      | <input type="checkbox"/> | 0.000 V | 0.000 mA | 0.000            | 0.000            |       |
| 16      | <input type="checkbox"/> | 0.000 V | 0.000 mA | 0.000            | 0.000            |       |
| 17      | <input type="checkbox"/> | 0.000 V | 0.000 mA | 0.000            | 0.000            |       |
| 18      | <input type="checkbox"/> | 0.000 V | 0.000 mA | 0.000            | 0.000            |       |
| 19      | <input type="checkbox"/> | 0.000 V | 0.000 mA | 0.000            | 0.000            |       |
| 20      | <input type="checkbox"/> | 0.000 V | 0.000 mA | 0.000            | 0.000            |       |

# Model Comparison

| XPOW  | XDAC-XU   | XDAC-XMUB   | XDAC-XMUB   |
|---|---|---|---|
| 8/40/120 Channels   | 8/40/120 Channels   | 8/40/120 Channels   | 8/40/120 Channels   |
| 16-bit resolution control   | 16-bit resolution control   | 16-bit resolution control   | 16-bit resolution control   |
| 8-bit AVR RISC-based microcontroller  | Quad core Cortex 64-bit ARM v8  | Quad core Cortex 64-bit ARM v8  | Quad core Cortex 64-bit ARM v8  |
| 0 - 36 Volt, 0 - 300 mA (Basic)<br>+<br>0 - 5 Volt, 0 - 10 Volt, 0 - 20 Volt, 0 - 200 mA, 0 - 100 mA, 0 - 50 mA (Premium feature) | 0 - 36 Volt, 0 - 300 mA (Basic)<br>+<br>0 - 5 Volt, 0 - 10 Volt, 0 - 20 Volt, 0 - 200 mA, 0 - 100 mA, 0 - 50 mA (Premium feature) | ±18 Volt , ±500 mA (Basic)<br>+<br>±2.5 Volt, ±5 Volt, ±10 Volt (Premium feature) | ±18 Volt , ±500 mA (Basic)<br>+<br>±2.5 Volt, ±5 Volt, ±10 Volt (Premium feature) |
| USB ports   | Gigabit Ethernet, USB ports   | Gigabit Ethernet, USB ports   | Gigabit Ethernet, USB ports   |
| Shared Ground   | Shared Ground   | Shared Ground   | Un-Shared Ground  |

## Software

- a Basic features: slider, voltage reading, current reading, enable SCPI command.
- b Premium features: Basic + notes, lock, save & load setting, record, sequence, programming template, range span configuration

\*Range span configuration: enables the user to select the output range with software without loose control of the high-resolution feature.

sales@nicslab.com  
www.nicslab.com

### Ordering Information:



800 Village Walk #316  
Guilford, CT 06437  
Ph: 203-401-8093

Email orders to: [sales@xsoptix.com](mailto:sales@xsoptix.com)  
Fax orders to: 800-878-7282