

Nexus, Pulse & UnicornOne

Comparison and Feature Set



Bismuth



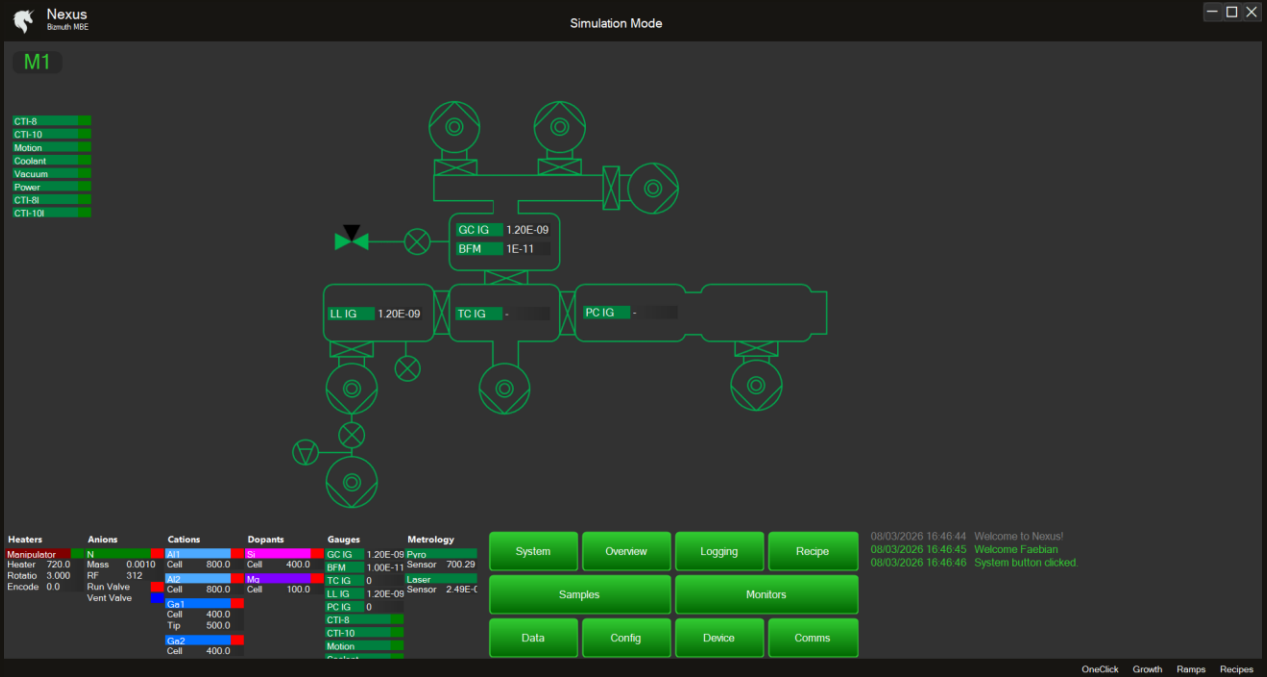
Comparison

Feature	Nexus	Pulse	Dual Nexus & Pulse	UnicornOne
Compatible with existing hardware	✓	✓	✓	✓
Integrated simulator	✓	✓	✓	✓
Digital twin	✗	✗	✗	✓
AI LLM assistant	✗	✗	⚠	✓
Custom AI/ML workbooks tools	✗	✗	⚠	✓
Rest API	✗	✗	⚠	✓
Process control	✓	✗	✓	✓
RHEED analysis	✗	✓	✓	✓
Advanced RHEED analysis features	✗	✗	✓	✓
Up to 5 metrology tools for advanced feedback	✗	✗	✗	✓
Automated BEP/Flux measurements	✓	✗	✓	✓
Python scripting recipes	✓	✗	✓	✓
RHEED function in scripting recipes	✗	✗	✓	✓
Anomaly detection	✓	✗	✓	✓
Consumable tracking	✓	✗	✓	✓
DIY device libraries	✓	✗	✓	✓

⚠ AI features available via additional annual subscription



Nexus



Legacy hardware compatibility

User Pain Points

Difficult training new users

Tedious manual labour

Lack of metrology integration

Automatic Beam Equivalent Pressure Measurements

Python script recipes

Sample tracking

Anomaly detection

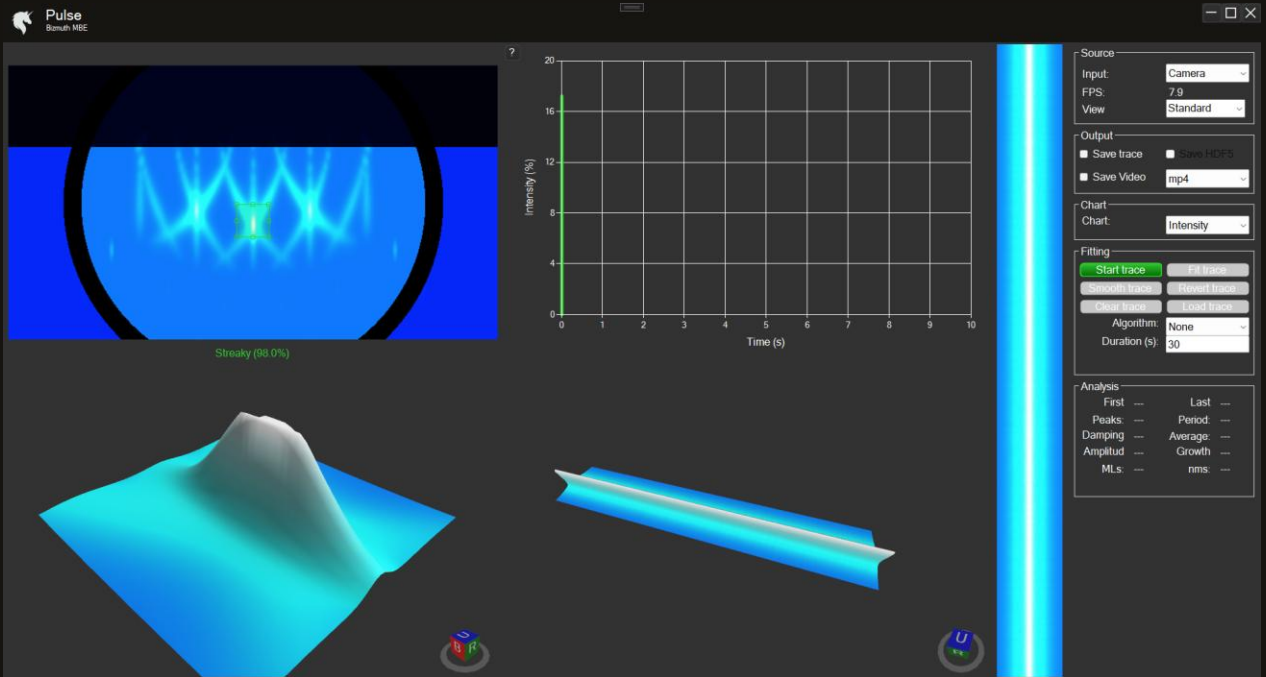
Consumable tracking

DIY device libraries

Compatible with all existing hardware



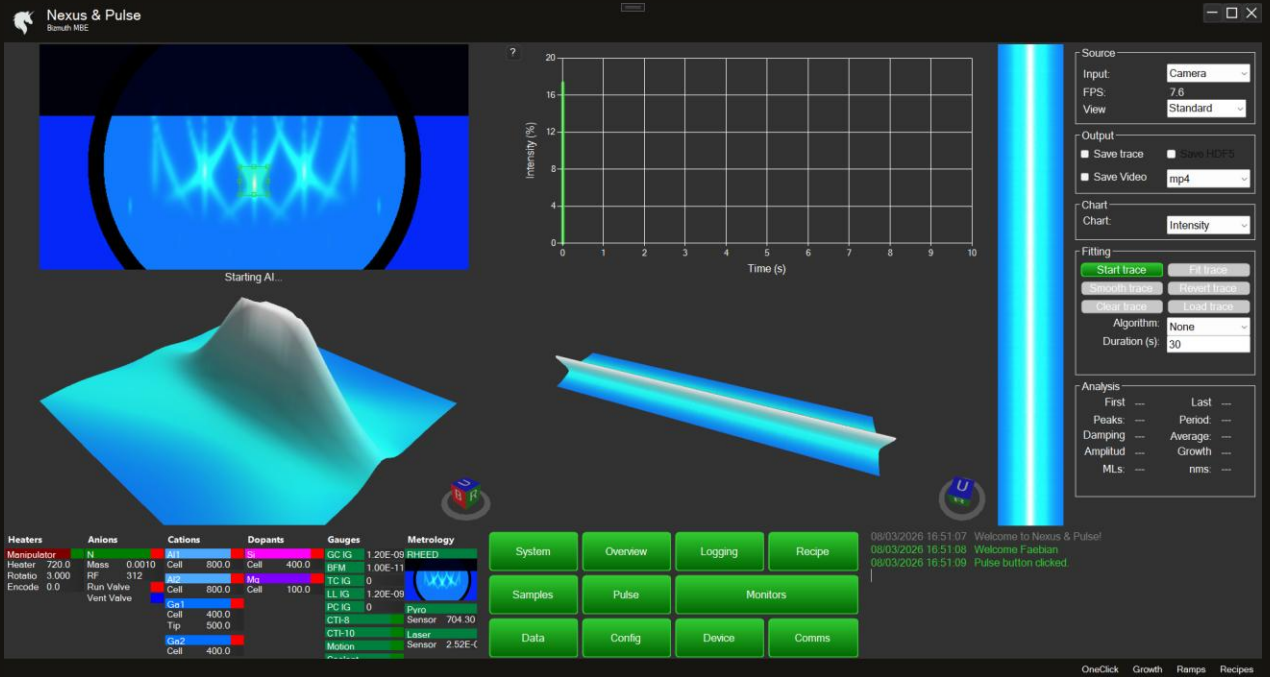
Pulse



- HDR RHEED image enhancer
- Save lossless videos and HDF5 archives
- Live capture and playback modes
- False colour pallets / LUT libraries
- Broad range of analysis tool and export capabilities

Compatible with any Windows camera

Dual Nexus & Pulse



All the features of individual **NEXUS** and **PULSE**

+

Advanced RHEED recipe scripting functions

RHEED camera thumbnail

Automatic growth rate determination

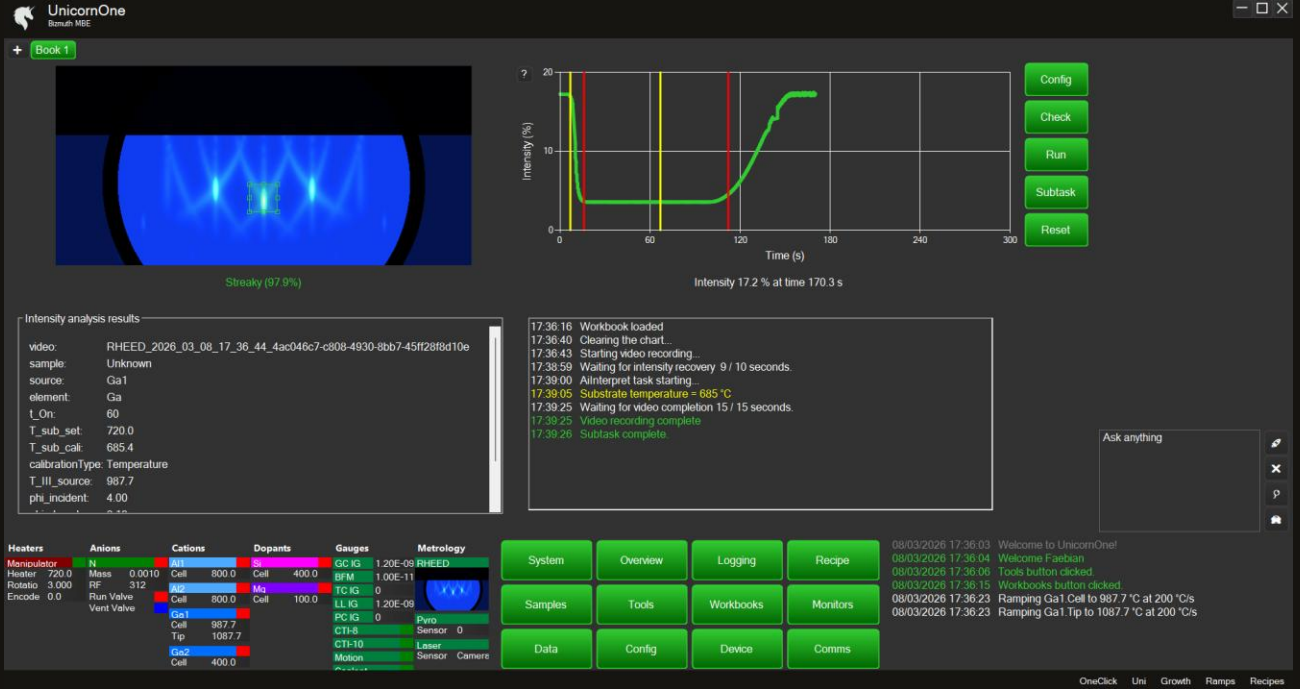
Advanced material specific fitting algorithms

for Nitrides, Oxides & 2D

The power of metrology integration



UnicornOne



All the features of “**dual NEXUS & PULSE**”

+

AI LLM assistant

Custom AI/ML workbooks tools

Integrate up to **5 metrology tools** for a advanced feedback: RHEED, Laser reflectance, pyrometry

Rest API for integration with lab software, databases, and facility tools

The LabOS: brain of your lab