

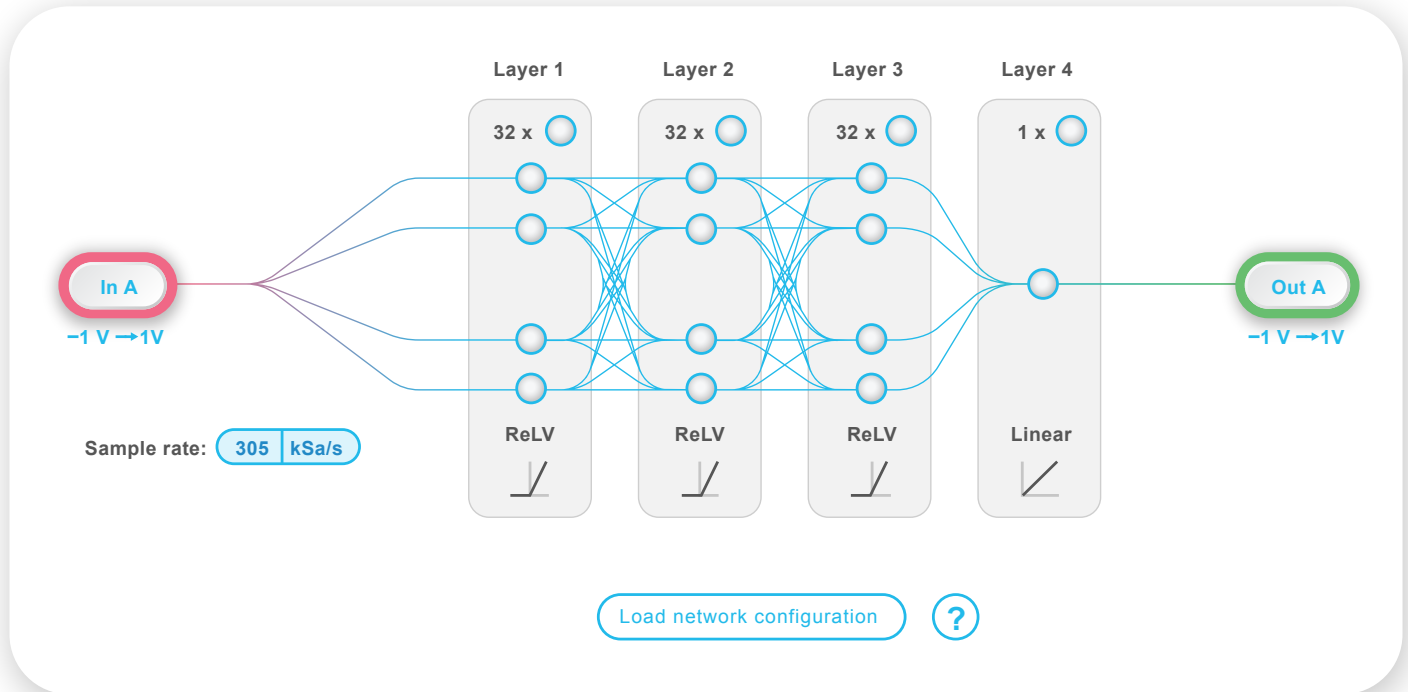


Moku:Pro Instrument Datasheet

Neural Network



The Moku:Pro Neural Network enables fast, agile implementation and evaluation of user-defined neural networks utilizing Multi-instrument Mode for Moku:Pro. Design and train your network configuration offline. Then, upload it to the Moku app for real-time Neural Network operation.



Max number of layers
5

Max neurons per layer
100

Maximum throughput
Up to 305 kHz sample rate in all modes and network sizes

Number inputs
1 to 4 in parallel,
1 to 100 in serial

Number of outputs
1 to 4 in parallel,
1 to 100 in serial

Precision
18-bit fixed-point representation

Features

- Training
 - Collect training data on any Moku device or simulate a desired complex process
 - Train the Neural Network offline
 - Upload the network configuration to a Moku:Pro device for real-time performance
- Datalog network outputs with the Moku Data Logger, Oscilloscope, or other instruments
- Examples available, including a user guide

Specifications

- Activation functions:
 - Nonlinear: ReLU, Softsign, Tanh, Sigmoid
 - Linear and (future) arbitrary
- Microsecond latency

Applications

- Control systems
- Sensor conditioning
- Signal classification
- Signal denoising