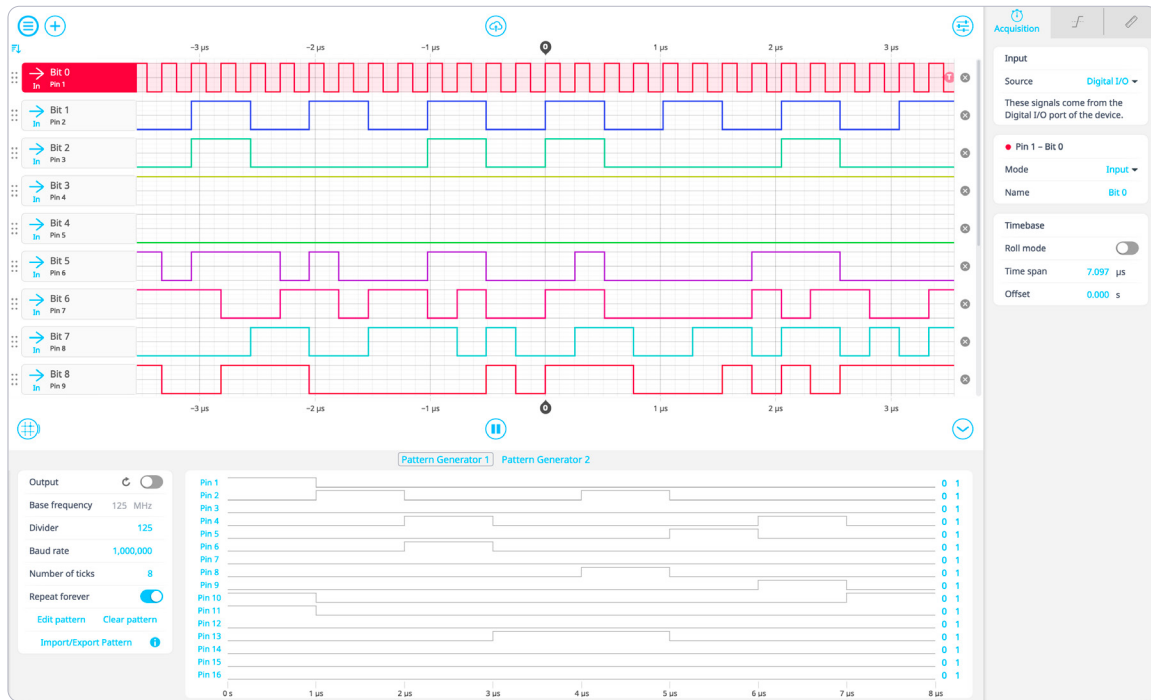Moku:Go Instrument Datasheet

Logic Analyzer

The Moku:Go Logic Analyzer is equipped with 16 bidirectional digital I/O with sampling rates up to 125 MSa/s. It supports 3.3 V logic levels (5 V tolerant) and 250k × 16 input sample depth. Two independent protocol channels can be added to decode UART, I2C, I2S, and SPI. Common measurements are readily available and can be shared along with data and screenshots to your computer or cloud. The Logic Analyzer is an invaluable tool for monitoring and debugging custom designs from Moku Cloud Compile, significantly accelerating the development process.

Sample Memory Depth	Pattern Memory Depth	Input/Output Sampling Rate	Supported Protocol	Protocol decoding rate
250k × 16	**32,764 × 16**	**125 MSa/s**	**UART, I2C, I2S, SPI**	**> 5 MHz**

Features

- 16 channel bidirectional digital I/O with sampling rates up to 125 MSa/s.
- 16-bit input bus and two 16-bit Pattern Generators in Multi-instrument Mode
- Supported Protocol: UART, I2C, I2S, and SPI
- Supported Math: AND, OR, XOR, NAND, NOR, XNOR
- Powerful, intuitive graphical user interface with Python, MATLAB, and LabVIEW API support.

Specifications

- Sample memory depth: 250k × 16
- Pattern memory depth: 32,764 × 16

Logic Analyzer

- Logic level: 3.3 V, 5 V tolerant
- Impedance: 1 MΩ
- Sampling rate: up to 125 MSa/s
- Maximum clock frequency: 62.5 MHz*

Pattern Generator

- Sampling rate: up to 125 MSa/s
- Logic level: 3.3 V
- Impedance: 400 Ω
- Maximum clock frequency: 612 MHz*

Protocol Decoder

- Max decode rate: > 5 MHz (protocol dependent)

Applications

- Custom design simulation, debugging and monitoring
- IC testing and validation
- Digital circuit design
- Digital communication diagnosis
- Protocol decoding
- Signal simulation

Please note that a high-speed cable is required to achieve the maximum clock rate.