

# PX2816B

## Protocol Exerciser



エキササイザ部はI3CやI<sup>2</sup>C等のコントローラ/ターゲット等を構成できて動作時にはロジアナ機能で信号波形キャプチャとプロトコルデコードができる。信号発生と解析機能が一体化した新ツール。LA/PAオプション部は、独立した16chのロジアナ/プロアナとして既存機種で実績のある機能を提供する。詳細な製品構成については立野電腦(株)へお問い合わせください。

### Data Transmission

- **Interface:** USB Type-C
- **Throughput:** Up to 5Gbps

### 8-Channel Exerciser POD Options: MIPI I3C, I<sup>2</sup>C, UART

- Capable of simulating protocol signals on up to 8 channels, and can be configured as either a Controller or Target device.
- Can edit topology of internal devices, where each device has separate settings.
- Can edit bus output voltage and operating modes (Pull up/down, etc.).
- Controller Mode Simulation
  - Provides Quick settings (Template) for rapid script generation and editing.
  - Provides Design wizard for editing transmission protocol data.
- Target Mode Simulation
  - Supports different Target types in various different communication protocols.
- SDK Mode
  - Supports Python Automation control API and examples.
- Logic Analysis/Protocol Analysis Functions
  - Maximum sampling rate 2GHz
  - When using with exerciser, can simultaneously observe signal waveforms and analysis results
  - Can be used independently as logic analyzer or protocol analyzer
  - Includes communication protocol decode and protocol analyzer functions
  - Supports real-time Live Mode decoding.
  - Can view decoding and packet statistics reports while transmitting protocol data.

### 16-Channel Logic Analyzer / Protocol Analyzer (Optional)

- Supports Acute 16-channel LA/PA POD.
- Supports various Protocol Trigger/Decode functions.

### Solid-State Drive (SSD) Storage Support

- Users need to purchase and install a compatible M.2 2280 PCIe Gen3 to Gen5 SSD.
- The SSD is used only in LA/PA logger mode, and its file system adopts Microsoft exFAT technology for storing large amounts of data.

### Power Supply and Power Consumption Measurement

- Provides one set of Power Supply (DC) output, configurable 0.1V - 5V DC output.
- When using power supply, can simultaneously measure power consumption.

### General Purpose Input/Output (GPIO)

Provides two sets of GPIO outputs, configurable as Reset signal or general I/O control.

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| Protocol         | Speed          | Vdd    | Pull-Up Resistance | Internal Devices           |
|------------------|----------------|--------|--------------------|----------------------------|
| I <sup>2</sup> C | 50KHz~1000KHz  | 1.8~5V | 100~100KΩ          | 4<br>(Controller + Target) |
| MIPI I3C         | 0.1MHz~13MHz   | 1.2~5V |                    |                            |
| UART             | 110~921600 bps | 1.8~5V | N/A                | 1                          |

## MIPI I3C Specifications

- Supports I3C v1.2 Specification.
- Can dynamically configure simulated devices (types: I3C Primary Controller / I3C Secondary Controller / I3C Target / I<sup>2</sup>C Target).
- Can set device PID / BCR / DCR.
- Custom device address allocation table creation.
- Supports generating packet data in different modes.
- Supported Modes
  - I3C SDR Mode
  - I<sup>2</sup>C Legacy
- Supports I3C Target mode sending IBI / Hot Join and other Interrupts.
- Can dynamically adjust Clock Speed and detailed Timing settings.
- Can send command formats containing Errors (Parity, CRC, etc.).

## I<sup>2</sup>C Specifications

- External I<sup>2</sup>C devices auto scanning.
- Timing and Frequency adjustment.
- Support different register types of internal I<sup>2</sup>C node.
- Capable of simulating both Controllers and Targets.

## UART Specifications

- Support different baud rates and format for UART Packet.
- Capable to send packets with ASCII or HEX format.

## Packing List:

- Device



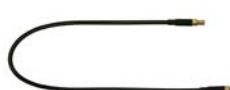
PX2816B unit



USB 3.0 cable



PD to DC Adapter Cable

Power Adapter  
(PD, 15V/3A)

Stack cable

- Exerciser POD (Option)



PX-POD



18.5cm Lead Cable



Grippers

- 16ch LA/PA (Option)



LA/PA-POD



Grippers



lead cables (LA20P x2)