



# Agilent N2102B Pattern Generator

**DISCOVER** the Alternatives...

## Industries and Applications

- Transceiver Test
- Telecommunication Equipment Test
- Fibre Channel, Ethernet, PON, Parallel Optics
- Multi-port system testing
- High port count burn-in test

## Product Description

The N2102B PXI Pattern Generator is capable of generating a number of low jitter patterns at rates up to 10.3125 Gb/s using an externally supplied clock. ActiveX Controls allow for easy software development and a graphical user interface is provided for manual operation of the module.



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### Models

|            |                              |
|------------|------------------------------|
| N2102B     | PXI Pattern Generator Module |
| N2102B-300 | 622 Mb/s to 10.3125 Gb/s     |

## Main Features and Benefits

| Product features  | Your benefit   |
|---|--|
| PRBS generations $2^n - 1$ , ( $n = 7, 9, 11, 15, 23, 31$ ); user defined patterns with 2048 bits max. length or 16 Kbytes if pattern length is dividable by 64 | Flexible, custom pattern generation  |
| 2-slot PXI module   | Minimum rack space   |
| Clock input   | Driven by the N2101B's clock output, the N2102B serves as a detached stimulus for the BERT |

Connector compatibility: cPCI, PXI-H, PXI-1

## Specifications and Characteristics

| Hardware                             |  |
|--------------------------------------|--|
| Size                                 | 2-slot module                                    |
| Bit rate operation                   | 622 Mb/s to 10.3125 Gb/s                         |
| Output rise/fall time (20% - 80%)    | 25 ps (max),<br>22 ps (characteristic)           |
| Output intrinsic jitter              | 2.5 ps RMS (max),<br>1.5 ps RMS (characteristic) |
| Output voltage range                 | 250 mV to 1 V pp                                 |
| Output voltage resolution            | 5 mV   |
| Pattern trigger/clock output voltage | 1 V pp (characteristic)                          |
| Clock input voltage range            | 500 mV to 1 V pp (characteristic)                |



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## Software

The N2102B Pattern Generator and its accompanying software fully comply with PXI specifications. The included Windows application enables the user to control the instrument without any software development required. An ActiveX Control makes integration into custom applications easy.

|  |   |
|--|---|
| Software operating systems                           | Microsoft Windows® XP (32-bit)<br>Windows 7 (32-bit, 64-bit)            |
| Standard compliant drivers                           | IVI-COM, IVI-C, LabVIEW, MATLAB   |
| Supported application development environments (ADE) | VisualStudio® (VB.NET, C#, C/C++), VEE, LabVIEW, LabWindows/CVI, MATLAB |
| Agilent IO Libraries                                 | Includes: VISA Libraries, Agilent Connection Expert, IO Monitor         |

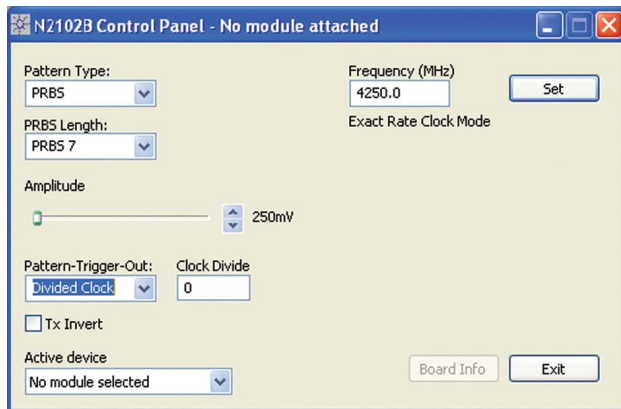


Figure 1. User Friendly Configuration Screen.

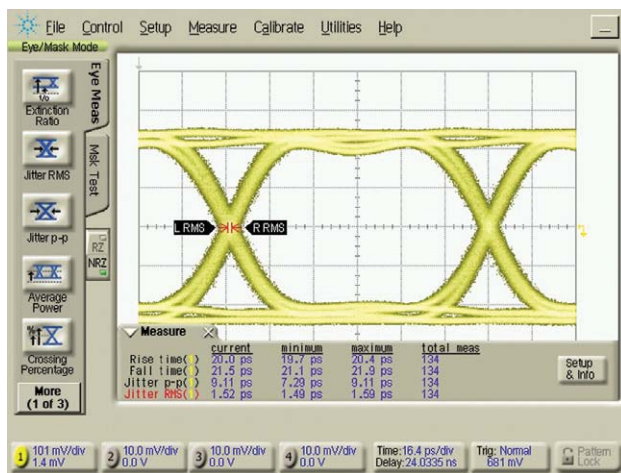


Figure 2. The N2102B eye output at 10.3125 Gb/s viewed on the DCA-J.

## Ordering Information

### Typical Product Configuration

| Model      | Description              |
|------------|--------------------------|
| N2102B     | PXI Pattern Generator    |
| N2102B-300 | 622 Mb/s to 10.3125 Gb/s |

### Related products

|        |                                     |
|--------|-------------------------------------|
| N2100B | PXI Digital Communication Analyzer  |
| N2101B | 10.3125 Gb/s Bit Error Ratio Tester |
| N2099A | PXI Synthesizer                     |

### Advantage Services: Calibration and Warranty

Agilent Advantage Services is committed to your success throughout your equipment's lifetime.

|             |                               |
|-------------|-------------------------------|
| R-50C-011-3 | Agilent Calibration - 3 years |
| R-50C-011-5 | Agilent Calibration - 5 years |

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