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Data Sheet

August 13, 2026

AGILENT / KEYSIGHT

Agilent / Keysight N1076A Electrical Clock Recovery

Keysight N1076A Electrical Clock Recovery (DCA-M) The Keysight N1076A isaDCA-M electrical clock-recovery instrument for NRZ and PAM4 signals. Option 216 covers 50 MBd to 16 GBd; Option 232 covers 50 MBd to 32 GBd. Recovered clock output is 50 MHz to 16 GHz with 220 fs maximum random jitter at 2 GBd and above (130 fs characteristic at 16 GHz). USB 2.0 connects the unit to an N1000A / 86100D DCA-X oraPC running N1010A FlexDCA. An auxiliary 4 to 8 GHz clock output provides less than 50 fs RMS characteristic jitter for a precision timebase. The Keysight N1076A isaDCA-M electrical clock-recovery instrument for NRZ and PAM4 signals. Option 216 covers 50 MBd to 16 GBd; Option 232 covers 50 MBd to 32 GBd. Recovered clock output is 50 MHz to 16 GHz with 220 fs maximum random jitter at 2 GBd and above (130 fs characteristic at 16 GHz). USB 2.0 connects the unit to an N1000A / 86100D DCA-X oraPC running N1010A FlexDCA. An auxiliary 4 to 8 GHz clock output provides less than 50 fs RMS characteristic jitter for a precision timebase. Clock recovery for sampling-scope transmitter measurements; compliant trigger for BER and eye tests on clock-less devices; NRZ and PAM4 electrical serial-link characterization; optional jitter spectrum analysis (JSA); PLL bandwidth / jitter-transfer receiver when paired with an M8000 jitter source.



MODEL

**Agilent / Keysight
N1076A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

N1076A

LISTING

<https://aumictechlabs.com/products/n1076a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight N1076A Electrical Clock Recovery is a precision module that locks onto high-speed serial data signals and outputs a clean, recovered clock for signal integrity analysis. Integrated into Keysight's DCA platform oscilloscopes, it delivers standards-compliant clock recovery across NRZ and PAM4 signaling from 50 MBaud to 32 GBaud. The module employs a "Golden PLL" with adjustable loop bandwidth up to 20 MHz and peaking, enabling jitter analysis and eye diagram characterization even from closed-eye signals when paired with equalizers. Its residual random jitter measures below 100 fs RMS, making it essential for compliance testing across PCIe, Ethernet, and high-speed serial protocols.

Technical Specifications

Parameter	Value
Data Rate Range	50 MBaud to 32 GBaud continuous
Signal Types	NRZ and PAM4 electrical signals
Recovered Clock Output Frequency	50 MHz to 16 GHz
Auxiliary Output Frequency	4 GHz to 8 GHz
Input Level to Acquire Lock	Single-ended 25 mVpp; Differential 50 mVpp
Input Voltage Levels	-2.2 V to 3.2 V maximum; ± 500 mV maximum; ± 2.2 Vpp maximum
Phase-Locked Loop Residual Jitter	<100 fs RMS
PLL Loop Bandwidth	Adjustable up to 20 MHz with peaking

Key Features

- Standards-compliant "Golden PLL" clock recovery with adjustable bandwidth and peaking
- Jitter Spectrum Analysis (JSA) option for root cause identification
- Acquisition from severely degraded signals using optional external or integrated equalizers
- Low residual random jitter performance for precision timing applications
- Single-ended and differential data input configuration

Typical Applications

- PCIe and Ethernet compliance testing
- Jitter characterization and eye diagram analysis
- High-speed serial protocol signal integrity verification
- Clock recovery from noise-degraded data streams

Compatibility & Integration

The N1076A is a DCA-M module that integrates with N1000A, N1090A, N1092-series, and N1094-series Keysight DCA-M oscilloscopes, or operates via USB connection to N1010A FlexDCA software on a standalone PC. Data inputs (single-ended and differential) connect through splitters to the module and oscilloscope channels; recovered clock output drives the oscilloscope's clock or trigger input.

N1076A Characteristics / Specifications

PARAMETER	VALUE
Model	N1076A
Manufacturer	Keysight
Instrument Type	Electrical clock recovery (DCA-M)
Alias	Keysight N1076A; N1076A Option 216; N1076A Option 232
Data Rate Option 2	50 MBd to 16 GBd (50 MBd to 16.4 GBd characteristic)
Minimum Lock Level	30 mVpp at rates 27 GBd or less; 35 mVpp above 27 GBd
Minimum Lock Level Characteristic	25 mVpp at 25.78125 GBd
Input Voltage Maximum	plus/minus 2.2 Vpp
Minimum Transition Density	20 percent
Data Input Interface	differential or single-ended, AC coupled, 50 ohm
Data Connector	2.92 mm (f)
Clock Output Range	50 MHz to 16 GHz
Recovered Clock Random Jitter	220 fs maximum at 2 GBd and above
Recovered Clock Jitter Characteristic	130 fs at 16 GHz
Loop Bandwidth Range	0.015 to 20 MHz user selectable
Loop Bandwidth Accuracy	plus/minus 30 percent characteristic
Clock Recovery Peaking	up to 4 settings (depends on loop BW)
Tracking Range	plus/minus 2500 ppm; plus/minus 0.25 percent characteristic (includes SSC)
Acquisition Range	plus/minus 5000 ppm characteristic
Auto Relocking	yes
Residual Spread Spectrum	-84 dB plus/minus 3 dB at 33 kHz characteristic
Phase Noise Accuracy	30 percent characteristic
Recovered Clock Amplitude	320 mVpp or greater at 5 GHz
Clock Divide Ratio	1, 2, 4, 8, 16 user selectable
Frequency Counter Accuracy	plus/minus 10 ppm

PARAMETER	VALUE
Clock Output Interface	single-ended, AC coupled, 50 ohm
Clock Connector	2.92 mm (f)
Aux Clock Frequency	4 GHz to 8 GHz
Aux Clock Voltage	550 mVpp characteristic
Aux Clock Jitter	less than 50 fs RMS characteristic
Aux Clock Interface	single-ended, DC coupled, 50 ohm
Operating Temperature	+10 C to +40 C
Nonoperating Temperature	-40 C to +70 C
Operating Altitude	up to 4600 m (15000 ft)
Humidity Type Test	95 percent at +40 C non-condensing
Power Consumption Characteristic	48 VA
Weight Characteristic	6.0 kg (13.2 lb)
Dimensions Without Connectors	88.26 mmHx 207.40 mmWx 485 mmDMains: 100 to 120 Vac 50/60/400 Hz; 200 to 240 Vac 50/60 Hz
Maximum Watts	290 W
Control Interface	USB 2.0 TypeBto N1000A, 86100D, or N1010A FlexDCA
Warm Up	1 hour continuous operation for warranted specs Notes Specs from Keysight N1076A DCA-M FlexDCA specification tables and the Electrical and Optical Clock Data Recovery Solutions data sheet. Confirm Option 216 vs 232 and whether Option JSA is installed. N1076B is the later 64 GBd successor, not this model.
Bandwidth	/ jitter-transfer receiver when paired with an M8000 jitter source.
Data Rate	Option 216: 50 MBd to 16 GBd (50 MBd to 16.4 GBd characteristic)
Humidity	Type Test: 95 percent at +40 C non-condensing

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	+10 C to +40 C
Operating Temperature	+10 C to +40 C
Humidity	Type Test: 95 percent at +40 C non-condensing
Nonoperating Temperature	-40 C to +70 C
Operating Altitude	up to 4600 m (15000 ft)
Humidity Type Test	95 percent at +40 C non-condensing
Power Consumption Characteristic	48 VA
Weight Characteristic	6.0 kg (13.2 lb)
Dimensions Without Connectors	88.26 mmHx 207.40 mmWx 485 mmDMains: 100 to 120 Vac 50/60/400 Hz; 200 to 240 Vac 50/60 Hz
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Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
Technical Specifications	
PARAMETER	VALUE
Model	N1076A
Manufacturer	Keysight
Instrument Type	Electrical clock recovery (DCA-M)
Alias	Keysight N1076A; N1076A Option 216; N1076A Option 232
Data Rate Option 216	50 MBd to 16 GBd (50 MBd to 16.4 GBd characteristic)
Data Rate Option 232	50 MBd to 32 GBd (50 MBd to 32.8 GBd characteristic)
Minimum Lock Level	30 mVpp at rates 27 GBd or less; 35 mVpp above 27 GBd
Minimum Lock Level Characteristic	25 mVpp at 25.78125 GBd
Input Voltage Maximum	plus/minus 2.2 Vpp
Minimum Transition Density	20 percent
Data Input Interface	differential or single-ended, AC coupled, 50 ohm
Data Connector	2.92 mm (f)
Clock Output Range	50 MHz to 16 GHz
Recovered Clock Random Jitter	220 fs maximum at 2 GBd and above
Recovered Clock Jitter Characteristic	130 fs at 16 GHz
Loop Bandwidth Range	0.015 to 20 MHz user selectable
Loop Bandwidth Accuracy	plus/minus 30 percent characteristic
Clock Recovery Peaking	up to 4 settings (depends on loop BW)
Tracking Range	plus/minus 2500 ppm; plus/minus 0.25 percent characteristic (includes SSC)
Acquisition Range	plus/minus 5000 ppm characteristic
Auto Relocking	yes
Residual Spread Spectrum	-84 dB plus/minus 3 dB at 33 kHz characteristic
Phase Noise Accuracy	30 percent characteristic
Recovered Clock Amplitude	320 mVpp or greater at 5 GHz
Clock Divide Ratio	1, 2, 4, 8, 16 user selectable

PARAMETER	VALUE
Frequency Counter Accuracy	plus/minus 10 ppm
Clock Output Interface	single-ended, AC coupled, 50 ohm
Clock Connector	2.92 mm (f)
Aux Clock Frequency	4 GHz to 8 GHz
Aux Clock Voltage	550 mVpp characteristic
Aux Clock Jitter	less than 50 fs RMS characteristic
Aux Clock Interface	single-ended, DC coupled, 50 ohm
Operating Temperature	+10 C to +40 C
Nonoperating Temperature	-40 C to +70 C
Operating Altitude	up to 4600 m (15000 ft)
Humidity Type Test	95 percent at +40 C non-condensing
Power Consumption Characteristic	48 VA
Weight Characteristic	6.0 kg (13.2 lb)
Dimensions Without Connectors	88.26 mm H x 207.40 mm W x 485 mm D
Mains	100 to 120 Vac 50/60/400 Hz; 200 to 240 Vac 50/60 Hz
Maximum Watts	290 W
Control Interface	USB 2.0 Type B to N1000A, 86100D, or N1010A FlexDCA
Warm Up	1 hour continuous operation for warranted specs

Specifications

PARAMETER	VALUE
Model	N1076A
Manufacturer	Keysight
Instrument Type	Electrical clock recovery (DCA-M)
Alias	Keysight N1076A; N1076A Option 216; N1076A Option 232
Data Rate Option 216	50 MBd to 16 GBd (50 MBd to 16.4 GBd characteristic)
Data Rate Option 232	50 MBd to 32 GBd (50 MBd to 32.8 GBd characteristic)
Minimum Lock Level	30 mVpp at rates 27 GBd or less; 35 mVpp above 27 GBd
Minimum Lock Level Characteristic	25 mVpp at 25.78125 GBd
Input Voltage Maximum	plus/minus 2.2 Vpp
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Data Input Interface	differential or single-ended, AC coupled, 50 ohm
Data Connector	2.92 mm (f)

PARAMETER	VALUE
Clock Output Range	50 MHz to 16 GHz
Recovered Clock Random Jitter	220 fs maximum at 2 GBd and above
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Tracking Range	plus/minus 2500 ppm; plus/minus 0.25 percent characteristic (includes SSC)
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Phase Noise Accuracy	30 percent characteristic
Recovered Clock Amplitude	320 mVpp or greater at 5 GHz
Clock Divide Ratio	1, 2, 4, 8, 16 user selectable
Frequency Counter Accuracy	plus/minus 10 ppm
Clock Output Interface	single-ended, AC coupled, 50 ohm
Clock Connector	2.92 mm (f)
Aux Clock Frequency	4 GHz to 8 GHz
Aux Clock Voltage	550 mVpp characteristic
Aux Clock Jitter	less than 50 fs RMS characteristic
Aux Clock Interface	single-ended, DC coupled, 50 ohm
Operating Temperature	+10 C to +40 C
Nonoperating Temperature	-40 C to +70 C
Operating Altitude	up to 4600 m (15000 ft)
Humidity Type Test	95 percent at +40 C non-condensing
Power Consumption Characteristic	48 VA
Weight Characteristic	6.0 kg (13.2 lb)
Dimensions Without Connectors	88.26 mmHx 207.40 mmWx 485 mmDMains: 100 to 120 Vac 50/60/400 Hz; 200 to 240 Vac 50/60 Hz
Maximum Watts	290 W
Control Interface	USB 2.0 TypeBto N1000A, 86100D, or N1010A FlexDCA
Warm Up	1 hour continuous operation for warranted specs

Notes

Specs from Keysight N1076A DCA-M FlexDCA specification tables and the Electrical and Optical Clock Data

Recovery Solutions data sheet. Confirm Option 216 vs 232 and whether Option JSA is installed. N1076B is the later 64 GBd successor, not this model.

Ordering Information

OPTION	DESCRIPTION
Option 216	covers 50 MBd to 16 GBd; Option 232 covers 50 MBd to 32 GBd. Recovered clock output is 50 MHz to 16 GHz with 220 fs maximum random jitter at 2 GBd and above (13
Option 232	Data Rate Option 216: 50 MBd to 16 GBd (50 MBd to 16.4 GBd characteristic)

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.