



## MODELS PM8571/2A

### 50MHz Single/Dual Channel Pulse Waveform Generators

- 50MHz Single / Dual Channel Pulse / Pattern generator
- 100MHz Function Generator for standard waveforms
- 300MS/s, 16Bit Arbitrary Waveform / Sequence Generator
- 10ps pulse resolution with 4ns transition time
- 32Vpp into open circuit with programmable impedance
- 16-Bit Digital Pattern Generator with programmable level
- AM, FM, FSK, ASK, PSK, PWM and sweep
- Powerful sequence generator links and loops segments
- in user-defined fashion. Stores up to 10 different sequence tables
- High resolution 3.8" User Friendly color LCD display
- Ethernet, USB and GPIB interfaces
- Waveforms transfer and storage through USB/CD/DVD
- "Drop-in" Emulators for: Fluke 80/1, HP8116, HP8112, HP8160, HP8165, Tabor 8500, Tabor 8550/1

Model PM8571/2A is very high performance, dual channel pulse/pattern generator that stretch normal pulse generators' spec to the limit, becoming by far the most advanced pulse waveform generator available in the market. In addition to its high performance pulse features, the new PM8571/2A generate a complete array of standard, arbitrary and sequenced waveforms which are necessities in today's laboratories.

#### Versatile Pulse Controls

If your application requires more than just a fixed duty cycle or programmable pulse width, then you can modulate and control your leading edge with any standard or arbitrary waveform shape. Combine all of these features with external pulse width control and you have an extremely versatile pulse generation tool.

#### Extremely Accurate Resolution

Need to control pulse transitions and placement? Just program each channel to output pulses with linear or fast transitions and control edge placement with 10ps resolution.

#### High Speed Function Generator

Care to use the instrument as a function generator? No need to calculate complex waveforms because the PM8571/2A does the work for you. Select the standard waveforms tab and start generating any of ten waveforms that are pre-computed and available for immediate use. Included are: sine, triangle, square, pulse, ramp, sinc and others at frequencies up to 100MHz.

#### 32Vp-p Into Open Circuit

While typical pulse/function generators come with 10Vp-p into 50Ω, model PM8571/2A provides an unmatched output of up to 20Vp-p into 50Ω (32Vp-p into open circuit). On top of that, the PM8571/2A output impedance can be programmed simply either from the front panel or through remote to fit the UUT requirement.

#### Trigger Jitter

Many applications require accurate triggering capabilities, with a trigger jitter of less than 100ps the PM series offers unprecedented triggering accuracy enabling users to implement various testing scenarios.

#### Store / Recall (Memory stick/CD/DVD)

The new PM series is equipped with a USB host enabling the loading and saving of setups and waveforms from various memory storage devices such as USB stick, CD ROM and DVD. This allows the user to instantly upload the waveforms and setup to the instrument without the need of a PC or Laptop.

#### Emulating Legacy Products

Model PM8571/2A implements command emulators to both new and discontinued Pulse and Function Generators sold in the market, providing smooth transition for all the aging automatic test systems that face obsolescence and maintenance problems. The unique feature will allow clients to easily "drop-in" the PM8571/2A in slots vacated by out-of-order Agilent, Fluke, HP, LeCroy, Tabor, Tektronix or Wavetek models, solving TPS programmers' replacement issues.



# MODELS PM8571/2A

## 50MHz Single/Dual Channel

## Pulse Waveform Generators

### Waveform Memory

Waveform memory is the internal scratchpad where the waveforms reside. Larger memory banks provide for longer waveforms. One can use the entire memory (up to 4M) for a single waveform or split the length to smaller segments. In this case, many waveforms can be stored in the same memory and replayed, one at a time, when recalled to the output. The memory segmentation feature may be combined with a sequence generator that can take different memory segments and link (and loop) them in any order as required for the test. The ability to loop waveform segments in a sequence can save a lot of memory and extend the capability of the generator to produce longer, more complex waveforms. The PM8571/2A has a sequence generator for each of its output channels that can be loaded with unique sequences.

### Signal Integrity

As technology evolves and new devices are developed each day, faster and more complex signals are needed to simulate and stimulate these new devices. With its wide sample clock generator range (up to 300MS/s), 16-bit vertical resolution and wide output bandwidth (over 100MHz), one can create mathematical profiles, download the coordinates to the instrument and regenerate waveforms without compromising signal fidelity and design integrity.

### 16-Bit Digital Pattern Generator

16-bits are available as digital patterns from a rear-panel VHDC connector. The standard output level is LVDS which is efficient and sufficient for high speed digital data transmissions, however, programmable levels and impedances can be achieved by using a standard external accessory.

### Inter-Channel Control (PM8572A Only)

In the PM8572A, both channels share a common sample clock, and both channels are triggered from the same source assuring tightly synchronized channel-to-channel timing. Precise control over channel-to-

channel phase offset is achieved by allowing control over channel start phase with a resolution down to as small as 1 waveform point. This enables extremely accurate timing or phase dependencies to be studied, such as those found in high speed digital communication systems.

### Smart, Small and Cost Effective Solution

The PM8571/2A offers unmatched performance even compared to instruments designed to generate fewer types of signals. Its smart, compact, 2U 1/2 rack size box design will allow designers and manufacturers to conserve substantial bench space, while benefiting from high performance, high bandwidth, signal integrity, reliability and the flexibility to adapt to a full spectrum of applications, for many years to come, offering unprecedented integration levels, which make it the best in its category for size-price-performance.

### Easy to use

A large and user-friendly 3.8" back-lit color LCD display facilitates browsing through menus, updating parameters and displaying detailed waveform information. Combined with a numeric keypad, cursor position control and a knob, the front panel controls simplify the operation of this universal waveform source.

### Remote Control

Access speed is an increasingly important requirement for test systems. Ethernet, USB and GPIB interfaces are available so that the most suitable interface for the application may be selected. Remote control of instrument functions, parameters and waveform downloads is easily tailored to specific system environments regardless of whether control is via a laptop computer or full-featured ATE system. IVI drivers and factory support will speed up system integration and minimize test development time and costs.

### Remote Calibration

Normal calibration cycles in the industry range from one to three years where instruments are sent to a service center, opened to allow access to trimmers, calibrated and certified for repeated usage. Leading-edge technology was employed on the PM8571/2A to allow calibration from any PM8571/2A remote interface such as USB, GPIB or LAN. Calibration factors are stored in a flash memory thus eliminating the need to open instrument covers.

### Multi-Instrument Synchronization

Multiple PM8571/2A can be synchronized using a Master-Slave arrangement allowing users to benefit from the same high quality performance in their multi-channels needs.

### Multiple Environments to Write Your Code

The PM8571/2A comes with a complete set of drivers, allowing you to write your application in various environments including: Labview, CVI, C++, VB and MATLAB. You may also link the supplied dll to other Windows-based API's or use low-level SCPI commands to program the instrument, regardless if your application is written for Windows, Linux or Macintosh operating systems.

### ArbConnection

ArbConnection is a powerful software package that allows you to easily design any type of waveform and control the instrument functions, modes and features via a graphical user interface (GUI). Whether you need to generate output using a built-in waveform, a hand sketched or played back waveform, a pulse pattern, a serial data string, a modulated carrier or even an equation, ArbConnection provides you the editing tools which makes virtually any application possible.



# MODELS PM8571/2A

## 50MHz Single/Dual Channel

## Pulse Waveform Generators

### Specification

#### CONFIGURATION

**Output Channels** 1/2, semi-independent

#### PULSE

**Type:** Normal, Complement, Inverted, Linear transitions  
**Mode:** Single, Delayed, Double, Fixed and External Width.

#### PERIOD PARAMETERS

**Range:** 20ns to 10s  
**Resolution:**  
 Continuous 11 digits  
 Gated, and Burst 3 digits  
**Accuracy:**  
 Continuous Same as reference  
 Gated, and Burst  $\pm 3\%$  of programmed value  
**RMS Jitter:**  
 Continuous  $< (10\text{ppm} + 20\text{ps})$   
 Gated, and Burst  $< (100\text{ppm} + 20\text{ps})$

#### PULSE WIDTH, DOUBLE PULSE

**Range:** 8ns to 10s  
**Delay:** 0 to 10s  
**Resolution:** 10ps; limited by 5 digits  
**Accuracy:**  $\pm (3\%$  of setting + 500ps)  
**RMS Jitter:**  $< (100\text{ppm} + 15\text{ps})$  RMS

#### FIXED DUTY CYCLE MODE

**Mode:** Output duty cycle remains constant regardless of pulse width setting  
**Range:** 1% to 99%  
**Accuracy:**  $\pm (3\%$  of setting + 500ps).

#### OUTPUT LEVELS

**Mode:** High/Low, Amplitude/Offset, Positive, Negative.  
**Amplitude:**  
 Standard 16mV to 16Vpp, into 50 $\Omega$ ;  
 32mV to 32Vpp, into open Z  
 Option 3 21mV to 20Vpp, into 50 $\Omega$ ;  
 42mV to 32Vpp, into open Z  
 Option 4 16mV to 10Vpp, into 50 $\Omega$ ; 32mV to 20Vpp, into open Z High Level  
 Range:  
 Standard -7.983V to +8V, into 50 $\Omega$ ;  
 -15.966V to +16V, into open Z  
 Option 3 -9.979V to +10V, into 50 $\Omega$ ;  
 -15.958V to +16V, into open Z  
 Option 4 -4.983V to +5V, into 50 $\Omega$ ;  
 -9.966V to +10V, into open Z

#### Low Level Range:

Standard -8V to +7.983V, into 50 $\Omega$ ; -16V to +15.966V, into open Z  
 Option 3 -10V to +9.979V, into 50 $\Omega$ ;  
 -16V to +15.958V, into open Z  
 Option 4 -5V to +4.983V, into 50 $\Omega$ ; -10V to +9.966V, into open Z  
**Resolution:** 4 digits.

#### PULSE PERFORMANCE

##### Transition Time:

Fast  
 16mV to 16Vpp  $< 5\text{ns}$  (typically  $< 4\text{ns}$ )  
 16Vpp to 20Vpp  $< 6\text{ns}$   
 Linear Selectable

##### Aberration:

16mV to 10Vpp  $< 5\%$ , typ.  
 10Vpp to 20Vpp  $< 8\%$

**Impedance:** 50 $\Omega$ , programmable

#### LINEAR TRANSITION TIMES

**Range:** 5ns to 5ms, in 6 overlapping ranges  
**In-range Span:** 20:1  
**Resolution:** 4 digits  
**Linearity:**  $\pm 3\%$  of setting above 100ns  
**Accuracy:**  $\pm (10\%$  of setting + 2ns).

#### EXTERNAL WIDTH CONTROL

**DESCRIPTION:** The pulse shape can be recovered whilst the period and width of an external input signal are maintained  
**Input:** Rear panel TRIG IN connector

#### STANDARD WAVEFORMS

**Waveforms:** Sine, Triangle, Square, Pulse, Ramp, Sine(x)/x, Gaussian, Exponential, Repetitive Noise and DC

##### Frequency Range:

Sine 100 $\mu\text{Hz}$  to 100MHz  
 Square, Pulse 100 $\mu\text{Hz}$  to 62.5MHz  
 All others 100 $\mu\text{Hz}$  to 31.25MHz

#### SINE

**Start Phase:** 0-360°  
**Phase Resolution:** 0.01°  
**Harmonics Distortion, 3Vp-p (typ.):**  
 DC to 2.5MHz  $< -55\text{dBc}$   
 2.5MHz to 25MHz  $< -50\text{dBc}$   
 25MHz to 40MHz  $< -40\text{dBc}$   
 40MHz to 50MHz  $< -35\text{dBc}$   
 50MHz to 100MHz  $< -28\text{dBc}$

##### Non-Harmonic Distortion:

DC to 50MHz  $< -70\text{dBc}$   
 50MHz to 100MHz  $< -65\text{dBc}$

#### Total Harmonic Distortion:

DC to 100kHz 0.1%

#### Flatness (1kHz):

DC to 1MHz 1%  
 1MHz to 10MHz 3%  
 10MHz to 25MHz 5%  
 25MHz to 80MHz 10%  
 80MHz to 100MHz 15%

#### Phase Noise (8 points Sine, Max. SCLK)

100Hz Offset -80dBc/Hz  
 1kHz Offset -89dBc/Hz  
 10kHz Offset -92dBc/Hz  
 100kHz Offset -112dBc/Hz  
 1MHz Offset -140dBc/Hz

#### TRIANGLE

**Start Phase Range:** 0-360°  
**Phase Resolution:** 0.01°  
**Timing Ranges:** 0%-99.9% of period

#### SQUARE

**Duty Cycle Range:** 0% to 99.9%  
**Timing Ranges:** 0%-99.9% of period  
**Rise/Fall Time:**  
 16mV to 16Vpp  $< 5\text{ns}$  (typically  $< 4\text{ns}$ )  
 16Vpp to 20Vpp  $< 6\text{ns}$   
**Aberration:**  
 16mV to 10Vpp  $< 5\%$ , typ.  
 10Vpp to 20Vpp  $< 8\%$

#### SINC (Sine(x)/x)

**"0 Crossings":** 4-100

#### GAUSSIAN

**Time Constant:** 10-200

#### EXPONENTIAL PULSE

**Time Constant:** -100 to 100

#### DC

**Range:** -8V to 8V, standard  
 -10V to 10V (with option 3)  
 -5V to 5V (with option 4)

#### HALF-CYCLE WAVEFORMS

**Function Shape:** Sine, Triangle, Square  
**Frequency Range:** 0.01Hz to 1MHz  
**Phase (Sine/triangle):** 0 to 360°  
**Phase Resolution:** 0.01°  
**Duty Cycle Range:** 0% to 99.9%  
**Run Modes:** Continuous, Triggered  
**Delay Between Half Cycles (Continuous only):** 200ns to 20s  
 Delay Resolution 20ns



# MODELS PM8571/2A

## 50MHz Single/Dual Channel Pulse Waveform Generators Specification

### ARBITRARY WAVEFORMS

<b>Sample Rate:</b>	1.5S/s to 250MS/s (typ. 300MS/s)
<b>Vertical Resolution:</b>	16 Bits
<b>Waveform Memory:</b>	1M points (2M/4M optional)
<b>Min. Segment Size:</b>	16 points
<b>Resolution:</b>	4 points
<b>No. of Segments:</b>	1 to 10k

### SEQUENCED WAVEFORMS

<b>Operation:</b>	Segments may be linked and repeated in a user-selectable order to generate extremely long waveforms. Segments are advanced using either a command or a trigger
<b>Multi Sequence:</b>	1 to 10, Selectable
<b>Sequencer Steps:</b>	1 to 4k
<b>Segment Duration:</b>	600ns min.
<b>Segment Loops:</b>	1 to 1M

### ADVANCE MODES

<b>Automatic:</b>	No triggers required to step from one segment to the next. Sequence is repeated continuously through a pre-programmed sequence table
<b>Stepped:</b>	Current segment is sampled continuously, external trigger advances to next programmed segment.
<b>Single:</b>	Current segment is sampled to the end of the segment including repeats and idles there. Next trigger advances to next segment
<b>Mixed:</b>	Each step of a sequence can be programmed to advance either: a) automatic (Automatic mode), or b) with trigger (Stepped mode)
<b>Advance Source:</b>	External (TRIG IN), Internal or software

### MODULATION

### COMMON CHARACTERISTICS

<b>Carrier Waveform:</b>	Sinewave, except for PWM
<b>Carrier Frequency:</b>	10Hz to 100MHz
<b>Source:</b>	Internal
<b>Run Modes:</b>	Off (Outputs CW), Continuous, Triggered, Delayed Trigger, Burst, Timer and Gated
<b>Advance Source:</b>	Front panel button, Software commands, TRIG IN
<b>Carrier Idle Mode:</b>	On or Off, programmable
<b>Marker Position:</b>	TTL, Programmable at selectable frequency

### FM

<b>Modulating Shape:</b>	Sine, square, triangle, ramp
<b>Modulation Freq.:</b>	10mHz to 100kHz
<b>Deviation Range:</b>	Up to 50MHz

### ARBITRARY FM

<b>Modulating Shape:</b>	Arbitrary waveform
<b>Modulating SCLK:</b>	1S/s to 2.5MS/s
<b>Freq. Array Size:</b>	4 to 10,000 frequencies

### AM

<b>Envelope Freq.:</b>	10mHz to 100kHz
<b>Envelope Shape:</b>	Sine, square, triangle, ramp
<b>Modulation Depth:</b>	0% to 100%

### FSK

<b>Baud Rate Range:</b>	1bits/sec to 10Mbits/sec
<b>Data Bits Length:</b>	2 to 4,000

### PSK

<b>Carrier Phase:</b>	0 to 360°
<b>Baud Rate Range:</b>	1bits/sec to 10Mbits/sec
<b>Data Bits Length:</b>	2 to 4,000

### FREQUENCY HOPPING

<b>Hop Table Size:</b>	2 to 1,000
<b>Dwell Time Mode:</b>	Fixed / Programmable per step
<b>Dwell Time:</b>	200ns to 20s
<b>Time Resolution:</b>	20ns

### ASK

<b>Start/Shift Amp.:</b>	16mVp-p to 16Vpp into 50Ω
<b>Resolution:</b>	Maximum amplitude/4096
<b>Baud Rate Range:</b>	1Bits/s to 10Mbits/s
<b>Data Bits Length:</b>	2 to 4,000

### AMPLITUDE HOPPING

<b>Range:</b>	16mVp-p to 16Vpp into 50Ω
<b>Resolution:</b>	Maximum amplitude/4096
<b>Dwell Time Mode:</b>	Fixed / Programmable per step
<b>Dwell Time:</b>	200ns to 20s
<b>Time Resolution:</b>	20ns

### ARBITRARY 3D

<b>Modulating Shape:</b>	Arbitrary waveform
<b>Modulating Type:</b>	Amplitude CH1, Amplitude CH2, Frequency and Phase
<b>Modulating SCLK:</b>	1S/s to 2.5MS/s
<b>Memory Size:</b>	4 to 30,000

### (n)PSK and (n)QAM

<b>Carrier Frequency:</b>	1Hz to 75MHz
<b>Carrier Control:</b>	On/Off
<b>Modulation Type:</b>	PSK, BPSK, QPSK, OQPSK, PI/4 DQPSK, 8PSK, 16PSK, 16QAM, 64QAM, 256QAM and User Defined
<b>Symbol Rate:</b>	1S/s to 1MS/s

<b>Carrier Control:</b>	On/Off
<b>Symbol Accuracy:</b>	±(500ns + Carrier Period)
<b>Table Size:</b>	2 to 4096

### PULSE WIDTH MODULATION

<b>Carrier Waveform:</b>	Pulse
<b>Source:</b>	Channel 1
<b>Width Range:</b>	10ns to 500ms
<b>Resolution:</b>	625ps
<b>Deviation:</b>	1% to 99%
<b>Standard Modulating Waveforms:</b>	Sine, square, triangle, ramp
<b>Period</b>	500ns to 1s
<b>Resolution</b>	Pulse width period
<b>Accuracy</b>	Reference + 1 Pulse width period
<b>Arbitrary Modulating Waveforms:</b>	Any shape
<b>Period</b>	Pulse Width x Number of Points
<b>Size</b>	5 to 512k
<b>Resolution</b>	Pulse width period
<b>Accuracy</b>	Same as Reference

### SWEEP

<b>Sweep Step:</b>	Linear or log
<b>Sweep Direction:</b>	Up or Down
<b>Sweep Time:</b>	1μs to 40s

### COMMON CHARACTERISTICS

### FREQUENCY

<b>Resolution:</b>	
Display	11 digits (limited by 1μHz)
Remote	14 digits (limited by 1μHz)
<b>Accuracy/Stability:</b>	Same as reference

### ACCURACY REFERENCE CLOCK

<b>Internal</b>	0.0001% (1 ppm TCXO) initial tolerance over a 19°C to 29°C temperature range; 1ppm/°C below 19°C and above 29°C; 1ppm/year aging rate
<b>External</b>	10MHz TTL, 50% ±2%, or 50Ω ±5% 0dBm (jumper)

### AMPLITUDE

<b>Range:</b>	
Standard	16mV to 16Vpp, into 50Ω; 32mV to 32Vpp, into open Z
Option 3	21mV to 20Vpp, into 50Ω; 42mV to 32Vpp, into open Z
Option 4	16mV to 10Vpp, into 50Ω; 32mV to 20Vpp, into open Z
<b>Resolution:</b>	4 digits



# MODELS PM8571/2A

## 50MHz Single/Dual Channel Pulse Waveform Generators

### Specification

#### Accuracy (1kHz):

16mV to 160mVp-p	$\pm(1\% + 5mV)$
160mV to 1.6Vp-p	$\pm(1\% + 10mV)$
1.6V to 12Vp-p	$\pm(1\% + 70mV)$
12V to 16Vp-p	$\pm 2\%$
16V to 20Vp-p	$\pm 5\%$

#### OFFSET

##### Range:

Standard	0 to $\pm 7.992V$ , into $50\Omega$
Option 3	0 to $\pm 9.981V$ , into $50\Omega$
Option 4	0 to $\pm 4.992V$ , into $50\Omega$

##### Resolution:

1mV

##### Accuracy:

$\pm(1\% + 1\% \text{ of Amplitude} + 5mV)$

#### FILTERS

##### Type:

Bessel	25MHz or 50MHz
Elliptic	60MHz or 120MHz

#### OUTPUTS

##### MAIN OUTPUT

**Coupling:** DC coupled

**Connector:** Front panel BNC

**Impedance:**  $50\Omega \pm 1\%$

##### Protection:

Standard	Short Circuit to Case Ground, 10s max
Option 4	$\pm 5VDC$ , $50\Omega$

##### SYNC OUTPUT

**Connector:** Front panel BNC

**Level:** TTL

##### Sync Type:

Pulse	Arbitrary and Standard waves
LCOM	Sequence and Burst modes

**Position:** 0 to 1M (2M or 4M optional)

**Resolution:** 4 points

##### SAMPLE CLOCK OUTPUT

**Connector:** Rear panel SMB

**Level:** 400mVp-p

**Impedance:**  $50\Omega$

##### COUPLE OUTPUT

**Connector:** Rear panel SMB

**Level:** LVPECL

**Impedance:**  $50\Omega$ , terminated to +1.3V

##### DIGITAL PATTERN OUTPUTS

**Connector:** Rear panel SCSI-2, 68-pin VHDC

**Pattern Width:** 16-bits, differential

**Source:** Channel 1 only

**Output Level:** LVDS

##### Pattern Length:

Dedicated Memory 1 to 128k

Arbitrary Memory 16 to 1M (2M or 4M optional)

**Update Frequency:** 100 $\mu$ pps to 250Mpps

#### INPUTS

##### TRIGGER INPUT

**Connector:** Rear panel BNC

**Input Impedance:**  $10k\Omega$

**Polarity:** Positive or negative, selectable

**Level:**  $\pm 5V$

**Sensitivity:** 100mV

**Damage Level:**  $\pm 12V$

**Min. Pulse Width:** 10ns

##### EXTERNAL REFERENCE INPUT

**Connector:** Rear panel SMB

**Frequency:** 10MHz

##### Impedance & Level:

Default	$10k\Omega \pm 5\%$ , TTL, 50% $\pm 2\%$
Option	$50\Omega \pm 5\%$ , 0dBm Sinewave

##### SAMPLE CLOCK INPUT

**Connector:** Rear panel SMB

**Input Level:** 300mVp-p to 1Vp-p

**Impedance:**  $50k\Omega$

**Range:** 1.5Hz to 250MHz

**Min. Pulse Width:** 4 ns

##### COUPLE INPUT

**Connector:** Rear panel SMB

**Input Level:** LVPECL

**Impedance:**  $50\Omega$ , terminated to +1.3V

**Min. Pulse Width:** 4 ns

#### RUN MODES

**Continuous:** Free-run output of a waveform.

**Triggered:** Upon trigger, outputs one waveform cycle. Last cycle always completed.

**Gated:** External signal transition enables or disables generator output. Last cycle always completed

**Burst:** Upon trigger, outputs a Dual or multiple pre-programmed number of waveform cycles from 1 through 1M.

**Mixed:** First output cycle is initiated by a software trigger. Consequent output requires external triggers through the rear panel TRIG IN

#### TRIGGER CHARACTERISTICS

**System Delay:** 6 SCLK+150ns

##### Trigger Delay:

Pulse	[(0; 100ns to 20s)+system delay]
All Others	[(0; 200ns to 20s)+system delay]

##### Trigger Resolution:

Pulse	10ps, limited by 5 digits
All Others	20ns

##### Trigger Delay Error:

Pulse	$\pm(3\% \text{ of setting} + 500ps)$
All Others	6 SCLK+150ns

#### EXTERNAL

**Source:** Rear panel BNC

**Trigger Level:**  $\pm 5V$

**Resolution:** 1mV

**Input Frequency:** DC to 2.5MHz

**Min. Pulse Width:** 10ns

**Slope:** Positive/Negative, selectable

##### Trigger Jitter:

Pulse	<50ps
All Others	<100ps

#### INTERNAL / TIMER

##### Range:

Pulse	100ns to 1s
All Others	200ns to 20s

##### Resolution:

20ns

**Error:** 3 sample clock cycles+20ns

#### MANUAL

**Source:** Soft trigger command from the front panel or remote

#### FREQUENCY COUNTER / TIMER

**Measurements:** Frequency, Period, Averaged Period, Pulse Width & Totalize Trigger Input

**Range:** 10Hz to 100MHz (typ.120MHz)

**Sensitivity:** 500mVpp

**Accuracy:** 1ppm

**Slope:** Positive/Negative transitions

**Gate Time:** 100 $\mu$ Sec to 1 Sec

**Input Range:**  $\pm 5V$

**Trigger Modes:** Continuous, Hold and Gated

##### Period Averaged:

Range	10ns to 50ms
Resolution	7 digits / Sec

##### Period and Pulse Width:

Range	500ns to 50ms
Resolution	100ns

##### Totalize:

Range	$10^{12}$ -1
Overflow	Led indication





# MODELS PM8571/2A

## 50MHz Single/Dual Channel Pulse Waveform Generators

### Specification

#### INTER-CHANNEL DEPENDENCY (PM8572)

**Separate controls:** Output on/off, amplitude, offset, standard waveforms, user waveforms, user waveform size, sequence table

**Common Controls:** Sample clock (Arb), frequency (Std), period (Pulse) reference source, trigger modes, trigger advance source, SYNC OUT.

#### PHASE OFFSET (LEADING EDGE)

**Range:** 0 to 1M points, 2M/4M optional

**Resolution:** 1 point

**Initial Skew:** <1ns

Error 1 SCLK

#### MULTI-INSTRUMENT SYNCHRONIZATION

**Initial Skew:** <25 ns + 1 SCLK

**Waveform Types:** Standard, Arbitrary and Sequenced using the automatic sequence advance mode only

**Run Modes:** Continuous, Triggered, Gated and Counted Burst

#### LEADING EDGE OFFSET

**Run Mode:** Continuous run mode only

**Offset Range:** 200ns to 20s

**Resolution:** 20ns

#### GENERAL

**Voltage Range:** 85 to 265V

**Frequency Range:** 48 to 63Hz

**Power Consumption:** 60W

**Display Type:** Color LCD, back-lit

Size 3.8" reflective

Resolution 320 x 240 pixels,

#### Interfaces:

USB

Device 1 x rear, USB device, (B type)

Host 1 x rear, USB device, (A type)

LAN 100/10 BASE-T

GPIO IEEE 488.2 standard interface

#### Dimensions:

With Feet 212 x 102 x 415mm (WxHxD)

Without Feet 212 x 88 x 415mm (WxHxD)

#### Weight:

Without Package 3.5Kg

Shipping Weight 4Kg

#### Temperature:

Operating 0°C - 50°C

Storage -40°C to + 70°C.

#### Humidity:

11°C - 30°C 85%

31°C - 40°C 75%

41°C - 50°C 45%

**Safety:** EN61010-1, 2nd revision

**Calibration:** 1 year

**Warranty <sup>(1)</sup>:** 5 years standard

#### ORDERING INFORMATION

MODEL	DESCRIPTION
PM8571A	50MHz Single Channel Pulse Waveform Generator
PM8572A	50MHz Dual Channel Pulse Waveform Generator

#### OPTIONS

<b>Option 1:</b>	2M Memory (per channel)
<b>Option 2:</b>	4M Memory (per channel)
<b>Option 3:</b>	20Vp-p into 50Ω
<b>Option 4:</b>	±5VDC Protection. 10Vp-p into 50Ω

#### ACCESSORIES

<b>Sync Cable:</b>	Multi-instrument synchronization
<b>S-Rack Mount:</b>	19" Single Rack Mounting Kit
<b>D-Rack Mount:</b>	19" Dual Rack Mounting Kit
<b>Case Kit:</b>	Professional Carrying Bag

**Note:** Options and Accessories must be specified at the time of your purchase.

<sup>(1)</sup> Standard warranty in India is 1 year.

