

## Active Programmable Delay Line 1-IN 0.01ns ABS 14.8ns MAX 32-Pin QFN EP Tube



Images are for reference only

[Inquiry](#)

**Manufacturer:** [Microchip Technology, Inc](#)

**Package/Case:** VQFN

**Product Type:** Clock & Timer ICs

**RoHS:** RoHS Compliant/Lead free 

**Lifecycle:** Active

### General Description

The SY89296U is a programmable delay line that delays the input signal using a digital control signal. The delay can vary from 3.2ns to 14.8ns in 10ps increments. Further, the delay may be varied continuously in about 40ps range by setting the voltage at the FTUNE pin. In addition, the input signal is LVPECL, uses either a 2.5V  $\pm 5\%$  or 3.3V  $\pm 10\%$  power supply, and is guaranteed over the full industrial temperature range (-40°C to +85°C). The delay varies in discrete steps based on a control word. The control word is 10-bits long and controls the delay in 10ps increments. The eleventh bit is D[10] and is used to simultaneously cascade the SY89296U for a larger delay range. In addition, the input pins IN and /IN default to an equivalent low state when left floating. Further, for maximum flexibility, the control register interface accepts CMOS or TTL level signals. For applications that do not require an analog delay input, see the SY89295U. The SY89295U and SY89296U are part of Micrel's high-speed, Precision Edge® product line.

### Key Features

Precision LVPECL programmable delay time

Guaranteed AC performance over temperature and voltage:

Low jitter design:

Programmable delay range: 3.2ns to 14.8ns in 10ps increments

Increased monotonicity over the MIC100EP195

VBB output reference voltage

Parallel inputs accept LVPECL or CMOS/LVTTL

40ps/V fine tune range

Low voltage operation: 2.5V  $\pm 5\%$  and 3.3V  $\pm 10\%$

Industrial -40°C to +85°C temperature range

Available in 32-pin (5mm x 5mm) MLF® package or 32-pin TQFP package



## Recommended For You

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### **SY87729LHY**

Microchip Technology, Inc  
QFP32

### **SY87701ALHG**

Microchip Technology, Inc  
TQFP32

### **SY89297UMG**

Microchip Technology, Inc  
QFN24

### **SY89295UMG**

Microchip Technology, Inc  
QFN

### **SY89874UMG**

Microchip Technology, Inc  
QFN

### **SY87700ALHG**

Microchip Technology, Inc  
QFP32

### **SY87739LHY**

Microchip Technology, Inc  
TQFP32

### **SY100EL34ZG**

Microchip Technology, Inc  
SOP16

### **SY89202UMG**

Microchip Technology, Inc  
QFN

### **SY89876LMG**

Microchip Technology, Inc  
QFN

### **SY100EP196VTG**

Microchip Technology, Inc  
TQFP32

### **SY89831UMG**

Microchip Technology, Inc  
QFN

### **SY89833ALMG**

Microchip Technology, Inc  
16-VFQFN

### **SY89297UMH**

Microchip Technology, Inc  
VQFN

### **SY87721LHG**

Microchip Technology, Inc  
64-TQFP