

# GuideTech

Precision Time & Frequency  
Test & Measurement Instruments, ATE

## APPLICATIONS

- Event Timing, UTC Synchronized
- Laser Ranging Timing Subsystem
- Real Time, Time stamping
- Long Distance Time Transfer
- Radar & Ultrasonic timing
- 1 PPS Monitoring
- Fast Time Measurements & Analysis
- Variation in Pulse Timing
- Frequency Modulation
- Allan Variance
- Measure jitter and skew

## SOFTWARE SUPPORT

- Software package & APIs for SLR
- SLR GUI
- Windows 32bit, 64 bit
- Linux 32bit, 64 bit
- NI LabVIEW
- Python
- Java
- Custom software Development/Support

## KEY FEATURES

- UTC synchronizable with 1 PPS
- Programmable gates controlling Source & receiver subsystems
- Easy cross-platform integration
- Very high throughput & accuracy
- Built-in NIST traceable time-base
- Expandable test systems 2 to 34 synchronized channels
- Available in PCI, PCIe, PXI, PXIe BUS & Test-System with SLR GUI

**GuideTech**

(408) 733-6555

(408) 988-9998

[sales@guidetech.com](mailto:sales@guidetech.com)

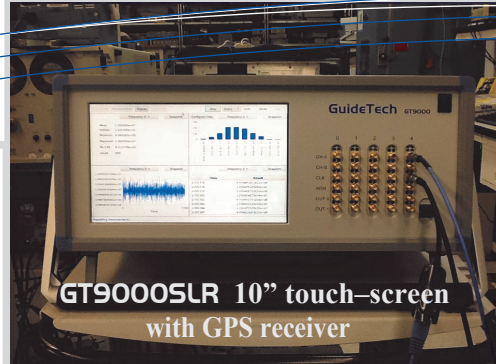
[www.guidetech.com](http://www.guidetech.com)

# GT668SLR Event-Timer

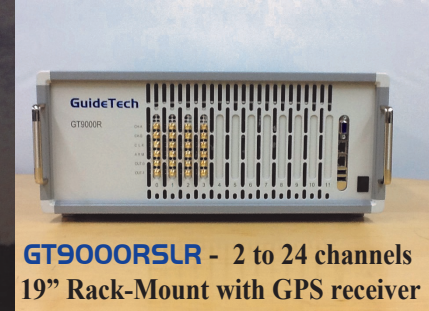
Multi-Channel, 2.7GHz, 0.9pS, 4M m/s



GT9000PSLR-USB3



GT9000SLR 10" touch-screen  
with GPS receiver



GT9000RSLR - 2 to 24 channels  
19" Rack-Mount with GPS receiver

With a 50% smaller foot-print and much more powerful performance than its previous generation **GT658** Event-Timer, **GuideTech's GT668SLR** computer-based **Event-Timer CTIA** enables a wider range of cutting-edge applications.

In addition to all **GT658** and **GT668** Event-Timer functions, the **GT668SLR** Event-Timer has the following functions & software support:

- ◆ 1PPS input
- ◆ Two Programmable triggering outputs
- ◆ Ability to synchronize with UTC time reference
- ◆ Software package, APIs for SLR & SLR GUI
- ◆ Integrated GPS receiver with OCXO, Rubidium or Cesium

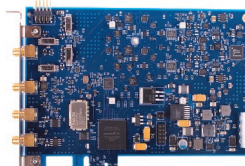
With easy expansion (up to 34 Channels) and modular capabilities, the **GT668SLR** is offered as follows:

- \* **GT9000SLR** Scalable system, 2 to 24 channels, Touch-Display
- \* **GT9000RSLR** Rack-Mount scalable system, 2 to 24 channels
- \* **GT9000PSLR-USB3** Portable 2 channel system
- \* **GT8000SLR PXI/PXIe** scalable, 2 to 34 channels
- \* **GT668SLR** 2 channels **PCI, PCIe, PXI & PXIe** plug-in boards

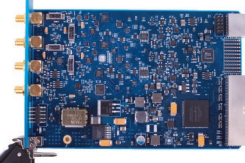
All of **GuideTech's** SLR systems & board products come with **NIST** traceable calibration, **SLR** APIs and customizable **SLR GUI**. The **GT9000SLR** & **GT9000RSLR** come with an optional integrated GPS receiver, providing a one-



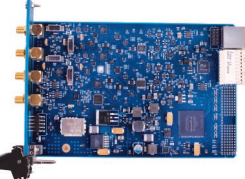
GT668SLRPCI



GT668SLRPCIe



GT668SLRPXI



GT668SLRPXIe



7 Slot Hybrid  
GT8000SLR - PXI / PXIe

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## GT668SLR Event-Timer

Multi-Channel, 2.7GHz, 0.9pS, 4M m/s



### SPECIFICATIONS



**GT8000SLR - PXI / PXIe**  
Scalable from 2 to 34 channels

### GT668SLR MODELS

#### PCI

- ◆ GT668SLRPCI-1
- ◆ GT668SLRPCI-2
- ◆ GT668SLRPCI-15
- ◆ GT668SLRPCI-40

#### PCIe

- ◆ GT668SLRPCIe-1
- ◆ GT668SLRPCIe-2
- ◆ GT668SLRPCIe-15
- ◆ GT668SLRPCIe-40

#### PXI

- ◆ GT668SLRPXI-1
- ◆ GT668SLRPXI-2
- ◆ GT668SLRPXI-15
- ◆ GT668SLRPXI-40

#### PXIe

- ◆ GT668SLRPXIe-1
- ◆ GT668SLRPXIe-2
- ◆ GT668SLRPXIe-15
- ◆ GT668SLRPXIe-40

- \* -1 = 0.9pS resolution
- \* -2 = 1.8pS resolution
- \* -15 = 15pS resolution
- \* -40 = 40pS resolution

- Time Res. single-shot - 0.9ps
- Freq. Res. (Digits/S) - up to 12
- Max. Meas. rate - 4M m/s

### MAIN INPUT CHANNELS:

- No. of channels: 2 per site, A & B
- Frequency range: DC - 2.7 GHz
- Sensitivity:
  - \* 50 mV rms (DC - 2.7 GHz)
- Input impedance: 1K $\Omega$  / 10 pF, or 50 $\Omega$  software programmable
- Coupling: DC or AC
- Threshold setting (each channel):
  - \* Range: -5V to +5V
  - \* Resolution: 153 $\mu$ V
  - \* Absolute accuracy: 0.1% of setting
  - \* Automatic threshold setting option
- Frequency 100MHz locked to:
  - \* Internal 10MHz OCXO
  - \* External clock: 5 or 10 MHz ( $\pm$ 3KHz)
- Minimum pulse width: 6nS
- Oven Oscillator:
  - \* Temp: 0 - 45°C  $\pm$  25ppb
  - \* Aging:  $\pm$ 1 ppm first year,  $\pm$ 3 ppm over 20 years

### TIMEBASE:

### EXTERNAL CLOCK & ARM INPUTS:

- Sensitivity: 50mV rms
- Input impedance: 1K $\Omega$
- Threshold setting
  - \* Range: - 5V to + 5V
  - \* Resolution: 153 $\mu$ V
  - \* Absolute accuracy: 0.1% of setting
- Automatic threshold setting available

### EXTERNAL CONNECTIONS

- Main channels: 2, SMA per site
- External clock: 1, SMA
- External arm: 1, SMA
- Digital input: 1 SMA (for 1PPS UTC synch)
- Digital output: 2, SMA (software programmable, to control user subsystems)

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[www.jitter.com](http://www.jitter.com)