GT9000, GT9000R, GT9000SLR, GT9000P

**TIC** Time Interval Counter 2.7GHz, 0.9ps
**MUX** DC to 6 GHz 17-to-2 Active Multiplexer
**CTIA** Continuous Time Interval Analyzer 2.7GHz, 0.9ps

GT90000SLR is a scalable 2 to 24 channels **Event-Timer** with GPS receiver.

GT916MUX is a DC to 6 GHz 17-to-2 Active Multiplexer. Combined with the **GT668 CTIA** and/or **GT210 TIC**, you can Have up to 36 channels in the **GT9000** and up to 102 channels in the **GT9000R**.

Some of the **GT9000** test-platform measurements include: Frequency, 1 PPS Monitoring, Allan Variance, Time Interval, Time Interval Error, Real-Time Time Stamping, Jitter measurements, PLL & Clock Jitter, Spread Spectrum Modulation, PLL Lock Time, Period, Pulse Width, Skew, Tpd, Rise/Fall Time, and more.

With easy expansion through its modular design, **GuideTech**’s **GT9000** Test-Platforms offers a comprehensive Time & Frequency test-solutions for a wide range of applications From R&D labs to Characterization, field test, fast automated characterization and high-throughput production test on all ATE platforms, including low-cost in-house testers.

In addition to the **GT9000** Test Platforms, **GuideTech** offers **CTIA** & **TIC** instruments in **PCI, PCIe, PXI** and **PXIe** plug-in cards.

**GT9000** family is USA-made industrial-grade systems with an integrated industrial-computer. The platform enables scalable optimal test at lower cost.

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**APPLICATIONS**
- 1 PPS Monitoring
- Allan Variance
- Measure Jitter and Skew
- Real-Time Time Stamping
- Lab / R&D Characterizations
- Variation in Pulse Timing
- PLLs and Frequency Modulation
- Fast Production Time Analysis
- Portable Telecommunication Test
- Nuclear Physics
- Radar & Ultrasonic Timing
- Satellite Laser Ranging
- Optical and Magnetic Disk Timing

**SOFTWARE SUPPORT**
- GuideTech GT668 CTIA GUI
- Windows 32bit, 64 bit
- Linux 32bit, 64 bit
- NI LabVIEW
- Python
- Java
- Custom software dev/support

**KEY FEATURES**
- Very low noise floor
- Extremely high throughput
- NIST traceable calibration
- 2 to 24 correlated channels
- 17 to 102 channels GT916MUX
- Small-size & portable-USB3 unit
- Seamless transition from R&D, device characterization to production
- High accuracy & measurement speed
- Easy integration with ATE systems
GT9000, GT9000R, GT9000SLR, GT9000P

TIC Time Interval Counter 2.7GHz, 0.9ps
MUX DC to 6 GHz 17-to-2 Active Multiplexer
CTIA Continuous Time Interval Analyzer 2.7GHz, 0.9ps

The GT9000, GT9000R, GT9000SLR & GT9000P test Platforms can be configured with any combinations of GT668 CTIA and/or GT210 TIC and/or GT916MUX

The performance level of the instruments ranges from 0.9ps to 40ps (see GT9000 Models table on left)

The Time-Base has several options from OCXO to Rubidium and CSAC-Cesium

GTGPS - Optional GPS Receiver with Antenna disciplining the time-base

SPECIFICATIONS

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: 1KΩ / 10 pF, or 50Ω software programmable
- Coupling: DC or AC
- Threshold setting (each channel):
  - * Range: -5V to +5V
  - * Resolution: 153µV
  - * Absolute accuracy: 0.1% of setting
  - * Automatic threshold setting option

TIMEBASE:
- Frequency 100MHz locked to:
  - * Internal 10MHz OCXO
  - * External clock: 5 or 10 MHz (±3KHz)
- Minimum pulse width: 6nS
- Oven Oscillator:
  - * Temp: 0 - 45ºC ± 25ppb
  - * Aging: ±1 ppm first year, ±3 ppm over 20 years

EXTERNAL CLOCK & ARM INPUTS:
- Sensitivity: 50mV rms
- Input impedance: 1KΩ
- Threshold setting
  - * Range: -5V to +5V
  - * Resolution: 153µV
  - * 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)

GT9000 MODELS

GT668 CTIA
- GT668-1
- GT668-2
- GT668-15
- GT668-40

GT210 TIC
- GT210-1
- GT210-2
- GT210-15
- GT210-40
  - -1 = 0.9pS resolution
  - -2 = 1.8pS resolution
  - -15 = 15pS resolution
  - -40 = 40pS resolution

GT916MUX

GTGPS - GPS Receiver
- GTGPSO - OCXO
- GTGPSR - Rubidium
- GTGPSC - CSAC Cesium