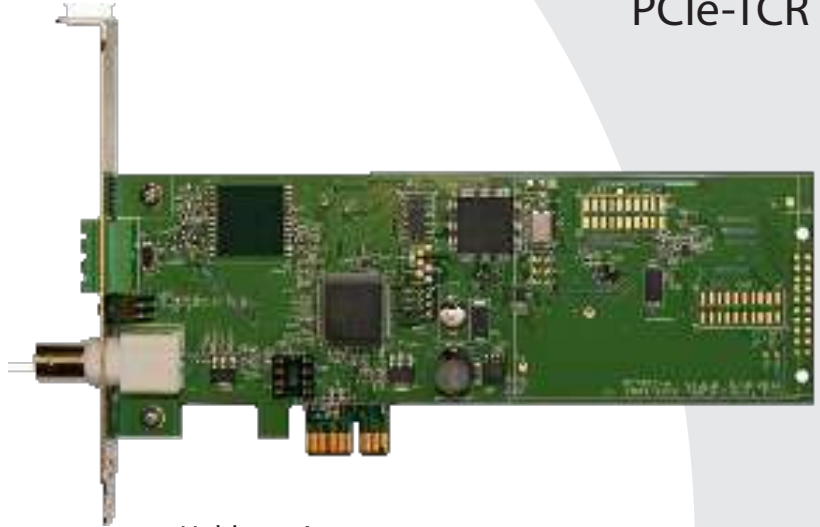# PCIe-TCR

FEATURES

- Synchronizes PC to ± 2 milliseconds of time code reference
- References IRIG-B, SMPTE, EBU time codes
- Automatic time code detection
- Balanced and unbalanced time code inputs
- Provides millisecond accuracy to Windows applications
- Microsecond accuracy achievable through API development
- Fully configurable time zone and daylight saving time offsets
- PCIe revision 2.0 – slot compatible X1 through X16
- LED status indicator

SPECIFICATIONS

Time Code Inputs
 > SMPTE (30/25/25 fps - non-drop frame only) to Leitch Date Encoding Standard
 > IRIG-B pulse width coded (unmodulated) DC, IEEE 1344 standard
 > IRIG-B(1) 1 kHz Amplitude Modulated, IEEE 1344 standard

Supported Drivers
> Windows XP (32 bit)
> Windows 7/8/10 (32 & 64 bit)
> Windows Server 2003 R2/2008 R2/2010 R2/2012 R2/2016/2019
> Linux

Software
> API software development kit and documentation is provided for designers
> Windows OS requires Net Framework 4.0 and a Windows Visual Studios C++ to be installed

Physical
> Length: 6.6 in (167.6 mm), Height: 2.712 in (68.8 mm)
> Low profile card and bracket standard; full height bracket included

Holdover Accuracy
> With loss of power or time reference syncronization, device reverts to an internal battery-backed real-time clock chip with accuracy of ± 1min/year
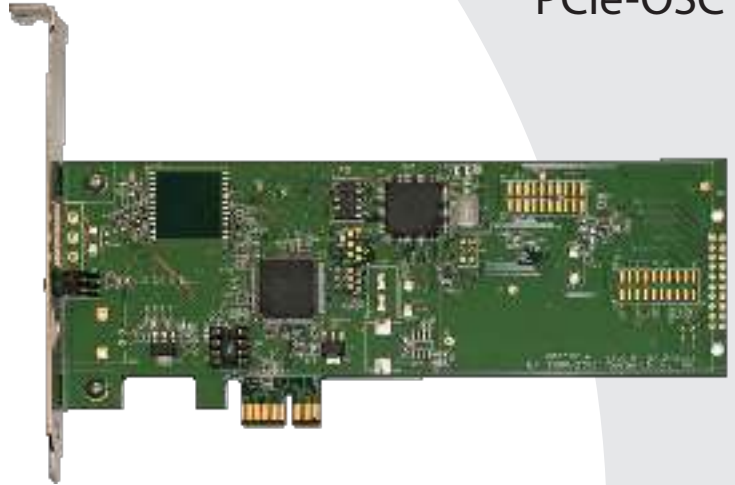
High-stability Oscillator Options
> HSO-1 with TCXO provides accuracy of ± 3 seconds/year
> HSO-2 with OXCO provides typical stability of ± 250ms/year after 30 days of aging

Freq = 10 Mhz	HSO-1	HSO-2
Oscillator Type	TCXO	OCXO
Freq. Stability	± 2.5 x 10`6	± 5 x 10`9
Aging Stability per yr	± 1 x 10`6	± 1 x 10`8
Drift per year	± 3 seconds	±0.3seconds

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PCIe-OSC

FEATURES

- Provides millisecond accuracy to Windows applications
- Microsecond accuracy achievable through API development
- Fully configurable time zone and daylight saving time offsets
- PCIe revision 2.0 – slot compatible X1 through X16
- LED status indicator

SPECIFICATIONS

Time Generation Accuracy
> Internal battery-backed real-time clock chip provides accuracy of ± 1min/year

Supported Drivers
> Windows XP (32 bit)
> Windows 7/8/10 (32 & 64 bit)
> Windows Server 2003 R2/2008 R2/2010 R2/2012 R2/2016/2019
> Linux

Software
> API software development kit and documentation is provided for designers
> Windows OS requires Net Framework 4.0 and a Windows Visual Studios C++ to be installed

Physical
> Length: 6.6 in (167.6 mm), Height: 2.712 in (68.8 mm)
> Low profile card and bracket standard; full height bracket included

Operating Parameters
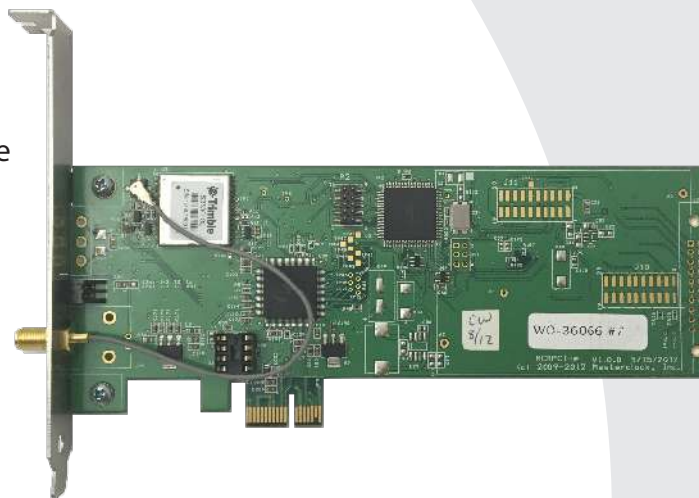 > Temperature: 0 to 60 °C

High-stability Oscillator Options
>HSO-1 with TCXO provides accuracy of ± 3 seconds/year
> HSO-1 with TCXO provides accuracy of ± 3 seconds/year

Freq = 10 Mhz	HSO-1	HSO-2
Oscillator Type	TCXO	OCXO
Freq. Stability	± 2.5 x 10`6	± 5 x 10`9
Aging Stability per yr	± 1 x 10`6	± 1 x 10`8
Drift per year	± 3 seconds	±0.3seconds

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PCIe-GPS

FEATURES

- Synchronizes PC to ± 2 milliseconds of GPS reference
- Provides millisecond accuracy to Windows applications
- Microsecond accuracy achievable through API development
- Fully configurable time zone and daylight saving time offsets
- PCIe revision 2.0 – slot compatible X1 through X16
- LED status indicator

SPECIFICATIONS

Holdover Accuracy
> With loss of power or time reference syncronization, device reverts to an internal battery-backed real-time clock chip with accuracy of ±1min/year

Supported Drivers
> Windows XP (32 bit)
> Windows 7/8/10 (32 & 64 bit)
> Windows Server 2003 R2/2008 R2/2010 R2/2012 R2/2016/2019
> Linux

Software
> API software development kit and documentation is provided for designers
> Windows OS requires Net Framework 4.0 and a Windows Visual Studios C++ to be installed

Physical
> Length: 6.6 in (167.6 mm), Height: 2.712 in (68.8 mm)
> Low profile card and bracket standard; Full height bracket included

Operating Parameters
> Temperature: 0 to 60 °C

Antenna Options
> Basic antenna package includes magnetic GPS antenna and 15 ft (5 m) of cable
> Standard antenna package includes outdoor GPS antenna, mounting kit, and 50 ft (15 m) of cable

High-stability Oscillator Options
> HSO-1 with TCXO provides accuracy of ± 3 seconds/year
> HSO-2 with OXCO provides typical stability of ± 250ms/year after 30 days of aging

Freq = 10 Mhz	HSO-1	HSO-2
Oscillator Type	TCXO	OCXO
Freq. Stability	± 2.5 x 10`6	± 5 x 10`9
Aging Stability per yr	± 1 x 10`6	± 1 x 10`8
Drift per year	± 3 seconds	±0.3seconds

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