

## PCL PCIe Time Code Reader Cards for PC

- PCIe L:** card with LTC reader
- PCIe LV:** analog video card with VITC and LTC reader
- PCIe 3G:** PCI 3G video card with DVITC, ATC, UMID, Metadata and LTC reader
- PCIe TS:** PCI card with LTC reader and Windows software for real time synchronization

AV PCL Time Code reader cards for the PCIe express bus are an important computer hardware solution for software development in fields such as subtitling, computer controlled editing, interactive-video, technical scientific analysis, and other applications that are based on picture accurate video processing.

Driver compatibility between analog, digital and HD video cards enables you to design a software which is interoperable with any Plura PCI or PCIe card. Each card has its own processor system with a register set for data transfer. Thus the critical time routines are completely decoupled from the PC's CPU, which enables extensive error checking.

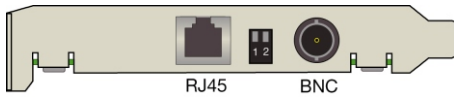
An automatic frame rate detection (24, 25, 30, 30 DF) is supported as well as the parallel operation of two or more PCL PCIe-Cards. Drivers and exemplary programs for Windows 32- and 64 bit and Linux are included. DLL functions for reading Time Code and configuration are given. C/C++, Visual Basic and Delphi are also supported.

Video-Untertitelung, Computer-orientiertes Editing, Interaktiv-Video, Computer-Animationen und viele wissenschaftlich-technische Videoauswertungen benötigen eine framegenaue Videobildererkennung. Die PCL PCIe- Timecode-Reader-Karten für PCIe express-Bus sind wichtige Hardware-komponenten für die Entwicklung solcher Anwendungen.

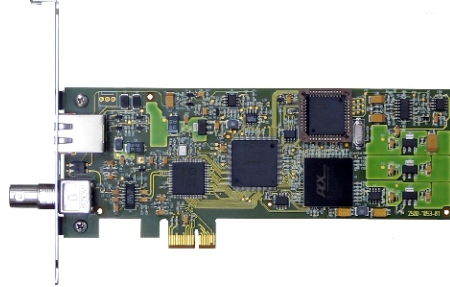
Die Treiber aller analog-, SDI-und HDSDI-Videokarten sind in der Basis identisch, so dass eine Anpassung an einen anderen Videostandard mit geringem Aufwand machbar ist. Jede PCL PCIe-Karte verfügt über ein eigenes Prozessorsystem mit einem Registersatz zum Datentransfer. Die zeitkritischen Timecode-Routinen sind damit vollständig von der PC-CPU entkoppelt, wodurch umfangreiche Error-Checks möglich sind.

Die Framerate-Erkennung (24, 25, 30, 30 DF) erfolgt automatisch; der parallele Betrieb mit mehreren PCL PCIe-Karten ist möglich. Treiber und Beispielprogramme für Windows, 32-/64 bit und Linux werden mitgeliefert. Es stehen DLL-Funktionen zum Lesen der Timecode-Werte und zur Konfiguration zur Verfügung. Unterstützt werden C/C++, Visual Basic und Delphi.





PCIe rear panel



PCIe LV card

Working with ATC, UMID and Metadata formats offers new opportunities regarding the application area of PCIe 3G cards. This data is carried in the Ancillary Data portion of the digital video.

The „Monochrome Transfer“ method of MPEG transfer is available for use with this hardware. PCIe 3G also offers an integrated logic analyzer for the digital video signal.

PCIe TS was designed for the synchronization of a Windows system clock with a realtime locked LTC Time Code signal. The included Windows program "TimeSys" controls the realtime process.

PCIe 3G für 3G/HD-SDI haben mit den Formaten ATC, UMID und Metadaten zusätzliche Möglichkeiten. Diese Daten werden als „Ancillary Data“ transportiert.

Für MPEG-Transfer ist das „Monochrome Transfer“-Verfahren verfügbar. PCIe 3G-Karten bieten darüber hinaus einen integrierten Logic analyzer für das digitale Videosignal.

PCIe TS dient zur Synchronisation der Systemuhr von Windows-Systemen auf ein echtzeit-verkoppeltes LTC-Signal. Das Windows-Programm "TimeSys" wird für diesen Zweck mitgeliefert.

## PCIe specifications

### LTC reader

#### Reading range forward and backward

1 to 2500 fps

#### Connector (balanced or unbalanced)

RJ45 (0.1 to 5 Vpp)

#### Video SD (PCIe 3G)

SMPTE 259M-1997 (270 Mb/s)

525/59.97 or 625/50 component (SDI)

Equalization: 100m Belden 8281 or equivalent

#### Video HD (PCIe 3G)

SMPTE 424M-2006 (3 Gb/s HD)

SMPTE 292M-2008 (1.485 Gb/s HD)

SMPTE 260M-1999 (1125/60 HD)

SMPTE 295M-1997 (1080/50 HD)

SMPTE 274M-2008 (1080/all frame rates HD)

SMPTE 296M-2001 (720/all frame rates HD)

Equalization: 100m Belden 1694A or equivalent

#### VITC reader (PCIe LV)

##### Reading range

Still frame to search-speed

##### Connector

1 x BNC (FBAS 0.7 to 2Vpp)

##### Termination

Switchable

##### Level adjustment

Automatic

##### Video

NTSC, PAL, SECAM

#### DVITC reader (PCIe 3G)

##### Standards

SMPTE 12M-2-2008 (DVITC)

##### Connector

1 x BNC, 75 Ω (8/10 Bit)

#### ATC reader (PCIe 3G)

##### Ancillary Time Code

SMPTE 291M - 1998 (ANC Data)

RP 188-1999 (ATC)

RP 196-1997 (HANC TC)

##### Connector

1 x BNC, 75 Ω (8/10 Bit)

## Others

### Operating System

Windows 7 to 11, Server 2008 R2 to 2022, 32- and 64-bit

Linux

### Dimensions

168 x 69 x 22 mm

Standard profile

Option: low profile

### Operating voltage

3.3 V/12V from PCIe connector

### Interface

PCI Express x1

### Base address

Automatic

### I/O address

384 in 2 Blocks

### Memory address

384 in 2 Blocks

### Data transfer

32-Byte register set

## Product ordering ID

### PCIe L

PCIe card with LTC reader

### PCIe LV

PCIe card with VITC and LTC reader

### PCIe 3G

PCIe 3G video card with DVITC, ATC, UMID, Metadata and LTC reader

### PCIe TS

PCIe LTC reader card and software for real time synchronisation

## Accessory

Standard and low profile brackets included

We reserve the right to modify specifications without notice.

## Legend:

**LTC:** Linear Time Code (SMPTE 12M-1999)

**VITC:** Vertical Interval Time Code (SMPTE 12M-1999)

**DVITC:** Vertical Interval Time Code (SMPTE 266M-1994)

**ATC:** Ancillary Time Code (SMPTE 291M-1998)

