

# Installation

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A group of several CreamWare DSP cards connected in a computer via the S/TDM bus

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## Welcome

Thank you for choosing CreamWare hardware. With our hardware you've acquired not only a very high-quality, state-of-the-art I/O card, but also one of the most advanced DSP systems currently available. New applications (effects, synths, etc.) for the SCOPE Fusion Platform are continually being created by hundreds of developers around the world working with the SCOPE development platform. With SCOPE technology our goal is to open a new chapter in the development of audio technology - and we're happy to have you along with us.

### Important Advice

**Transients may occur on the Creamware card outputs during startup of the computer or the software. Equipment connected to the card outputs should be switched on only *after* starting the program, or its volume controls should be turned down until the software has been started, in order to avoid damage to this equipment. Likewise, the volume should be turned down, or the equipment switched off, *before* shutting down the computer.**

**Before installing the software, please refer to the readme file in the root directory of the CD for possible changes of the setup sequence or for last-minute information!**



The Creamware hardware is hereby certified to conform to the requirements set forth in the guidelines for electromagnetic acceptability (89/336/EWG).

CreamWare Datentechnik GmbH, March 2002  
Dr. Hans-Ulrich Hund

## PC

## SCOPE /SP

### Absolute minimum system requirements

CPU	Pentium II 400 MHz
RAM	128 MB
Graphics card	PCI or AGP, 8 MB
Resolution	1024 x 768, 16-bit
Operating system	Windows 95/98/ME/W2000/XP
Free hard disk space	200 MB minimum

### Recommended minimum system requirements

CPU	Pentium II 500 MHz or faster
RAM	256 MB or more
Graphics card	AGP, 16 MB or more
Resolution	1024 x 768 or higher, 16-bit
Operating system	Windows 95/98/ME/W2000/XP
Free hard disk space	200 MB minimum

## MAC

## SCOPE /SP

### Absolute minimum system requirements

CPU	B/W G3 or G4, 350MHz
RAM	128 MB
Graphics card	PCI or AGP, 8 MB
Resolution	1024 x 768 or higher, 16,7 Mill.
Operating system	Mac OS 8.6 or higher
Free hard disk space	200 MB minimum

### Recommended minimum system requirements

CPU	B/W G3/G4, 400 MHz or faster
RAM	256 MB or more
Graphics card	AGP, 16 MB or more
Resolution	1024 x 768 or higher, 16,7 Mill.
Operating system	Mac OS 8.6 or higher
Free hard disk space	200 MB minimum

## **PC**

## **Pulsar/Pulsar XTC**

### **Absolute minimum system requirements**

<b>CPU</b>	Pentium with MMX, 166MHz
<b>RAM</b>	96 MB
<b>Graphics card</b>	PCI or AGP, 4 MB
<b>Resolution</b>	1024 x 768 or higher, 16-bit
<b>Operating system</b>	Windows 95/98/ME/W2000/XP
<b>Free hard disk space</b>	200 MB minimum

### **Recommended minimum system requirements**

<b>CPU</b>	Pentium II with 300 MHz or faster
<b>RAM</b>	192 MB (256MB or more)
<b>Graphics card</b>	AGP, 8 MB or more
<b>Resolution</b>	1024 x 768 or higher, 16-bit
<b>Operating system</b>	Windows 95/98/ME/W2000/XP
<b>Free hard disk space</b>	200 MB minimum

## **MAC**

## **Pulsar/Pulsar XTC**

### **Absolute minimum system requirements**

<b>CPU</b>	B/W G3 with 300MHz
<b>RAM</b>	128 MB
<b>Graphics card</b>	PCI or AGP, 4 MB
<b>Resolution</b>	1024 x 768 or higher, 16,7 Mill.
<b>Operating system</b>	Mac OS 8.6 or higher
<b>Free hard disk space</b>	200 MB minimum

### **Recommended minimum system requirements**

<b>CPU</b>	B/W G3 or G4 with 400 MHz or faster
<b>RAM</b>	256 MB or more
<b>Graphics card</b>	AGP, 8 MB or more
<b>Resolution</b>	1024 x 768 or more, 16,7 Mill.
<b>Operating system</b>	Mac OS 8.6 or more
<b>Free hard disk space</b>	200 MB minimum

## PC

## Luna/PowerSampler/Elektra

### Absolute minimum system requirements

CPU	Pentium with MMX, 166MHz
RAM	64 MB
Graphics card	PCI or AGP, 4 MB
Resolution	1024 x 768 or higher, 16-bit
Operating system	Windows 95/98/ME/W2000/XP
Free hard disk space	100 MB minimum

### Recommended minimum system requirements

CPU	Pentium II, 300 MHz or faster
RAM	192 MB (256MB or more)
Graphics card	AGP, 8 MB or more
Resolution	1024 x 768 or higher, 16-bit
Operating system	Windows 95/98/ME/W2000/XP
Free hard disk space	100 MB minimum

## MAC

## Luna/PowerSampler/Elektra

### Absolute minimum system requirements

CPU	B/W G3 with 300MHz
RAM	128 MB
Graphics card	PCI or AGP, 4 MB
Resolution	1024 x 768 or higher, 16,7 Mill.
Operating system	Mac OS 8.6 or higher
Free hard disk space	min. 100 MB

### Recommended minimum system requirements

CPU	B/W G3 with 350 MHz or faster
RAM	256 MB or more
Graphics card	AGP, 8 MB or more
Resolution	1024 x 768 oder higher, 16,7 Mill.
Operating system	Mac OS 8.6 oder higher
Free hard disk space	100 MB minimum

## The Hardware

### The SCOPE Board (here with 24ADAT Plate)

The SCOPE board contains 5 S/TDM bus connections for cascading several DSP boards. You will also find a header to connect the SyncPlate just in front of the first S/TDM connection point. Please note the location of pin #1 (lower left) on this header. *This pin must be connected to the red colored line of the SyncPlate ribbon cable (see below).*

SCOPE and Pulsar II are available in several versions. The following section gives a brief description of the I/O options.

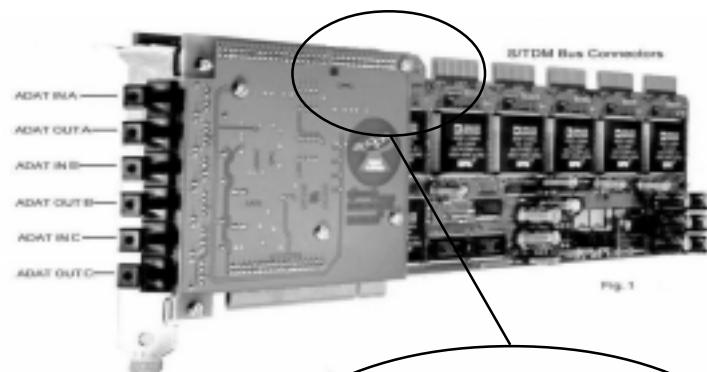


Fig. 1

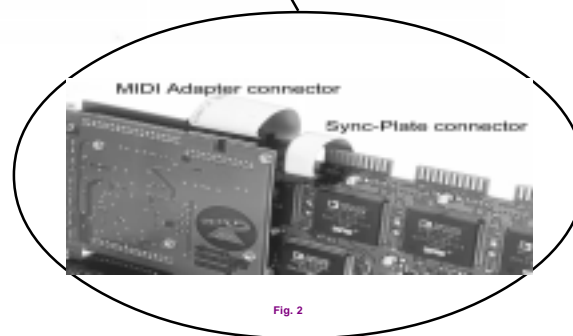
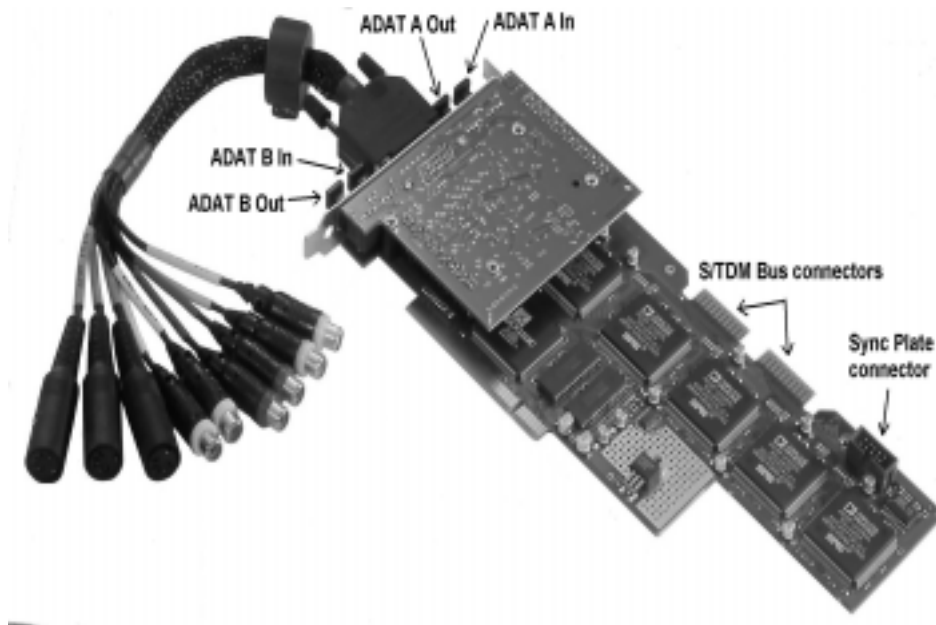


Fig. 2

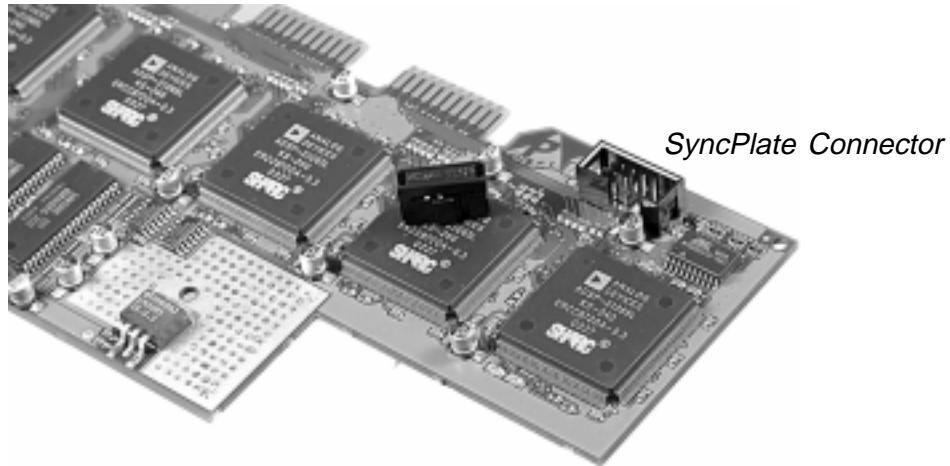
## The Pulsar II Board (here with "Classic" 20 I/O Plate)



As with SCOPE, the Pulsar II may also be equipped with the "Classic" 20 Plus or 24ADAT or Z-Link I/O boards .

Cards without I/O boards are referred to as "SRBs" (for Sonic Rocket Booster) or "Pulsar XTC" and are available in both Pulsar II SRB, Pulsar XTC and SCOPE SRB versions.

## The Pulsar XTC Board

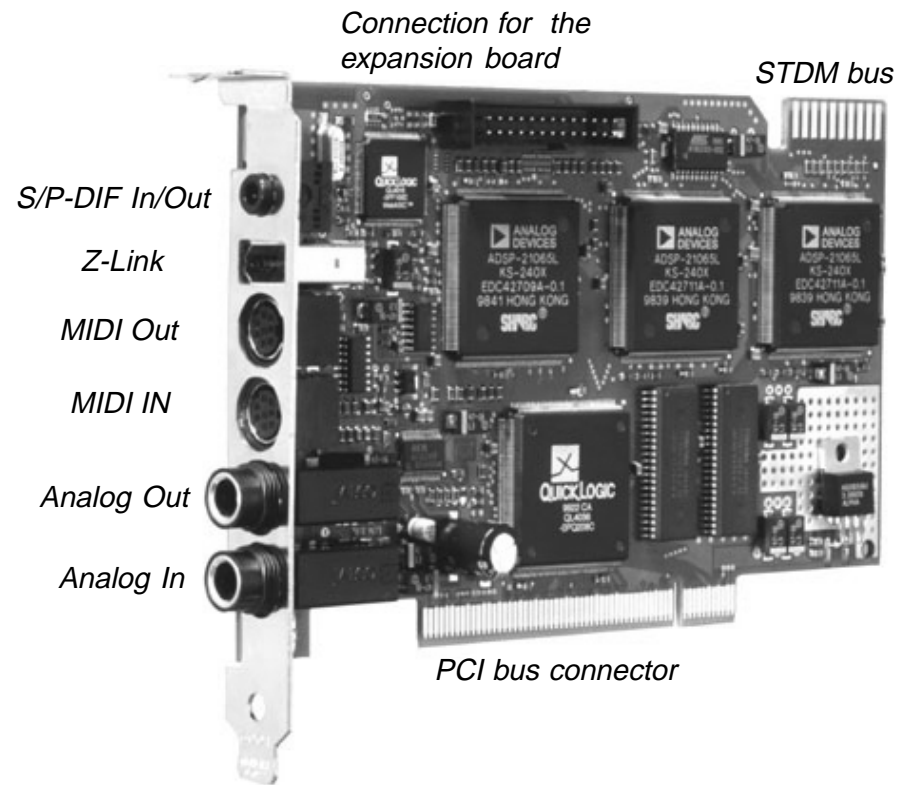


A distinguishing feature of the XTC hardware as compared to Pulsar II hardware is the small plug inserted into the SyncPlate connector. If you wish to add a SyncPlate to your XTC card (note: this is possible only if you have upgraded from XTC to Pulsar II), you will need to remove this plug. Otherwise, this plug can and should remain in place.

As with SCOPE and Pulsar II, any of our I/O plates can be used with the Pulsar XTC hardware.



## The Luna II Board (Luna/PowerSampler/ Elektra)



## The various I/O options for SCOPE, Pulsar II and Pulsar XTC

The assembly sequence for the inputs and outputs is as illustrated in chapter 'Pulsar II Board'.

### The 24ADAT Plate

The MIDI I/O cable whip attaches to a connector on a slot cover plate which is in turn connected to the 24 I/O board via a ribbon cable (figure #2 on page 72). Note that the connector on the 24 I/O board is notched for the correct orientation of the ribbon cable.

### The "Classic" 20 I/O Plate

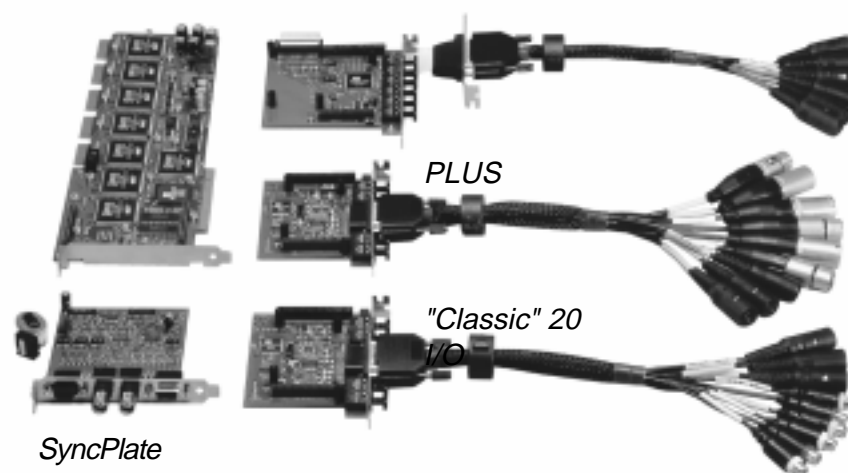
The "Classic" I/O plate is already affixed to the SCOPE or Pulsar board and provides audio and MIDI I/O.

2 x ADAT input and output ports, 1 x stereo analog input and output (unbalanced, RCA), 1 x stereo digital input and output (S/PDIF, coaxial) and MIDI In/Out/Thru.

### The PLUS Plate

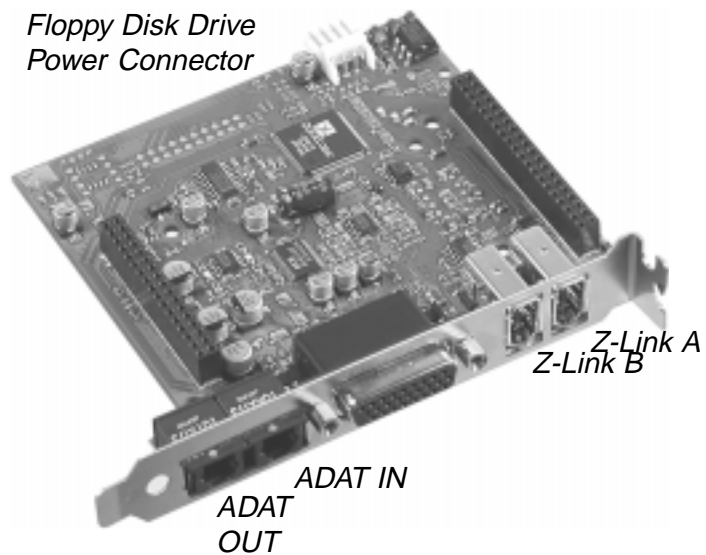
2 x ADAT input and output ports, 1 x stereo analog input and output (balanced, XLR), 1 stereo digital input and output (AES/EBU, XLR) and MIDI In/Out/Thru.

The MIDI, stereo analog and stereo digital connections are provided in a cable whip assembly, and are clearly labeled.



## The Z-Link Plate

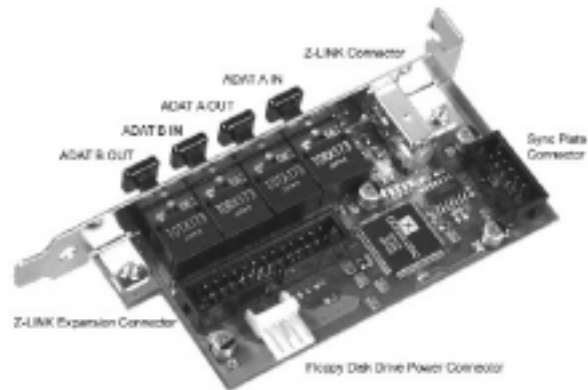
2x Z-Link, 1x ADAT, 1x analog stereo (unbalanced coaxial), 1x digital stereo (S/PDIF coaxial), MIDI In/Out/Thru.



The MIDI, analog and stereo digital connections are identified as such on the supplied cable whip.

For instructions on mounting the optional I/O boards refer to following pages.

## The Luna ADAT Expansion for Luna II Boards



The Luna ADAT expansion board adds 2 additional ADAT interfaces (for 16 I/Os) and a second Z-LINK bus port to connect the optional Luna 2496 I/O converter. This board also provides a connector for the SyncPlate (see next page).

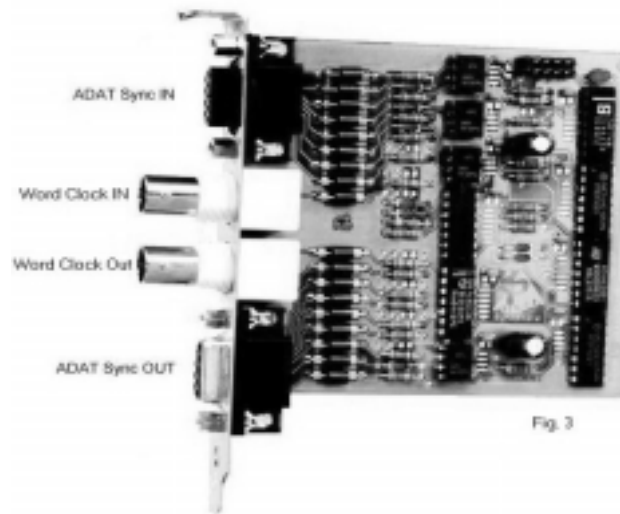
If you wish to connect a Luna 2496 IO Box to the three-DSP board and another one to the Luna ADAT expansion, you must connect the floppy power connector ("Floppy Disk Drive Power Connector" in the diagram above) with the appropriate connector on the PC's internal power supply. Otherwise, the supply of power to the PCI bus is not guaranteed to meet specifications.

## The SyncPlate

The SyncPlate provides word clock synchronization through two BNC connectors and ADAT sync through two ADAT 9-pin connectors. Near the back of the card at the top is a header for connecting the sync ribbon cable (fig.2 in the chapter SCOPE Board). *When connecting this cable, ensure the red-colored line connects to pin #1 as marked on the printed circuit board.*

With the SyncPlate it is easy to integrate your Creamware DSP board into an existing studio using either word clock or ADAT sync. As can be seen in figure #3, the SyncPlate provides both inputs and outputs for sync signals allowing the software to switch between master and slave modes at any time.

With regard to sync we have assumed you are familiar with fundamental digital studio technology concepts. Please understand that, for the purposes of this installation guide, we cannot discuss the implementation of sync in depth.



Once the Sync Plate has been installed (when installing the hardware, please also note the items in chapter 'Installing Instructions...', which apply to the SyncPlate as well), corresponding new options for word clock and ADAT synchronization will appear in the 'Sample Rate Settings' dialog of the program. Use the appropriate modules – 'Sync Plate Source'– **or** –'Sync Plate dest'- from the directory ..\Hardware Devices.

It's certainly also worth knowing that signals which are applied to the ADAT Sync IN and Wordclock Sync IN inputs are fed directly through to the corresponding outputs. More detailed information can be obtained from the manual for your product.

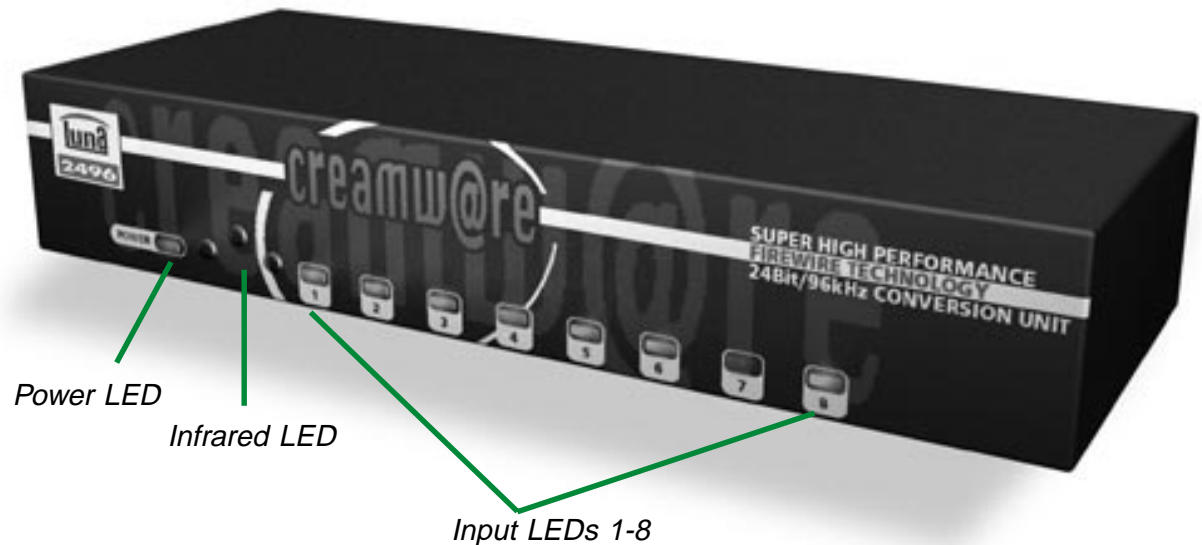
## The Luna 2496 Converter Unit

Connect the provided Z-Link cable between the Z-Link connector on the Luna card and the one on the converter unit. The converter also receives its power via this cable – no additional power connection is necessary.

In case you don't use the enclosed Z-Link-cable please make sure to use 6-6 pin Firewire cable only!

Please note: Z-Link is using a separate protocol not compatible with other Firewire components!

Connect the eight RCA inputs and outputs on the converter unit to the corresponding signal jacks on your analog equipment as desired.



### Indicators

**Power LED:** Assuming that the converter unit is properly connected to the Z-Link card via the Z-Link cable, this LED lights green if a Z-Link Source module is currently loaded in the software.

**Infrared LED:** This is a receiver which has been built in to allow for possible future implementation of wireless remote control of software functions. Remote control is currently not implemented.

**Input LEDs 1-8:** These LEDs indicate input signal level for each of the eight channels.

The three colors indicate levels as follows:

Green: -60 dBFs

Yellow: -12 dBFs

Red: -1 dBFs

Ideally, input levels should be set so that the yellow LED lights occasionally, the red LED seldom or never.

## A16 Ultra

The **A16 Ultra**, following in the tradition of the successful A16 converter, is among the most compact multi-channel 24-bit/96kHz AD/DA converters offering uncompromising audio quality. It combines the qualities that made its forerunner so popular with today's latest audio technology.



The **A16 Ultra** simultaneously converts 16 analog audio channels to digital and 16 digital channels to analog. The digital interfacing is provided through two ADAT\* or two Z-Link interfaces. Provision is made for additional expansion to accommodate any future digital audio interface that may become available to the studio environment.

An automatic memory function stores the current settings when you switch the unit off so you can get back to work quickly and easily when you resume your session.

Not only because of its audiophile quality, but also because of its flexibility and expandability, the **A16 Ultra** will prove itself daily to be a perfect fit for your professional studio.

### Controls

The front panel contains the power switch, two buttons—Synchronization and Sample Rate— and 11 light emitting diodes (LEDs) to indicate the device status. It also contains the 16 five-segment level indicators for precise analog input calibration.

When switched on, the green power LED indicates that the unit is operational.

ADAT and Z-Link interfaces "A" correspond to analog channels 1-8; ADAT and Z-Link interfaces "B" correspond to analog channels 9-16.

The analog inputs and outputs are balanced and can be configured, by group, to professional or consumer levels with 4 DIP switches.

The Synchronization button selects the clock source for the sample rate. In Master mode, the Sample Rate button selects the desired sample rate. In Slave mode, the sample rate is indicated here, and the Sample Rate button is used to switch between S-Mux and normal operation. In normal operation, all sample rates less than 50kHz are indicated.

## A16 Ultra as Word Clock Master

When the **Master LED** shines green, the **A16 Ultra** is operating in **Master** mode.

The sampling frequency used by the analog-to-digital (ADC) and digital-to-analog (DAC) converters is derived from a highly stable internal clock generator. Using the **Sample Rate** button, the sample rate can be set to 32kHz, 44.1kHz, 48kHz, 88.2kHz or 96kHz. A sample clock signal is available at the **Word Clock Out** BNC connector on the rear of the unit. This signal is used to synchronize additional external devices to the sample clock.

If the unit is operating in Master mode at 88.2kHz or 96kHz, the ADAT interfaces switch automatically to S-Mux. In this case, ADAT A corresponds to analog channels 1-4, and ADAT B to channels 9-12. If an optional ADAT Aux card is installed in the expansion bay the remaining channels 5-8 and 13-16 are available there. The **Word Clock Out** BNC jack provides the appropriate clock frequency—88.2kHz or 96kHz.



## A16 Ultra as Slave: ADAT and Word Clock

The **ADAT LED** lights in **green** to indicate that the **A16 Ultra** is in **ADAT Slave** mode. If this LED lights in **red**, it is an indication that no ADAT signal is present at the ADAT inputs (possibly because the optical cable is not connected).

The **Word Clock LED** lights in **green** to indicate that the **A16 Ultra** is synchronized to the clock signal present at the Word Clock IN (BNC) connector. If this LED lights in **red**, it is an indication that no Word Clock signal is present at the Word Clock input

A special situation arises in Slave mode when the incoming sample rate at the ADAT or Word Clock inputs lies in the range **38kHz – 50kHz**.

The ADAT signal itself provides no indication as to whether it is transmitting a "true" 48kHz 8-channel signal or a multiplexed 96kHz 4-channel signal. Therefore, this setting must be selected manually. Pushing the **Sample Rate** button switches between Normal and S-MUX operation. The **Sample Rate LEDs** alternate between **48 kHz** and **96 kHz** accordingly. When the **96kHz LED** is *lit*, the **A16 Ultra** is operating as an **ADAT slave** in S-MUX mode. Similar behavior applies with an ADAT or Word Clock input signal frequency of 44.1kHz.

In contrast to the ADAT signal, a Word Clock input signal can have a frequency of **88.2kHz** or **96kHz**. When these frequencies are detected at this input, the **A16 Ultra** switches itself automatically into S-MUX mode.

## A16 Ultra as Z-Link Slave

The **Z-Link LED lights** in *green* to indicate that the **A16 Ultra** is connected to a computer which has assumed control over the **A16 Ultra**. The sample rate is then selected remotely via the computer.

In **Z-Link mode**, up to two ADAT-compatible devices interfaced via the optical connectors can be accessed via the PC without the need for recabling. The Sample Rate button is used to determine whether or not these devices can be accessed. The level indicator array functions as a simple text display and briefly shows either "**ANLG**" or "**ADAT**". Pushing the button *once* causes the current setting to be displayed, while pushing it *twice in rapid succession* ("double-clicking") causes the setting to change.

**ANLG**: is similar to the normal **A16 Ultra** operating mode. Additionally, the analog input signals are sent to the ADAT out connectors (after being converted by the ADC). This makes it possible, for example, when recording via the **A16 Ultra**, to hook up an original ADAT-XT for the purpose of making backup recordings.

**ADAT**: indicates that the **A16 Ultra** is configured as a Z-Link <-> ADAT Interface. This configuration can be used, for example, to transfer an ADAT recording from tape to the computer. The signals being transferred are simultaneously available via the ADAT outputs and – via the **A16 Ultra** DACs – as analog signals.

If a sample rate of **88.2kHz** or **96kHz** is selected while in Z-Link mode, the ADAT interfaces are automatically switched into S-MUX operation.

## Option

The **Option LED** is reserved for use in connection with future **A16 Ultra** expansion options. It lights only if an option such as a USB interface is installed in the expansion slot.

## Level

The **A16 Ultra** is outfitted with balanced inputs and outputs. The **A16 Ultra** can be adapted to various standards via the DIP switches on its rear panel. The analog inputs can be set in groups for an input sensitivity of either **-10dBv** or **+4dBu**. The same applies to the analog outputs.

The functions of the DIP switches are as follows:

Name	UP	DOWN	Function
IN-A	Prof (+4dBu)	Consumer (-10dBv)	Level (Gain) for input group A
IN-B	Prof (+4dBu)	Consumer (-10dBv)	Level (Gain) for input group B
OUT-A	Prof (+4dBu)	Consumer (-10dBv)	Level (Output) for output group A
OUT-B	Prof (+4dBu)	Consumer (-10dBv)	Level (Output) for output group B
OPT-A			reserved for future expansion
OPT-B			reserved for future expansion

Since the maximum signal or numerical value which can be faithfully converted constitutes the practical upper limit for all AD/DA converters, this limit is represented as **0 dBFS** (Full Scale) in the level display and signifies that the analog input signal is just barely at the level at which numerical overload is about to occur. However, the **red LED** lights starting at a level of **-0.5 dBFS**, thus providing a warning of impending overload before it actually occurs.

In any digital system, it is desirable to use as many "bits" as possible in order to keep the noise component of the signal to a minimum (each bit used corresponds to approximately **6 dB** additional signal-to-noise ratio).

The level at each of the 16 inputs is displayed via a 5-segment peak indicator. The **yellow** and **red LEDs** are equipped with a peak-hold function for improved readability. The LEDs light in succession at the following signal levels: **-60 dBFS; -12 dBFS; -6 dBFS; -3 dBFS** and **-0,5 dBFS**.

As a basic rule of thumb for optimal recordings, input signal levels should be adjusted so that the **red LEDs** never or only very seldom light – that is, as high as possible without causing overloading. This ensures that all bits will be used and that the noise floor will be as low as possible.

## General Tips / Troubleshooting

### Mute Function

An important feature of a studio-grade D/A converter is the ability to instantly mute itself when errors occur in the digital data stream. This can occur very easily in practice - for example, when more than one digital device in the system is inadvertently operated as master. Such errors are especially hazardous to high-quality monitor loudspeakers, which can quickly be destroyed by the resulting high-energy impulses.

The **A16 Ultra** mutes its inputs upon detecting a digital carrier signal with an incorrect sample rate. On the other hand, an input signal from an unsynchronized source does not cause muting, and the signal is allowed to go through. Because the **A16 Ultra** works with any phase relationship at its inputs, clicks and pops occur only occasionally, when an "extra" sample is inserted or when one is left out. This can occur when the **A16 Ultra** and the computer to which it is connected are both operating as sync master.

All of the LEDs associated with the **Synchronization** button are **dual-color LEDs**. **Green** indicates that the sync source signal is of good quality and that the high-jitter-tolerance / low-jitter PLL is locked to the sync signal. **Red**, on the other hand, generally indicates a problem with the digital connections.

### S-MUX

The ADAT signal, as specified by Alesis, is defined only for sample rates between roughly **37 kHz** and **50 kHz**. In order to permit the transfer of 96 kHz data streams via the optical cable, a transfer format with the name S-MUX was developed, in which the eight channels of a standard ADAT interface are used as four pairs, each of which can transfer one channel at the higher sample rate. Unfortunately, the fact that an ADAT signal is being used in S-MUX mode cannot be ascertained from the signal itself. This means that this mode must be selected deliberately and manually by the user.

Inappropriate S-MUX activation can result in the generation of unwanted high-frequency signals. S-MUX is therefore always automatically switched off whenever the sync source or the sync frequency is changed.

## What happens if the transfer mode and the sample rate is chosen incorrectly?

### - Normal source (e.g., 44.1 kHz) with A16 Ultra S-MUX 88.2 kHz:

Pairs of channels get "mixed" and image frequencies are produced in the range **22-44 kHz** (or **24-48 kHz**). These higher frequencies – generally inaudible – could quietly cause overheating damage to the high-frequency drivers of a monitor system.

### - S-MUX source (e.g., 96 kHz) with A16 Ultra normal 48 kHz:

Each single signal is "divided" across two channels. Frequencies above **24 kHz** (or **22 kHz**) will be imaged into the audible spectrum (this is normally referred to as aliasing). This effect is scarcely audible with most normal audio material, as the high frequency content of such material is minimal.

## Synchronization

ADAT inputs may operate in an arbitrary phase relationship to the device Word Clock. In addition, each device may have a different phase offset.

In order to ensure that groups A and B are played back correctly in-phase, the start of every received ADAT signal must be offset by no more than **+/- 25%** of a Word Clock period with respect to the reference clock (internal or sync source). If the phase difference is larger than this, the signal will nevertheless still be correctly received, but may be shifted by one sample.

Naturally, in operation in conjunction with CreamWare cards, it is guaranteed that all ADAT outputs are correctly phased – even those of multi-card systems!

## Auto synchronization

Whenever a signal is present on the ADAT A or Z-Link A interface, the **A16 Ultra** will synchronize itself to this signal, regardless of whether a signal is also present on interface B. When a signal is present on interface B and no signal is detected on interface A, the **A16 Ultra** will synchronize itself to the interface B signal.

## Z-Link

If only one Z-Link interface is connected, the other half of the converter remains in ADAT mode. Since the converter always derives its sync clock from the Z-Link data stream when in Z-Link mode, any device which is connected to the ADAT interface **must** be operated as a sync slave.

The Z-Link connectors must be driven by phase-aligned signals.

In a system composed of multiple STDM-interconnected CreamWare cards inside a single computer, correct phase alignment of the Z-Link signals is guaranteed.

If the two Z-Link streams are not properly phase-aligned, the **A16 Ultra** mutes itself completely.

## Analog connectors

The stereo phone jacks of the analog inputs and outputs are connected as follows:

***Tip is hot(+), ring is cold(-)***

(see the table 'Inputs and Outputs' on the next page)

## Power supply

The **A16 Ultra** is delivered with the proper AC power adaptor and should be used exclusively with this adapter.

The **green Power LED** signals that the **A16 Ultra** is ready for operation. If this LED does not light, check whether the AC adaptor is being supplied with power. The **A16 Ultra** contains no internal user-replaceable fuses. It is protected internally against thermal and electrical overloading and shuts itself down automatically when necessary to avoid damage. When the cause of the problem has been eliminated, the **A16 Ultra** will automatically switch itself on again.

## Inputs and Outputs

To avoid hum due to ground loops we recommend an ungrounded (earth lift) wiring scheme.  
We also recommend use of balanced lines with the A16 adjusted to +4dBu for optimal AD/DA quality.

### Balanced output with balanced input (lifted ground):

Balanced output		Conductors	Polarity	Balanced input	
Stereo phone plug	XLR			Stereo phone plug	XLR
Sleeve	Pin 1	Shield	GND	Not connected	Not connected
Tip	Pin 2	Signal 1	+	Tip	Pin 2
Ring	Pin 3	Signal 2	-	Ring	Pin 3

### Balanced output with balanced input:

Balanced output		Conductors	Polarity	Balanced input	
Stereo phone plug	XLR			Stereo phone plug	XLR
Sleeve	Pin 1	Shield	GND	Sleeve	Pin 1
Tip	Pin 2	Signal 1	+	Tip	Pin 2
Ring	Pin 3	Signal 2	-	Ring	Pin 3

### Unbalanced output with balanced input (lifted ground):

Unbalanced output		Conductors	Polarity	Balanced input	
Mono phone plug				XLR	Stereo phone plug
		Shield	GND	Pin 1	Sleeve
Tip		Signal 1	+	Pin 2	Tip
Sleeve		Signal 2	-	Pin 3	Ring

**Unbalanced output with balanced input:**

Unbalanced output		Conductors	Polarity	Balanced input	
Mono phone plug				XLR	Stereo phone plug
		Shield	GND	Pin 1 (bridged with pin 3)	Sleeve (bridged with ring)
Tip		Signal 1	+	Pin 2	Tip
Sleeve		Signal 2	-	Pin 3 (bridged with pin 1)	Ring (bridged with sleeve)

**Balanced output with unbalanced input (lifted ground):**

Balanced output		Conductors	Polarity	Unbalanced input	
Stereo phone plug	XLR			Mono phone plug	
Sleeve	Pin 1	Shield	GND		
Tip	Pin 2	Signal 1	+	Tip	
Ring	Pin 3	Signal 2	-	Sleeve	

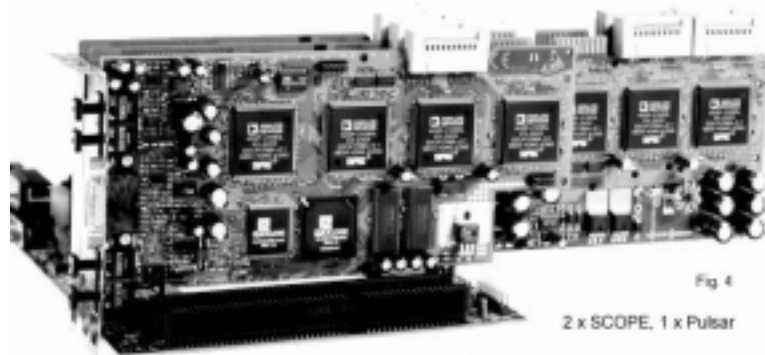
**Balanced output with unbalanced input:**

Balanced output		Conductors	Polarity	Unbalanced input	
Stereo phone plug	XLR			Mono phone plug	
Sleeve	Pin 1	Shield	GND	Sleeve	
Tip	Pin 2	Signal 1	+	Tip	
Ring	Pin 3	Signal 2	-		

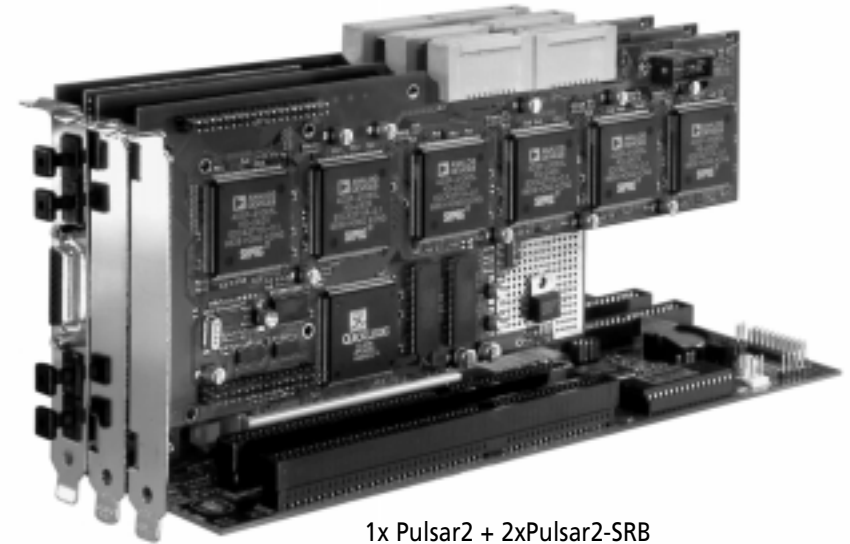


## Cascading of S/TDM Bus compatible hardware

Creamware developed the S/TDM bus so that additional Creamware DSP cards can be cascaded, thereby greatly extending the processing power of your system. All that's required is the correct cable (supplied with the cards) to connect to the bus connection points provided on each CreamWare DSP card.



CreamWare has also designed the system such that the DSP boards can share interrupts (IRQs) - thus greatly simplifying expansion. Only the appropriate Windows driver is required to enable a card once it is physically installed in the system (see next chapters for more information on driver installation).



## A group of several CreamWare DSP cards connected in a computer via the S/TDM bus

(Pulsar I, II and XTC, SCOPE (SRBs), Luna II (Elektra, PowerSampler))

The following consists of the most important information you need to get a diverse collection of our DSP cards (Pulsar, Pulsar II, Pulsar XTC, SCOPE, SRB variants, Luna II, PowerSampler/Elektra) up and running quickly, and without problems.

It's all quite straightforward, really: install the card in a free PCI slot, attach the S/TDM cable, and make sure the required drivers are installed. The 'new' resources will then be immediately available to you. If your software is already installed, the whole procedure to install multi-DSP cards can be completed within 10 minutes.

Because of the variety of DSP cards (\*) available, and the flexibility of options the cards offer, the following is provided as a handy guide to help you reach your ultimate goal - creative results!

\* = two or more of the following 5 cards combined in groups of a maximum of 3:

Pulsar I (in both standard and Plus versions)

Pulsar I SRB

Pulsar II (4 different I/O versions, plus the SRB, also Pulsar XTC)

SCOPE (4 different I/O versions, plus SRB)

Luna II (also known as PowerSampler/Elektra cards)

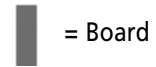
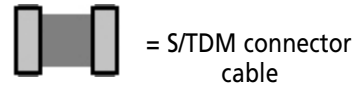
If you are already the owner of one or more Pulsar-, SCOPE- or SRB-boards, and you want to use the cards simultaneously, then you require a special cable to connect the cards via the S/TDM bus connector. This cable can be obtained free of charge from your dealer or from CreamWare.

Simply connect the cards according to the installation instructions on page 56 and as depicted on the following illustrations by firmly pressing the cable to the boards connectors.

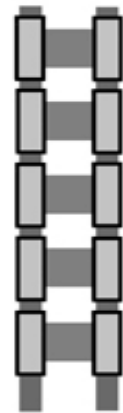
**Please observe the following:**

- 1. At most 3 cards Should be connected with a single STDm cable.**
- 2. All cards must have a direct connection to all other cards.**
- 3. Use the 'middle' PCI slots if possible, and do not share IRQs with other cards. The CreamWare DSP cards can share IRQs with each other, but other cards should not use the same IRQ as a CreamWare card.**
- 4. Make sure your computer chassis is well ventilated. It may be advisable to add another fan to your system to ensure an appropriate operating temperature.**
- 5. When using only two DSP cards, connect the outer S/TDM connections, leaving the middle one free.**

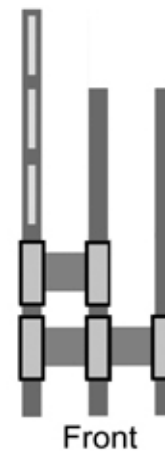
The following illustrations show how some common hardware combinations should be connected.



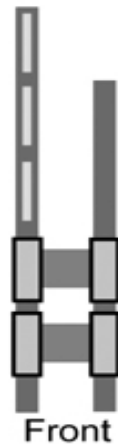
2 x SCOPE



SCOPE + Pulsar2 + Pulsar1



SCOPE + Pulsar2



SCOPE + Pulsar1



Wrong!



Note: In the above illustration Pulsar I can be considered equivalent to Luna II (or PowerSampler/Elektra) or Pulsar SRB hardware. Likewise, Pulsar II can be considered equivalent to Pulsar II SRB or Pulsar XTC and SCOPE to SCOPE SRB.

When you add an additional DSP card to an existing CreamWare DSP system, the sequence in which the software and main board recognize the PCI hardware can change. You may notice when you next start the software that different hardware modules are present in the default project (i.e. SCOPE analog source/dest, SCOPE Midi A source/dest etc. may replace Pulsar analog source/dest, Pulsar Midi source/dest etc.).

After you decide which card is to be your 'main card', create an appropriate default project that includes the respective hardware modules (e.g. SCOPE analog source/dest to register your SCOPE inputs and outputs). Details on creating a new default project are found in the manual.

After you add another DSP card to your system you may be presented with a registration dialog (Register ?) when you next start the software. Indicate your DSP card in the 'Hardware serial No.' field, and enter the requisite Activation keys (found in the installation guide or on the back of the card) in the appropriate fields. Press **Save keys** and close the dialog with the cross button in the upper right hand corner.

Generally it is recommended that the card with the most DSPs is treated as the first, or 'main' card in a system. In particular with SCOPE this can be important as the SCOPE mixers are distributed among the 15 SCOPE DSPs. If a Pulsar card is located first, this distribution may be changed, resulting in possible audio phase problems. If Pulsar II I/Os are registered in the default project of a system with both Pulsar and SCOPE DSP cards, you must change the order as follows:

- Close the program using the small icon in the taskbar (right-click, close..., Windows) or, on the Mac, run 'SFP Stop', found in the appropriate directory SFP:App:Bin.

- Open the file CSET.INI located in the program directory ..\App\Bin with a text editor (with the Mac rename the file to CSET.TXT).

- Add the following entries:

```
[board0]  
boardid=1
```

```
[board1]  
boardid=0
```

- save the file (and rename it back to CSET.INI if you are working with a Mac)

- The next time you run the software, the SCOPE I/Os will be present.

The above example is for two cards of the second generation of DSP products. If you have a mixed system that includes 'older' Pulsar I, Pulsar I SRB and SCOPE, Pulsar II, Pulsar XTC or Luna II, add the following entry as well

```
[HW]  
numboards=2
```

for 2 boards (numboards=3 for 3 boards).

If you have more than 2 cards, or other unusual multi-card 'permutations' and have any problems, do not hesitate to call our support with a detailed specification of your system. This also applies if you have a system with three cards, and would like to add another. Please inquire first for advice and appropriate support.

Now hold tight and enjoy your new DSP power!

## Installation Instructions for Optional I/O Plates - 24ADAT, "Classic" 20 I/O, PLUS, Z-Link

Please take a moment and read these instructions thoroughly! The installation is easy. All you need is a small flat-tip screwdriver and a Phillips screwdriver.

### Hardware Installation

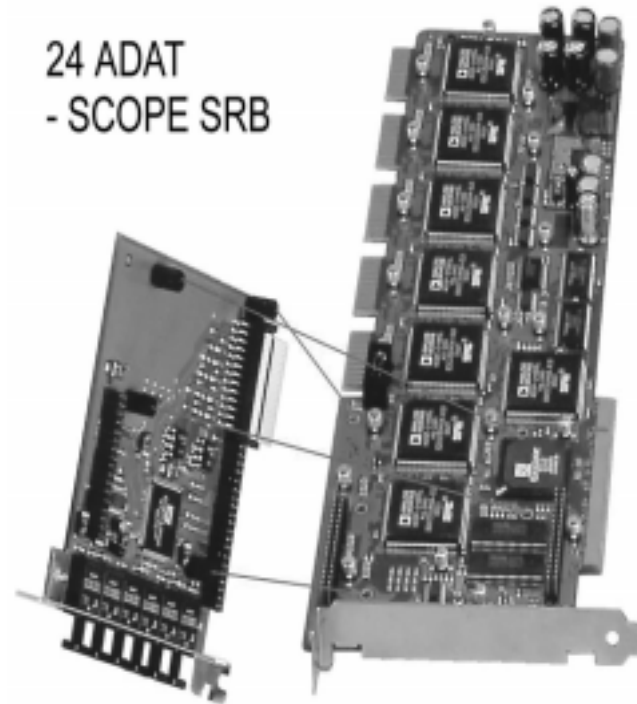
- 1.)** Disconnect the power from your computer and remove the chassis cover or access panel.
- 2.)** Discharge any buildup of static electricity from yourself by briefly touching a grounded metal object (such as a radiator or water pipe, etc.). NOTE: the ground contact of an electrical cord or electrical outlet should NOT be used for this purpose, as this introduces a shock hazard.
- 3.)** Remove the CreamWare DSP board on which you want to install the I/O Plate from the computer.
- 4.)** Remove the metal mounting bracket of the board with help of a flat-tip screwdriver.
- 5.)** Remove the I/O Plate carefully from its packaging. Do NOT touch the contacts on the card!
- 6.)** Position the I/O Plate carefully and precisely over the connectors on the DSP board – as shown in the illustration below. Then press straight downward on it until it is seated securely on the connectors.
- 7.)** Secure the I/O Plate to the DSP board using the Phillips screws that come with the package. Screw them into the holes on the back side of the DSP board. Make sure they go in straight!
- 8.)** If you wish to connect one or two Luna 2496 IO Boxes to the Z-Link plate, you must connect the floppy power connector (see diagram on in the chapter Z-Link Plate) with the appropriate connector on the PC's internal power supply. Otherwise, the supply of power to the PCI bus is not guaranteed to meet specifications.

**9.)** Seat the DSP board back into the PCI slot and use the retaining screw you removed in step 3 to secure it once again to the computer chassis.

**10.)** Replace the computer's housing or access panel and re-connect the power cable.

After launching the software you can access the new hardware I/Os by means of the appropriate modules from the 'Hardware Devices' or 'Hardware IOs' directory.

Once the installation is complete: before turning your computer on again, you should carefully check that all connectors are properly oriented and fully inserted. This may help you to avoid costly errors and possible hardware damage.





## Installation Instructions for Optional ADAT Expansion (3 DSP boards)

Please take a moment and read these instructions thoroughly! The installation is easy. All you need is a small Philips screwdriver.

### Hardware Installation

1.) Disconnect the power from your computer and remove the chassis cover or access panel.

2.) Discharge any buildup of static electricity from yourself by briefly touching a grounded metal object (such as a radiator etc.). NOTE: the ground contact of an electrical cord or electrical outlet should NOT be used for this purpose, as this introduces a shock hazard.

3.) Remove the CreamWare DSP board on which you want to install the **Z-LINK/ADAT expansion** from the computer.

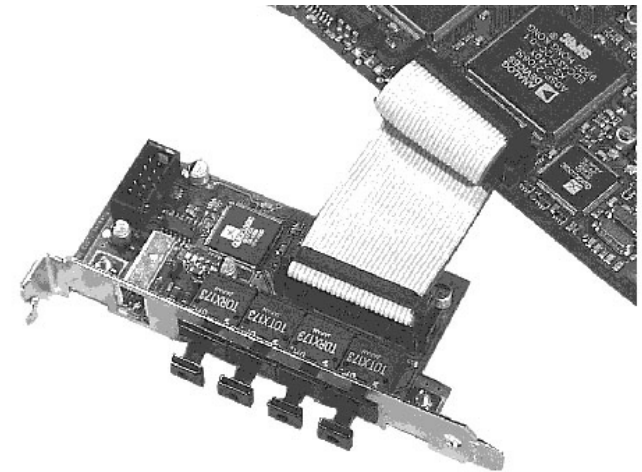
4.) Remove the **Z-LINK/ADAT expansion** carefully from its packaging. Do NOT touch the contacts on the card!

5.) Position the cable of the **Z-LINK/ADAT expansion** carefully and precisely over the corresponding connectors on the DSP board. Then press straight downward on it until it is seated securely on the connectors (see below).

6.) If you want to connect a Luna 2496 IO Box to both the DSP board and the Z-Link/ ADAT Expansion, connect the floppy disk drive power connector (page 61) to a matching connector from the PC power supply. Otherwise proper power supply of the PCI bus cannot be guaranteed.

7.) Secure the **Z-LINK/ADAT expansion** to the computer chassis. Make sure they go in straight!

8.) Seat the DSP board back into the PCI slot and use the retaining screw you removed in step 3 to secure it once again to the computer chassis.



9.) Replace the computer's housing or access panel and reconnect the power cable.

After launching the software you can access the new hardware I/Os by means of the appropriate modules from the 'Hardware Devices' or 'Hardware IOs' directory.

Once the installation is complete: before turning your computer on again, you should carefully check that all connectors are properly oriented and fully inserted. This may help you to avoid costly errors and possible hardware damage.

## Hardware Installation (PC+Mac)

Installation of the Creamware DSP card is quick and easy, thanks to its Plug And Play compatibility.

Note: If you are using more than one DSP card, be certain to read the special instructions in the Installation Guide regarding the cascading of multiple DSP cards.

1. Disconnect the power from your computer and remove the chassis cover or access panel.

2. Locate a free PCI slot (ideally one of the slots in the middle).

3. Remove the rear panel coverplate for the selected card slot.

4. Discharge any buildup of static electricity from yourself by briefly touching a grounded metal object (such as a radiator or water pipe, etc.). **NOTE:** the ground contact of an electrical cord or electrical outlet should **NOT** be used for this purpose, as this introduces a shock hazard.

5. Remove the Creamware DSP card carefully from its packaging. **Do NOT, under ANY circumstances**, touch the gold contacts (PCI/S/TDM bus) on the card!

6. Position the Creamware DSP card **carefully** in the selected PCI slot and then press straight downward on it from above until it is seated securely in the slot.

7. Use the retaining screw you removed in step 3 to secure the card's metal mounting bracket to the computer chassis.

8. Replace the computer's housing or access panel and reconnect the power cable.

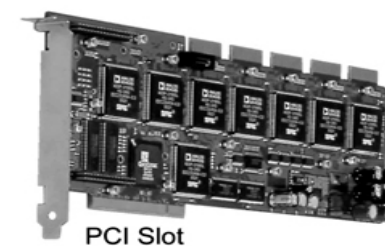
### **Pulsar II (also CUTmaster Pro) and SCOPE:**

9. Connect the 'cable whip assembly' and the optical cables to the appropriate jacks on the board, and to the audio/MIDI inputs and outputs.

### **Luna II (PowerSampler/Elektra/CUTmaster):**

9. Now connect the included adapters (Mini-DIN-/MIDI), a commercial stereo mini-plug/cinch adapter (\*), and the analog inputs and outputs (stereo plugs) to the appropriate jacks on the Luna II card.

When installing the SyncPlate or Luna ADAT expansion board refer to the instructions provided in the respective package.



(\*) not supplied with the package

## Installing the Drivers (Windows 95/98/ME/W2000/XP\*)

**Note:** In the following discussion references to 'CreamWare DSP cards' refer to any one of the relevant cards (SCOPE, Pulsar II, Pulsar XTC, Luna II, SRBs).

Installing the software and drivers under Windows 95/ME/W2000/XP proceeds essentially as for Windows 98, described here. Depending on the version of the operating system, however, some of the dialogs may vary slightly.

Note that to install the software under Windows2000 or Windows XP you must be the **administrator** (or a regular user with the **same rights as the administrator**).

1. Power up your computer.

2. Windows will report that new hardware (a PCI multimedia device) has been found.

3. Windows will automatically launch the 'Add new hardware' wizard. Click on 'Next'.

4. You will be asked to specify how to proceed. Select the option **Display a list of drivers in a specific directory**, and click **Continue**.

5. A list of the possible types of hardware appears. Select **Audio, video and game controllers** and click **Continue**.

6. Next, you will be asked to select a manufacturer and model. Instead, insert the Software CD into your CD-ROM drive and click **Have Disk**.

7. In the **Install from diskette** dialog which appears, click **Browse**.

8. Open the **Driver** folder. In the folder you will find two directories. Open the directory appropriate for your operating system:

**Win2k** for Windows 2000 or Windows XP

**Win9x** for Windows 95/98/ME

A list of **INF files** appears. Select the file for your environment:

Windows 2000/Windows XP:  
**scopewdm.inf** (all cards)

Windows 95/98/ME:

**scope.inf** (for SCOPE cards),

**pulsar2.inf** (for Pulsar2 cards),

**pulsar.inf** (for original Pulsar1 cards),

**elupo.inf** (for Luna cards)

and click **OK**.

\* see Notes at the end of this chapter

**9.** This returns you to the **Open** dialog, in which the path to your CD-ROM drive is now entered. Click **OK**.

**10.** In the subsequent **Select device** dialog, the appropriate CreamWare DSP card should already be selected. Click **OK**.

**11.** The New Hardware Wizard will now inform you that it is ready to install the Luna drivers. Click **Continue**.

**12.** Windows will now install the drivers (this is typically accompanied by updating of the Windows driver database).

**13.** Finally, the New Hardware Wizard notifies you that the Creamware DSP card has been installed. Click **Finish**.

**14.** Windows must now be restarted, so that the newly-installed drivers can be loaded. Click **Yes** in answer to the corresponding **Restart now?** inquiry.

**15.** Following restart, you can verify the correctness of the installation via the Windows Device Manager (**Start -> System settings -> Control panels -> System -> Device Manager**). In the Device Manager, click on **Audio, video and game controllers**, where you should now see the appropriate CreamWare DSP card listed.

If the installation has been perfectly carried out, you will see **neither** a yellow exclamation point **nor** a red X next to the Creamware DSP card entry. When you double-click on this entry, the **Device status** report in the **Properties** dialog which opens should indicate that the device is ready and functioning properly.

If this is not the case, see the notes in the **Support** section of the CD.

## SFP Software Installation (PC)

Installation of the software is accomplished easily by means of a Windows setup utility.

It is possible that the instructions that follow deviate slightly from the actual installation procedure. Before proceeding, check the README file under 'Last Minute Information' for possible changes to the installation procedure.

To install the SFP software:

1. Insert the software CD-ROM disc into your CD-ROM drive.
2. Close any programs that may be running.
3. In Windows Explorer, switch to the CD-ROM drive and doubleclick on '**setup.exe**' in the root directory.



You can also start the setup program by typing <CD-ROM drive letter>:\**setup.exe** in the **Start menu's**

**'Run' utility** (i.e. D:\setup.exe).

Click Next to start the installation.

4. Select the appropriate language to use.

This choice determines which language will be used during the setup and whether the German, English or French manual will be installed!

5. A window appears, in which the Creamware software license agreement is presented. Read this information carefully through, then click on '**Accept**' to indicate your agreement with the terms of the license.

6. The following dialog will once again recommend that you read the **ReadMe** file. This file contains important information regarding update issues, as well as other very useful information. It has been provided as an HTML document which you can read using your Web browser. Continue with the installation once you have read this file.

7. If Windows did not detect your Creamware DSP board, and therefore did not install the driver, you have the option now of running the driver installation. Or, if you are upgrading to a newer version of the software, you should use this option to upgrade the driver. If you choose to do so, follow the given instructions.

If you install the new driver at this point, Windows will prompt you to restart the computer at the completion of the driver installation. If you do this, then you must run **Setup** again after the computer restarts.

**TIP:** Ignore the Windows request to restart the computer. Instead, use the **Restart** option in the CreamWare driver installation dialog. This way the software installation process resumes automatically when Windows restarts.

8. In the dialog **Select target directory** you can choose the directory in which to install the software. If you don't like the default selection (C:\SFP - recommended) click **Browse** to select a

target drive and directory of your choice. Choose an existing target directory, or create a new one by entering it directly in the **Target** text box. Please name the directory **SFP**. Use the scrollbars to navigate the directory window. Click the **Up one level** directory symbol (up-pointing arrow) to navigate to the next higher directory level. Click **New Folder** to create a new directory at the current level. To rename a directory, click on its name text to enable edit mode, or press **F2** to edit a selected directory (press Enter after editing the name). Click **Next** to continue.

Do not include any blank spaces in the directory name!

**9.** In the dialog "Select the product you wish to install", you should select your product. The content of the key list displayed at right will vary depending upon the product you select. Enter the appropriate key for each product you wish to install. This can be done in various ways as described below:

### 1.) **Enter activation keys manually**

Select a field displaying the text **<enter key>** and, for each field as required, enter the corresponding activation key. The required keys are located in the front of the installation guide. For each key, press **Enter** to confirm. Proceed as above for all indicated package keys (you can also use the Windows copy/paste function). Note that 0 = zero. When you have finished entering all the required keys, click **Next**.

### 2.) **Import**

When you register your product at our Internet site (<http://www.creamware.com->Registration>) a personal page (My page) is created for you. This page contains a file named **allkeys.skf** in the **Activation keys** section containing all the keys required to enable the components you have purchased. Download this file and store it in a directory of your choice (for example, **..\Personal files**). Click **Import** and supply the location of the **allkeys.skf** file and confirm by clicking **OK**.

For products without XTC functionality, such as Luna or PowerSampler, the installation program now starts automatically. If you are installing a Pulsar, Pulsar XTC, PowerPulsar or SCOPE /SP package, a dialog appears asking you to supply the VST Plug-in directory.

**10. XTC Functionality (PC only):** The installation procedure now asks for the location of the plug-in directory in which to install the XTC plug-ins. For Steinberg products the correct path is already present in the top line. For products from other manufacturers (Emagic, for example) use **Browse** to select the path for the VST plug-in directory in the second line. Make sure that the directory "Vstplugins" appears only once in the path (for example, do not specify a path such as **..\Steinberg\Vstplugins\Vstplugins**", which can easily happen as a result of a manual search for the directory). If you do not want to install XTC functionality click **Deactivate** under both lines. Then click **Next** to start the actual installation.



### Notes:

**11.** When all the files have been copied the program ends with a notice indicating a successful installation. You can now close the dialog by clicking **Finish** or start the newly installed software immediately by clicking **Start SFP**.

**1.** Windows 95/ME/W2000/XP software and driver installation procedures are essentially the same as the Windows 98 procedures, but may differ slightly.

**2.** If the Creamware hardware is not recognized as 'new hardware' by your system (which can happen, depending on your software/hardware combination) just start the '**Add New Hardware**' wizard from the '**Control Panel**' instead to install the driver (as described in chapter 'Installing the Drivers', starting with step 3.).

In any case, it is absolutely essential that the driver is installed before you attempt to run the software.

**3.** If the driver did not '**take**' (the Creamware hardware is not listed as a '**Sound, video and game controller**' after the driver was supposedly installed) power down the computer, reboot, and install the driver again as above. We have found that Windows/Plug 'n' Play can sometimes require a couple of attempts before the new driver is successfully registered!

**Note: The Windows2000/XP driver is not a "signed driver". Ignore the reference to this that appears.**

Along with the software, the manual is also copied to your hard disk during the installation. To view or print the manual, **Adobe's Acrobat Reader** (included) must also be installed on your computer. To install the reader, change to the Acrobat Reader directory and run its **setup** program, following the instructions it gives you. After installing the reader, you can access the SFP manual by following '**Start->SCOPE FUSION PLATFORM -> Manual**'.

Also, remember that the manual is always available in the **Help** menu, only a couple of mouse clicks away!

## SFP Software Installation (Mac)

The software is easily installed using the Mac OS Setup utility. Complete the following procedure:

1. Insert the software CD into your CD drive.
2. Close any other open programs.
3. If the setup does not automatically start go to the Finder and run **SFP Setup**, depending on which product you are installing.
4. Select the appropriate language to use.

This choice determines which language will be used during the setup and whether the German, English or French manual will be installed!

5. The first dialog displays the '**License Agreement for ...**'. Please read this carefully and click on '**Accept**' to continue.

6. The following dialog will once again recommend that you read the **ReadMe** file. This file contains important information regarding update issues, as well as other very useful information. It has been provided as an HTML document which you can read using your Web browser. Continue with the installation once you have read this file.

7. If the driver was not previously correctly installed, you will be asked if it should now be installed. In later installations, you will in similar fashion be able to replace an installed driver with a newer version.

If you install the new driver at this point, select **Restart** at the end of the installation.

8. In the dialog **Select target directory** you can choose the directory in which to install the software. If you don't like the default selection (...:SFP - recommended) click **Browse** to select a target drive and directory of your choice. Choose an existing target directory, or create a new one by entering it directly in the **Target** text box. Please name the directory **SFP**. Use the scrollbars to navigate the directory window. Click the **Up one level** directory symbol (up-pointing arrow) to navigate to the next higher directory level. Click **New Folder** to create a new directory at the current level. To rename a directory, click on its name text to enable edit mode, or press **F2** to edit a selected directory (press **Enter** after editing the name). Click **Next** to continue.

Do not include any blank spaces in the directory name!



**9.** In the dialog "Select the product you wish to install", you should select your product. The content of the key list displayed at right will vary depending upon the product you select. Enter the appropriate key for each product you wish to install. This can be done in various ways as described below:

#### 1.) Enter activation keys manually

Select a field displaying the text **<enter key>** and, for each field as required, enter the corresponding activation key. The required keys are located in the front of the installation guide. For each key, press **Enter** to confirm. Proceed as above for all indicated package keys (you can also use the Windows copy/paste function). Note that 0 = zero. When you have finished entering all the required keys, click **Next**.

#### 2.) Import keys

When you register your product at our Internet site (<http://www.creamware.com->Registration>) a personal page (My page) is created for you. This page contains a file named **allkeys.skf** in the **Activation keys** section containing all the keys required to enable the components you have purchased. Download this file and store it in a directory of your choice. Click **Import** and supply the location of the **allkeys.skf** file and confirm by clicking **OK**. The installation of the program files starts automatically.

**10.** If you already have another application installed which includes ASIO driver support, you can now select an existing ASIO driver folder into which the CreamWare ASIO driver will also be placed. If this driver is to be accessible to several different applications, copy the file 'CreamWare ASIO Driver' from :SFP:Driver into the ASIO driver folder of the corresponding application after installation of the CreamWare software is

complete. You should also consult the ASIO driver documentation of the other application for possible important tips.

**11.** When all the files have been copied the program ends with a notice indicating a successful installation. You can now close the dialog by clicking **Finish** or start the newly installed software immediately by clicking **Start SFP**.

The software **Manual** has been copied to your hard drive during the installation. In order to read the manual you will need the **Adobe Acrobat Reader** program. If this program is not already installed on your computer you can find it on the software installation CD as **Acrobat Reader**. Run the associated setup program and follow its instructions. When the reader is installed you can access the manual at '**...:Manuals:'SCOPE FUSION PLATFORM' Manual**'.

## Installing the Driver (Mac OS 8.6 / 9.X)

After a new software installation all necessary files, including the driver, should already be installed in the appropriate location. If when you start the software for the first time it aborts because of a missing driver, or another driver problem, proceed as follows:

1. Start your computer.
2. To install the drivers for CreamWare DSP products on the Mac, the files,

### **ALLOC.DLL** **CreamWare Audio Driver**

must be copied from the software directory (e.g. :OS:**SFP**) into the :System:Extensions directory on the boot drive

3. Restart the computer.

## The Hotline

As mentioned before, the operation of our products is trouble-free in most computers given that attention has been paid to the various notes described earlier. Any known problems beyond this are described in the **Support** chapter, the README file, or on the support pages at our website:

**<http://www.creamware.com>.**

Please use our Internet support, the manuals and the current README files on the CD before contacting our hotline.

**Our hotline personnel will ask if you have done so!**

If you have checked all of the information presented here and on the Web site and you are still unable to solve your problem, there are various ways to contact us directly for advice. Once again, however, we request that you recheck all of the information presented above *before* doing so! In any event, only *registered users* are entitled to direct technical support, so please register now ([www.creamware.de](http://www.creamware.de) -> Registration, or sendus the yellow registration paper)!

If you write or email us, be sure to provide us with all required information about your system. You will find a form below to assist you with this. If you call us, please have this information ready to give to the technical support representative. It's best to first fill out the form completely and then either send it to us or have it ready at hand when you call us. Be sure to provide us with *all* required information about your system ...

1. I have tried all suggestions given in this document: **Yes**

## **2. Computer Configuration:**

Processor:  
Main board (chip set!):  
Hard drive(s):  
Graphics card (which slot / IRQ / driver version?):  
RAM:  
CD writer:  
SCSI controller (which slot / IRQ?):  
CD-ROM:  
Sound card (which slot / IRQ?):  
other internal devices/cards (which slot / IRQ?):  
How old is the power supply (!):

## **3. CreamWare products:**

triple1-Board ROM serial number (which IRQ / Port?):  
Your software keys?  
triple2-Board ROM serial number (which IRQ / Port?):  
Your software keys?  
TDAT16 ROM serial number  
(which slot / IRQ / driver version / program version?):  
Your software keys?  
A8 / A16:  
Pulsar ROM serial number (which slot / IRQ / driver version / program version?):  
Pulsar XTC ROM S/N (which slot / IRQ / driver version / program version?):  
SCOPE ROM S/N (which slot / IRQ / driver version / program version?):  
Elektra/Luna/PowerSampler ROM S/N (which slot / IRQ / driver version / program version?):

## **4. Connected Devices:**

Mixers:  
Synthesizers:  
Synchronizers:  
Samplers:  
Recorders (DAT / ADAT etc.):  
Other (Atari, MAC, MIDI patchbays etc.):

## **5. Installed Software**

Operating system:  
Sequencer software:  
Audio applications:  
Other:

## **6. Description of the problem**

When and where does it appear?

Can it be made to recur via a specific series of actions? How?

Which parts of the program are involved (modules / devices)? *Which* devices? *How* are they connected?

**There are four ways to reach our support department:**

**In the USA and Canada:**

email: support@creamware.com

Fax: (604) 435-9937

Phone: (604) 435-5158

Mail: CreamWare US Inc.  
6879 Russel Avenue  
Burnaby, B.C.  
V5J 4R8  
Canada

**All other countries:**

email: support@creamware.de

Fax: (++49) 22 41 - 59 58 57

Phone: (++49) 2241 - 59 58-12

Mail: CreamWare Datentechnik GmbH  
Support  
Wilhelm-Ostwald-Strasse 0/K1  
53721 Siegburg, Germany

But for now – enough hints about possible problems. As an experienced computer user, you are no doubt well aware that neither software nor hardware which is one-hundred percent perfect exists. We at CreamWare strive continually to improve our products, and we welcome your criticism and suggestions.

To help us determine that your claim under the warranty (guarantee?) is valid, a copy of the original sales invoice should accompany the returned package.

Having said that – we hope (and expect) that you won't encounter problems with your new Creamware product, and we wish you all the best in working creatively with it!!!

Sincerely,

Your CreamWare team!

**Before sending in your Scope /SP card for warranty support, please call the Support office to obtain an RMA number for your card.**

**Testing and repair of hardware which is sent to us without making prior arrangements is given a lower priority and can take correspondingly longer.**

## Warranty and Disclaimer

CREAMWARE GmbH ("CREAMWARE") warrants this product to be free of defects in materials and workmanship for a period of two (2) years for parts and for a period of ninety (90) days for labor from the date of original retail purchase. This warranty is enforceable only by the original retail purchaser.

To be protected by this warranty, the purchaser must complete and return the enclosed warranty card within fourteen (14) days of purchase.

During the warranty period CREAMWARE shall, at its sole and absolute option, either repair or replace free of charge any product that proves to be defective on inspection by CREAMWARE or an authorized service representative. In all cases disputes concerning the warranty shall be resolved as prescribed by law.

To obtain warranty service, the purchaser must first call or write CREAMWARE at the address and telephone number printed below to obtain a Return Authorization Number and instructions concerning where to return the unit for service. All inquiries must be accompanied by a description of the problem. All authorized returns must be sent to CREAMWARE or an authorized CREAMWARE repair facility postage prepaid, insured, and properly packaged. Proof of purchase must be provided in the form of a bill of sale, canceled cheque, or some other positive proof that the unit is within the warranty period. CREAMWARE reserves the right to update any unit returned for repair. CREAMWARE reserves the right to change or improve the design of the product at any time without prior notice. This warranty does not cover claims for damage due to abuse, neglect, alteration or attempted repair by unauthorized personnel, and is limited to failures arising during normal use that are due to defects in material or workmanship in the product.

ANY IMPLIED WARRANTIES INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED IN DURATION TO THE LENGTH OF THIS LIMITED WARRANTY. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

IN NO EVENT WILL CREAMWARE BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR OTHER DAMAGES RESULTING FROM THE BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, INCLUDING, AMONG OTHER THINGS, DAMAGE TO PROPERTY, DAMAGE BASED ON INCONVENIENCE OR ON LOSS OF USE OF THE PRODUCT, AND, TO THE EXTENT PERMITTED BY LAW, DAMAGES FOR PERSONAL INJURY. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

This warranty only applies to products sold in the United States of America or Canada. The terms of this warranty and any obligations of CREAMWARE under this warranty shall apply only within the country of sale. Without limiting the foregoing, repairs under this warranty shall be made only by a duly authorized CREAMWARE service representative. For warranty information in other countries please refer to your local distributor.

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