

SIS1100/3100 KMAX Driver

Getting Started Booklet

SIS GmbH
Harksheider Str. 102A
22399 Hamburg
Germany

Tel: ++49 (0) 40 60 87 305 0
Fax: ++49 (0) 40 60 87 305 20

email: info@struck.de
<http://www.struck.de>

Version: 1.00 as of 07.01.03

Revisions Liste:

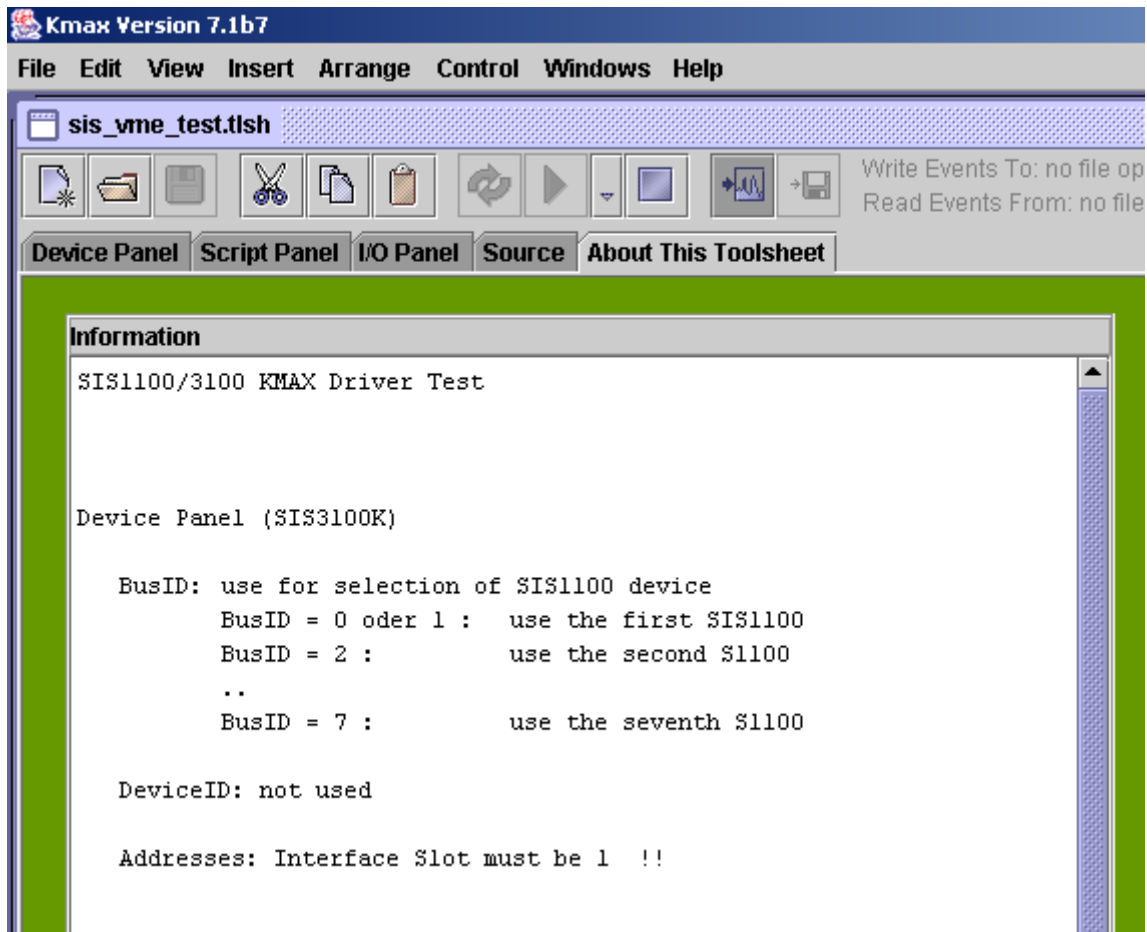
Revision	Date	Modification
0.01	06.01.03	Generation
1.00	07.01.03	Release

1 Table of contents

1	Table of contents	3
2	Introduction	4
3	Getting started	5
4	Implemented functions/widgets	7
4.1	VME_SYS_RESET	7
4.2	VME Write Word	7
4.3	VME Read Word	8
4.4	VME Write BLK	9
4.5	VME Read BLK	10
4.6	Start Sample_Read_SIS3300	11
5	Index	12

2 Introduction

This is the initial release of the documentation for KMAX support under Windows 2000 and XP for the SIS1100/3100 PCI to VME interface. Up to 7 SIS1100/3100 PCI to VME interfaces are supported.



Both documentation and the software are available online under:
<http://www.struck.de/win1100.htm>

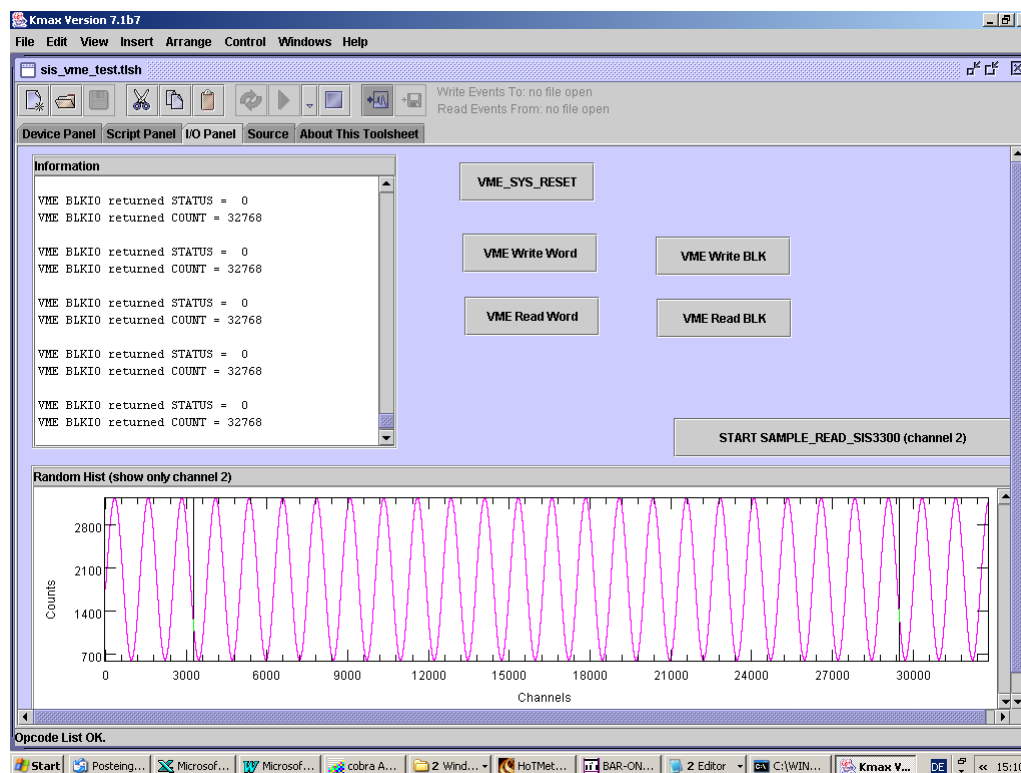
Note: Kmax is a trade mark of Sparrow corporation (www.sparrowcorp.com)



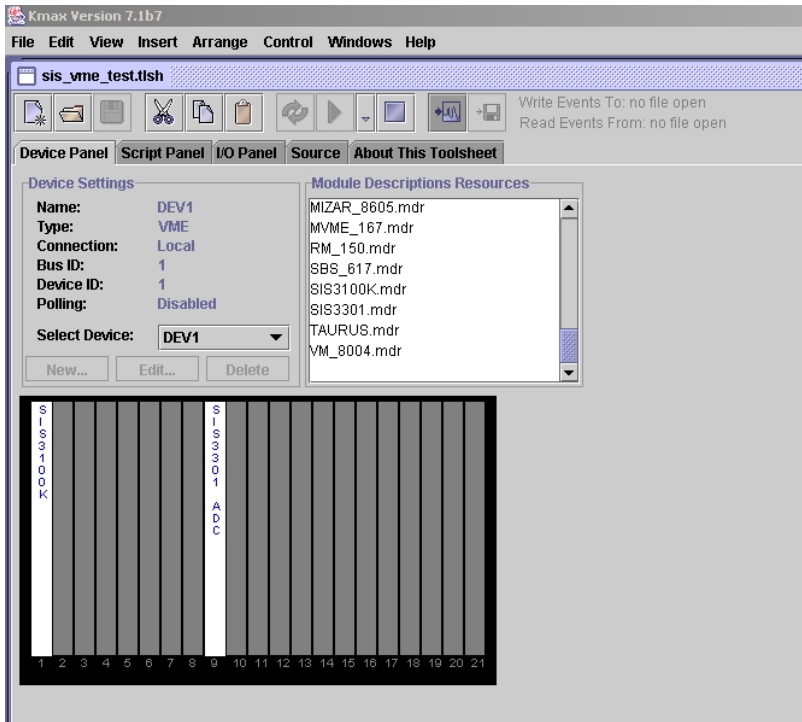
3 Getting started

- Install the full Windows 2000 or XP driver for the SIS1100/3100 PCI to VME interface on your PC as described in the “SIS1100/3100 Win Driver Programmers Manual”.
- Install both the SIS1100 and SIS3100 cards and establish the optical link connection as described in the same document.
- Install KMAX (the setup scripts of the SIS1100/3100 driver assume, that the KMAX installation resides in c:\kmax)
- Install JAVA as required by KMAX (depending on the language settings of your operating system the batch file to run KMAX may have to be modified)
- run the sis_kmax_setup batch file in the SIS_KMAX_FILES directory to copy the driver files into the appropriate locations
- run the batch file to start KMAX (kmax_german.bat for a JAVA residing in the Programme directory e.g.)
- open the sis_vme_test toolsheet
- compile and start the toolsheet
- change to the I/O panel

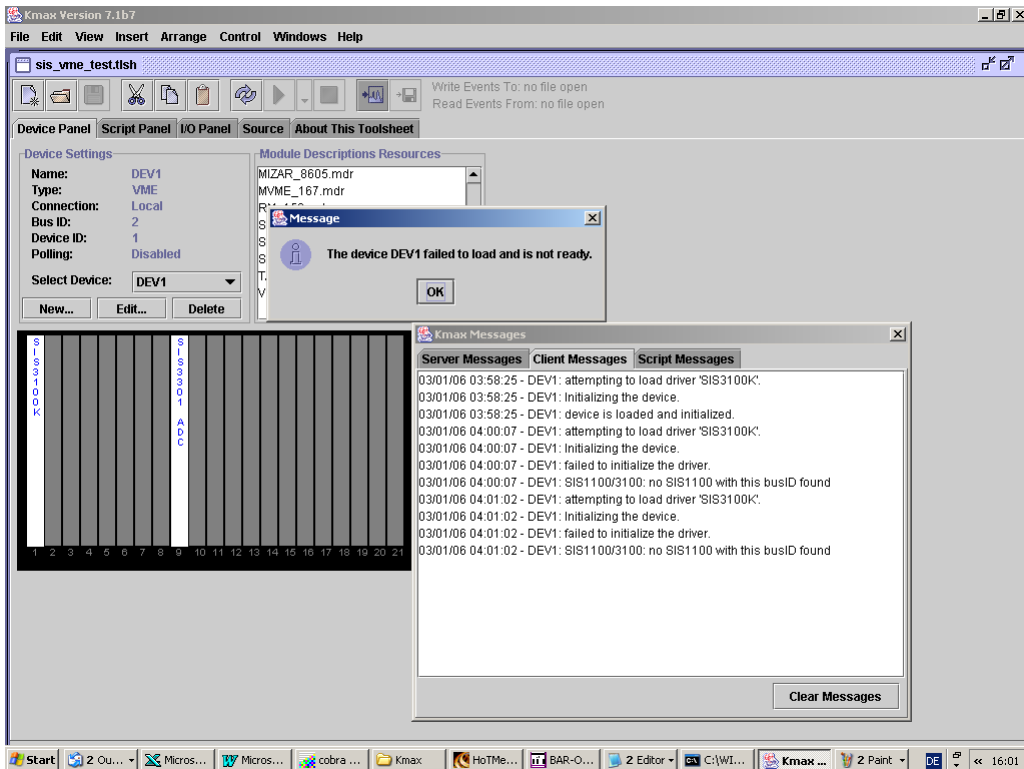
At this point you should see a screen like shown below:



The Device Panel should look like (i.e. with the SIS3100K and SIS3301 module description resources)

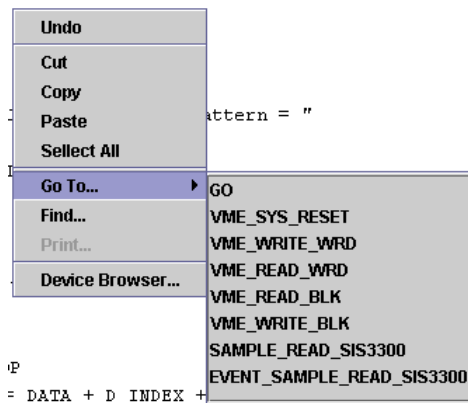


Error case (SIS1100 with bus ID2 not present on PCI bus)



4 Implemented functions/widgets

Find below a screen shot with the implemented calls.



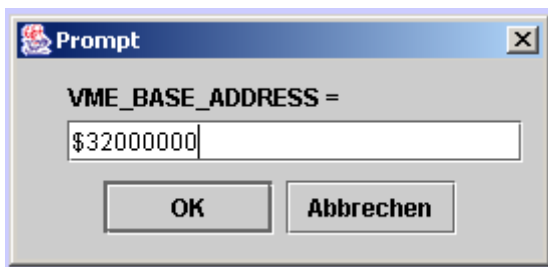
4.1 VME_SYS_RESET

This routine issues a VME SYSRESET.

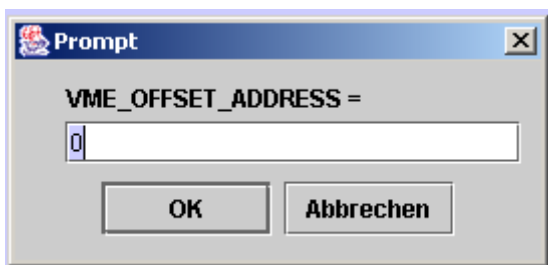
4.2 VME Write Word

The single write word routine has several parameter prompts.

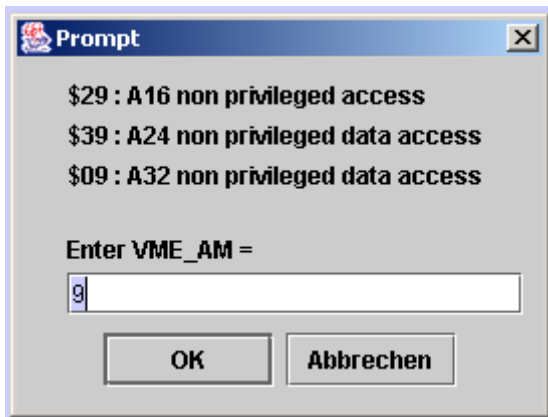
Base address prompt:



Offset prompt:

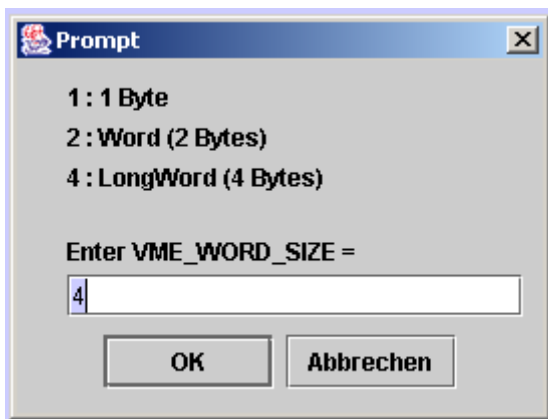


Address modifier prompt:

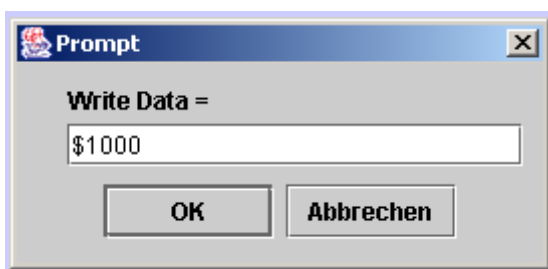


Note: All valid single word address modifiers can be used

Size prompt



Datum prompt



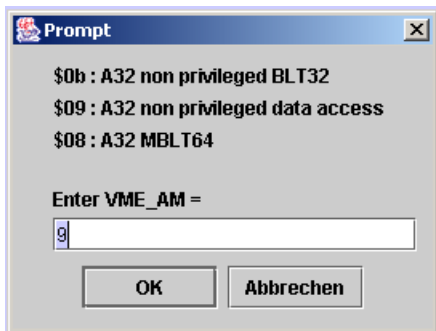
4.3 VME Read Word

The parameter prompts for this single word read routine are the same as for the single write case (with the exception that no datum has to be provided).

4.4 VME Write BLK

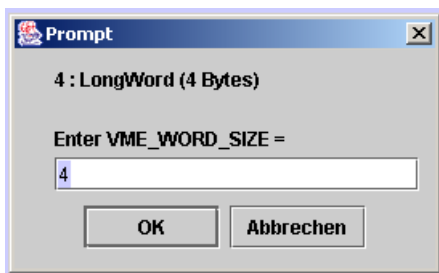
The current VME block write routine writes an increment pattern to the specified VME address. Transfer rates in excess of 60 MBytes/s can be achieved in MBLT64.

AM prompt:

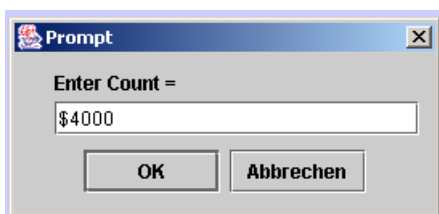


Size prompt:

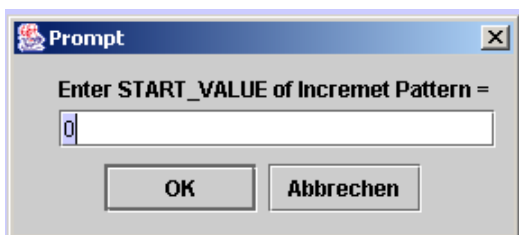
The size is preset to 4 for block transfers as longwords are transferred across the optical link by default. A size of 2 for D16 block transfers can be used however with taking into account, that the same 16-bit word will show up twice in the longword.



Word count prompt:



Start value prompt:

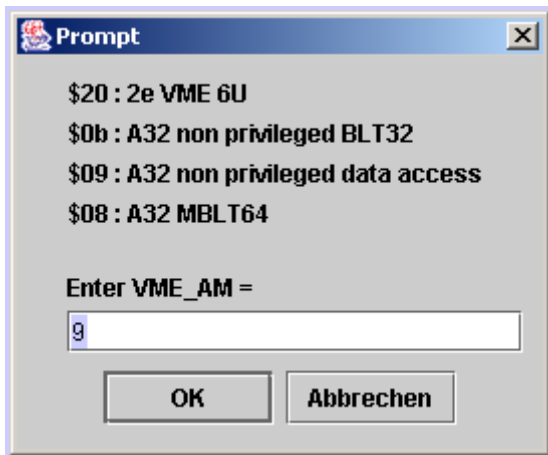


4.5 VME Read BLK

Transfer speeds in excess of 80 MBytes/s can be achieved with this block read routine in 2e VME (in conjunction with a SIS3300 or SIS3301 digitizer e.g.). This block transfer routine current VME block write routine writes an increment pattern to the specified VME address.

AM prompt:

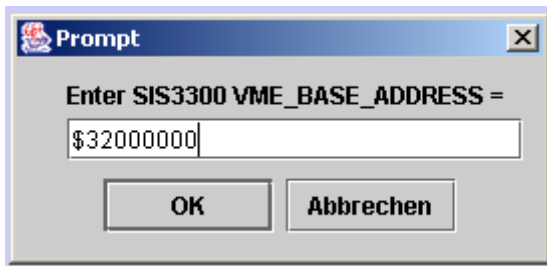
2e transfers are supported for block read access.



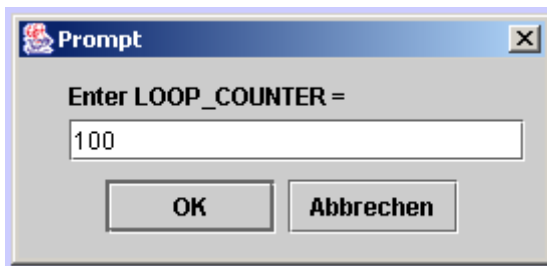
4.6 Start Sample_Read_SIS3300

This routine illustrates the readout of one channel of a SIS330x digitizer. The digitizer is configured started via VME and will stop sampling at the end of the memory bank. Data are read out and visualized after the stop condition has been detected. This sequence will be repeated as many times as defined by the LOOP_COUNTER parameter.

Base address prompt:



Loop counter prompt:



5 Index

address modifier	8	SIS3300.....	11
am.....	8	SIS3301.....	11
base address.....	7	size	8
datum.....	8	toolsheet.....	5
Getting started	5	vme_read_blk.....	10
I/O panel.....	5	vme_read_word.....	8
introducion	4	vme_sys_reset.....	7
JAVA	5	vme_write_blk	9
offset.....	7	vme_write_word	7, 11