

## DRIVER TYPES

	COMM	RES	CFE	ACE
<b>DOS</b>	4.23-1		4.23-1	
<b>WIN</b>	5.31-1		4.23-1	
<b>NT</b>	6.00-10			
<b>WIN 2000</b>	6.00-10			
<b>XP</b>	6.00-10			

## SUPPORTED HARDWARE

Supports SAIA PCD4 PLC Systems (or other series PCD hardware that supports the SBUS 'multidrop' or P800 protocols 'direct link').

SBUS requires a PCD4.C120/.C130 Bus Module.

P800 requires a PGU port on the processor module.

## PROTOCOL

Direct Link	X
Multi-drop	X
Communication Network	

For SBUS :

BaudRate = User Definable  
 DataBits = 8  
 Parity = None  
 Stop Bits = 1  
 Flow Control = None for v6.00-4 and earlier  
 Flow Control = RTS/CTS or None for v6.00-5 and later see comments

For P800 :

Baudrate = 9600  
 DataBits = 7  
 Parity = Even  
 Stop Bits = 1  
 Flow Control = RTS/CTS.

Support for 32 Devices per serial link on SBUS and 1 device when using P800.

Up to 8 serial ports are supported through DigiBoard and RIC card.

Backup port support on NT version.

SBUS mode Parity are used in v6.00-4 and earlier.

SBUS mode Parity and Break are supported from v6.00-5.

SBUS mode Parity, Break and Data are supported from v6.00-8.

Modem support is added from v6.00-8 .



## SUPPORTED MESSAGES/DATA AREAS

Message Type	Description
Read Input	Signals in Input Modules can be read.
Read Output	Signals in Output Modules can be read.
Write Output	Signals in Output Modules can be written.
Read Flag	Flags in Processor Modules can be read.
Write Flag	Flags in Processor Modules can be written.
Read Counter	Counters in Processor Modules can be read.
Write Counter	Counters in Processor Modules can be written.
Read Register	Registers in Processor Modules can be read.
Write Register	Registers in Processor Modules can be written.
Read Timer	Timers in Processor Modules can be read.
Write Timer	Timers in Processor Modules can be written.
Read Display Register	Display Register in Processor Modules can be read.
Read Real Time Clock	Real Time Clock in Processor Modules can be read.
Write Real Time Clock	Real Time Clock in Processor Modules can be written.

## DATA TYPES

DIGITAL  
UNSIGNED LONG  
SIGNED LONG  
FLOAT  
CLOCK

## REQUIRED VENDOR SOFTWARE

None

## SIGNAL CONDITIONING

The signal conditionings are on UNSIGNED LONG and SIGNED LONG data. The supplied signal conditionings are:

Option	Scaling	Description
DIV1	Divide with 10.	The value read from the PLC is divided with 10. When the value is written to the PLC it is multiplied with 10.
DIV2	Divide with 100.	The value read from the PLC is divided with 100. When the value is written to the PLC it is multiplied with 100.
DIV3	Divide with 1000.	The value read from the PLC is divided with 1000. When the value is written to the PLC it is multiplied with 1000.
DIV4	Divide with 10000.	The value read from the PLC is divided with 10000. When the value is written to the PLC it is multiplied with 10000.
MUL1	Multiply with 10.	The value read from the PLC is multiplied with 10. When the value is written to the PLC it is divided with 10.
MUL2	Multiply with 100.	The value read from the PLC is multiplied with 100. When the value is written to the PLC it is divided with 100.
MUL3	Multiply with 1000.	The value read from the PLC is multiplied with 1000. When the value is written to the PLC it is divided with 1000.

MUL4	Multiply with 10000.	The value read from the PLC is multiplied with 10000. When the value is written to the PLC it is divided with 10000.
8BN	0 - 255	Scales the low 8 bits in a register to EGU range.
LIN	0 - 65535	Scales the low 16 bits in a register to EGU range.
NONE	No scaling	Ignores EGU range in database block. No range check alarms.

## COMMUNICATIONS PERFORMANCE

The SBUS protocol is a serial binary protocol. It can read maximally 32 data words from a data block in one message. The 32 words can be any kind of information. The driver expects all data within one message to be of the same data type. At 9600 baud can 3-4 messages containing 32 words be fetched per serial link. This can be, when getting 3 messages/second,  $3*32=96$  analog values or  $3*32*32= 3072$  digital signals.

## GENERAL LIMITATIONS

## MANUAL

## DEMO

## COMMENTS

From V6.00-5:

Use SIOLIB60.DLL 980119 size 36864 that is on the driver diskette. Place the DLL file into your FIX32 root directory. RTS now correctly toggles (high/low) under Windows NT. Please note: RTS transitions high and stays high under Windows 95.

SBUS Protocol:

If you are using a RS232/RS485 converter that trigs on the RTS signal (e.g. Westermo MA 42) then you shall use Flow Control RTS/CTS. If you don't get any response from the PLC then try to increase the SBUS timing TS and TN delay in the PLC.

If you are using a RS232/RS485 converter that trigs on the data flow (e.g. Westermo MA44) then you shall use Flow Control None. Use this if you are using Windows 95.

If you are using the RS232 SBUS interface then you shall use Flow Control None.

From v6.0-9

Changed Digital Register database blocks offset addressing for Input, Output and Flag datatypes. If you are upgrading from an earlier version of the driver then you need to change the offsets for Input, Output and Flag. See Note in chapter "6.5 ANALOG AND DIGITAL REGISTER BLOCKS" in the SP4 I/O driver manual.