

# Ideal Hardware Platforms for Remote Data Collection.

## WATER

The SODA telemetry system is the ideal platform for remote data collection. SODA consists of hardware especially designed for telecommunication and software that leaves nothing to be desired in the field of remote data collection.

Two different hardware platforms are available, depending on the size of the data collection network and on whether expandability is desired.

SODACompact is for smaller applications and has only four communication lines; SODAModular is a larger-scale solution with up to 64 communication lines.

## SODACompact / SODAModular

### The SODA telemetry system

The SODA telemetry system forms the basis of the remote readout systems BelVis-CRA and WISKI-SODA. SODA uses the telemetry system's software and the adapted hardware in SODACompact and SODAModular.

The two systems contain the same software package distinguished by the following features:

#### Independence

SODA can fulfill its communication requirements independently of the client application WISKI or BelVis.

To this end, the basic data and task management are set up in SODA. The basic data holds all data needed for the download of the remote stations and the transmission to the target systems.

Using interfaces, either all data or only the descriptions necessary for assignment to the time series in the target system are taken from the client system.

SODA can execute fetch jobs independently for several clients. The required basic data and jobs are managed separately for each client.

#### Based on tasks

Fetching data from remote readout stations with SODA is done using tasks. The tasks summarize those remote readout stations which are to be read out at the same time. The period can be a multiple of minutes, hours, days, weeks or months.

#### Several export interfaces

The data retrieved can be exported to the target system in various formats using various methods of transmission:

- Formats:  
DDP files, ZRXP files
- Forms of transmission:  
WSP, local directory, NFS directory, FTP

### Parallelism

SODA works in a highly parallel fashion. Data can be read from remote readout stations via up to 64 serial interfaces at the same time.

### Communication lines

The following data transmission methods are supported on the rack side (for example):

- Modem
- GSM
- TCP/IP
- Powerline
- Remote Call access

Full details can be found on our data sheet.

### Reports

SODA creates detailed reports regarding all activities belonging to the fetch process and further processing of the data. The information can be represented based on tasks for the single fetch steps or based on stations for the single remote readout stations with various filtering possibilities.



### SODAccompact - the hardware concept

SODAccompact has a set hardware scope. The device is located in a compact housing. Four serial interfaces for connecting the terminal equipment are mounted on the back. Further connections

include power supply, printer interface as well as, for service purposes, keyboard, mouse, monitor and network.



### SODAm modular - the hardware concept

The standard configuration of the SODAm modular system consists of 3 components:

- computer unit: SODAm modular
- interface unit: SODAV24
- modem rack: SODAm modem

The computer unit contains a powerful industrial PC with

- Pentium 4 processor
- 2 x 40 GB hard disk (RAID-1) in exchangeable frame
- CD ROM drive
- network connection via Ethernet
- VGA graphics
- connection for PS2 mouse and keyboard
- secondary power supply unit

Up to four SODAV24s can be connected to SODAm modular. SODAm modular needs no controls at all for configuration or administration. This is done via SODAcc or a remote access by SSH (secure-shell).

SODAV24 provides 16 serial interfaces that can be used to connect modems in SODAm modem or external modems, powerline modems or remote control heads. SODAV24 can be cascaded up to 4 times so that 64 interfaces are available.

The SODAmodem modem rack can house up to 16 internal modems. In SODAmodem, power is supplied by a plug-in mains power supply.

### SODAmodem

The following modems are available:  
(Subject to technical modifications without notice.)

#### ■ Analog modem SODAHayes

Network interface:	analog telephone network
Data transmission speed:	up to 56 kbps
Data formats:	701, 7E1, 7N2, 7O2, 7E2, 8N1, 8E1, 8N01, 8N2
Instruction set:	extended AT instruction set
Reports/compression methods:	V.90, V.34+, V.34, V32bis, V32, V.42, LAPM, MNP, V42bis
Supply voltage:	5V
Current consumption:	200 mA
Interfaces:	RS232, RJ11 jack

#### ■ ISDN Modemadapter SODAIsdn

Network interface:	ISDN-Netz (S0)
Data transmission speed:	64 kbps
Data formats:	701, 7E1, 7N2, 7O2, 7E2, 8N1, 8E1, 8N01, 8N2
Instruction set:	extended AT instruction set
Reports/compression methods:	V.110, X.75, PPP, X.25 / X.31, HDLC
Current consumption:	50 mA
Supply voltage:	5V
Interfaces:	RS232, RJ45 jack

#### ■ GSM Modem SODAGsm

Network interface:	cellular network GSM via 900/1800 MHz
Data transmission speed:	9.6 kbps
Data formats:	7E1, 7O1, 7N2, 8N1
Instruction set:	extended AT instruction set, GSM07.07
Reports/compression methods:	V.42, V.110, TS11, TS12
Current consumption:	500 mA
Supply voltage:	5V DC
Interfaces:	RS232, antenna jack for external antenna

#### ■ SODAparallel

Remote call rack with parallel modem, replaces the components (Allgomatic rack, parallel modem and automatic service)	
Network interface:	analog telephone network
Data transmission speed:	4800 kbps
Data formats:	7N2
Instruction set:	instructions for data fetch from station according to annex F
Supply voltage:	5V
Current consumption:	500 mA
Interfaces:	RS232, RJ11 jack

### Dimensions

#### ■ SODACompact

approx. 325 mm / 135 mm / 375 mm

#### ■ Computer unit SODAm modular

approx. 172 mm / 440 mm / 523 mm

#### ■ SODAmodem

approx. 132 mm / 440 mm / 370 mm

#### ■ SODAV24

approx. 44 mm / 440 mm / 170 mm  
(height / width / depth)



# SODA Hardware

WATER RESOURCES MANAGEMENT

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