The Advant Soft Controller is a real-time software technology that turns a PC into a powerful process controller. The Controller runs under Microsoft® Windows NT® operating system.

The Advant Soft Controller is programmed using the Advant Control Builder, which is a powerful configuration and programming tool with extensive function libraries and several programming methods according to the IEC 61131-3 standard.

The Controller is available in six sizes for up to 256 I/O units.

- Remote programming via Ethernet or serial COM port.
- I/O support for S200 I/O and S200L I/O centrally via the serial I/O bus and remotely via PROFIBUS-DP.
- I/O support for S800 I/O remotely via PROFIBUS-DP.
- Communication alternatives to other control systems: MMS, SattLink, COMLI, SattBus, Data Highway Plus, 3964R, and user-defined protocols (via COM ports) etc.
- The application program size depends on the internal memory size of the PC.
Software
The Advant Control Builder provides the controller with a wide range of functionality, such as logic functions, PID control, alarm handling and communication possibilities to other controllers, HMI systems and third party alternatives.

Logic Functions
Logic functions, flip-flops, timers, counters, etc. are available as specified in IEC 61131-3.

PID Control
PID control functions are available in the controller system.

Alarm Handling
Functions for alarm and event detection and alarm printouts on local printer are available.

Communication
Communication with the programming tool is achieved via MMS on Ethernet or MMS on a serial port (SattLink).

Central I/O
The central I/O system is connected with a maximum cable length of 2.5 meters to the Advant Soft Controller and can handle up to 64 I/O units. These I/O units can be divided across a maximum of four interface units, ISA-CIIO, and eight I/O adapters, 200-AIO. ISA-CIIO is an interface board for the central I/O. The board has two serial I/O bus interface connections and is mounted in an empty ISA slot in the PC containing the Advant Soft Controller.

Remote I/O – PROFIBUS-DP
The PROFIBUS-DP fieldbus can handle a maximum length of 100 to 1200 meters, depending on the transmission rate. The interface unit, PCI-CIPB/DP, can handle up to 256 I/O units via I/O adapters. Either up to 99 adapters 200-APB12 or via up to 79 CI830 or a combination of both. Up to seven additional rows of I/O units can be connected to the CI830 adapter via optical cables and optical interface units, TB820.

Hardware
I/O system
The I/O systems S200 I/O and S200L I/O can be mixed and can be centrally or remotely connected to the controller. S800 I/O can be remotely connected.

The Advant Soft Controller can handle up to 256 I/O units depending on the chosen model. Each adapter, 200-AIO and 200-APB12, can handle up to eight I/O units. Adapter C1830 can handle up to 24 I/O units.

Programming
The Advant Control Builder can be installed in the same PC as the Advant Soft Controller or be located in another PC.

The maximum size of the application program depends on the internal memory size of the PC.

Fast execution
The Advant Soft Controller executes in a standard Microsoft Windows NT task. By executing at high priority, and locked in a RAM memory, high real-time performance is achieved. For example, a PID loop can be executed in less than 25 microseconds, or 1000 lines of logic in less than 30 microseconds on a Pentium II processor (300 MHz).

In time critical applications, it is recommended to use a dedicated PC, i.e. do not permit any other applications to be started.

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**SattBus**

SattBus SPC is an interface board for connecting the PC to the SattBus fieldbus. The board is mounted in an empty ISA slot in the PC containing the Advant Soft Controller.

**Data Highway Plus**

1784-KT is an interface board for the fieldbus Data Highway Plus of an Allen-Bradley PLC-5 system. The board is mounted in an empty ISA slot in the PC containing the Advant Soft Controller.

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Configuration alternative.
The programming tool Advant Control Builder and the Advant Soft Controller can be located in one PC.
## Technical Data

### Advant Soft Controller

<table>
<thead>
<tr>
<th>Product name</th>
<th>Advant Soft Controller version 1.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>I/O capacity</td>
<td>Available for 2, 16, 32, 64, 128 or 256 I/O units</td>
</tr>
</tbody>
</table>

#### Hardware Requirements

<table>
<thead>
<tr>
<th>Computer</th>
<th>Pentium processor-based system (Pentium 90 MHz or better) with the necessary environmental protection, depending on the installation environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating system</td>
<td>Windows NT operating system (Release 4.0 incl. min. Service Pack 3)</td>
</tr>
<tr>
<td>Internal memory</td>
<td>Minimum 64 Mbyte RAM memory</td>
</tr>
<tr>
<td>CD-ROM Drive</td>
<td>Minimum 35 Mbyte available</td>
</tr>
<tr>
<td>Ethernet interface</td>
<td>For the licence management an Ethernet interface is required</td>
</tr>
</tbody>
</table>

#### Communication

- The TCP/IP protocol must be installed, if Advant Soft Controller is going to be connected to a Local Area Network (LAN).
- Alternatively, a COM port can be used for serial communication

#### Supported I/O

- S200 I/O, S200L I/O and S800 I/O

#### Order codes

- ASC2, ASC16, ASC32, ASC64, ASC128 and ASC256

### PROFIBUS-DP Interface PCI-CIPB/DP

<table>
<thead>
<tr>
<th>Type</th>
<th>DP master class 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission speed</td>
<td>9.6, 19.2, 45.45, 93.75, 187.5, 500, 1500, 3000, 6000 or 12000 kbit/s</td>
</tr>
</tbody>
</table>

#### Status indicators

- Front: 2 green LEDs for Ready and Run.
- Board: 1 red LED for Error, 3 LEDs for service use only

#### Current consumption (from the PCI bus)

- +5 V: Typ. 700 mA

#### Approvals

- CE marked for industrial and light industrial environment and meets EMC directive 89/336/ECC according to the following standards: EN 50081-1 and EN 50082-2

#### Temperature

- +0 °C to +70 °C, operating

#### Size

- Half size. Occupies 2 slots

#### Weight

- 0.14 kg (excl. packaging)

#### Order code

- PCI-CIPB/DP

### SattBus Interface SATTBUSPC

<table>
<thead>
<tr>
<th>Status indicators</th>
<th>1 red LED for power/stop, 1 yellow LED for communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connectors</td>
<td>One 4-pole detachable connector, One ISA bus connector</td>
</tr>
</tbody>
</table>

#### Address selector

- DIP-switch to select the board address

#### Internal current consumption (from the ISA bus)

- +5 V: Typ. 700 mA

#### Approvals

- CE marked for industrial environment and meets EMC directive 89/336/ECC according to the following standards: EN 50081-2 and EN 50082-2

#### Temperature

- +0 °C to +70 °C, operating

#### Size

- Half size

#### Weight

- 0.15 kg (excl. packaging)

#### Order code

- SATTBUSPC

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