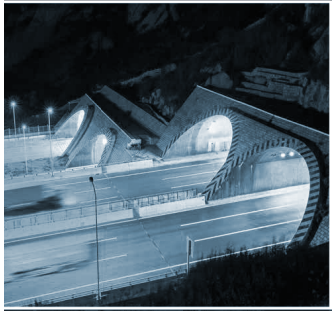


Redundant Automation Solutions

Standby controller ensures uninterrupted operation



Sample applications



Traffic



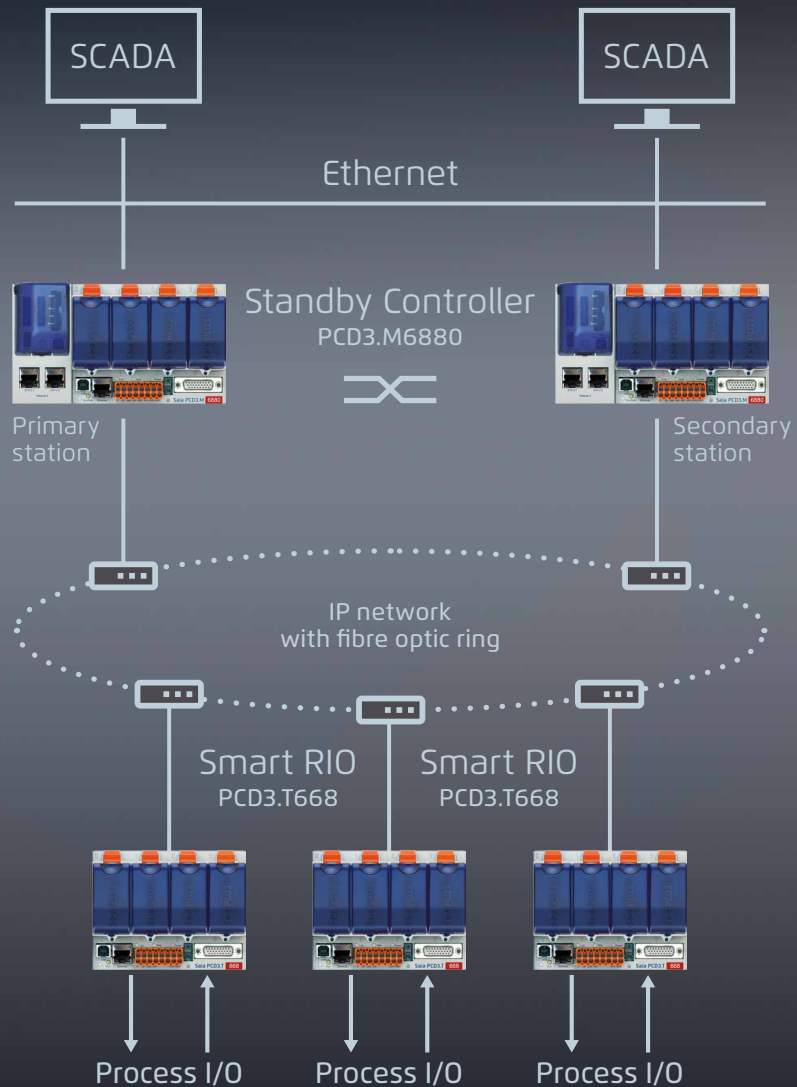
Water treatment plants



Cooling systems

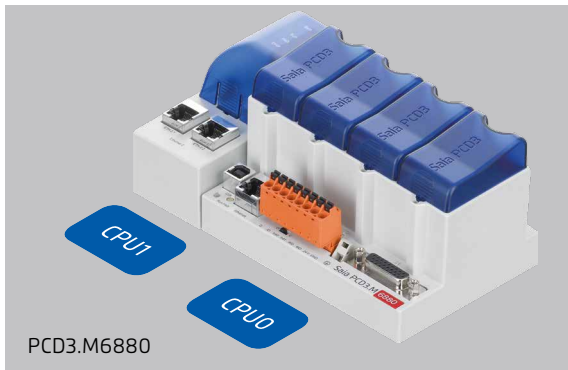


Data centres



Operating infrastructures without interruption with Saia PCD®

Redundant Saia PCD3 controllers ensure trouble-free operation of automation systems, for example in traffic engineering, water treatment and distribution, district heating/cooling plants and data centres.



PCD3.M6880

Dual processor system provides more flexibility and performance

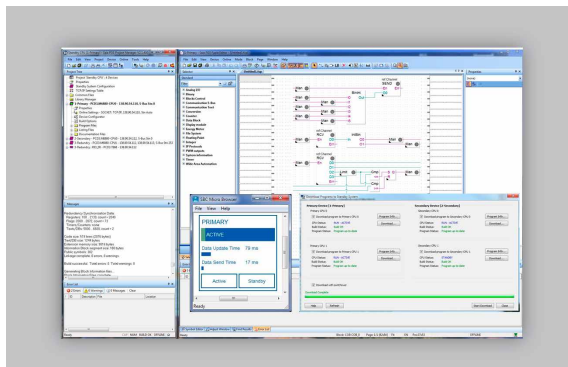
The standby controllers have a dual processor system. One processor for handling the redundant program and monitoring the active PCD. A second independent processor for handling other, non-redundant functions (e.g. automation server). This significantly increases the performance and flexibility of the system.



PCD3.T668

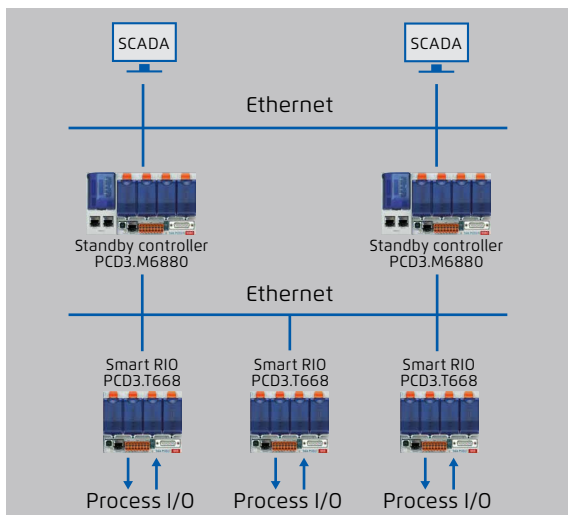
Smart programmable remote I/Os

The input/outputs (process signals) are connected to the PCD3 standby controllers via PCD3.T668 Ethernet smart RIOs and controlled through them. The remote I/Os are for both controllers together and therefore do not require redundant I/Os and sensors/actuators. Moreover, the RIOs also handle user programs that have been created with PG5, and thus provide great flexibility and additional security.



Time-saving engineering, commissioning and high-performance diagnostics

Good support from the PG5 programming tool keeps the engineering simple, and high-performance diagnostics help with commissioning and troubleshooting.



Easy system set-up in a standard Ethernet network

The redundant automation solutions based on Saia PCD® do not require any special network infrastructures and can be set up with standard network components. Both star and ring topologies are supported. To increase network availability, we recommend setting up ring topologies with fibre optic components.

« Redundant controllers from SBC guarantee openness, industrial quality and life cycles of up to 25 years, automating infrastructures sustainably and profitably. »

Urs Jäggi
Technical Product Manager

Data synchronisation between the active and standby controllers

Users can choose to synchronise data synchronously or asynchronously with the program cycle. In synchronous mode, data is synchronised between the controllers once per program cycle. The PCD media (R, F, T/C, DB) are synchronised within 200 ms at most. For medium applications, this results in cycle times of less than 300 ms (about 100 ms for the program cycle + about 200 ms for data synchronisation).

Switching from standby to active mode

A standby controller switches to active mode without interruption within the Keep Alive monitoring time that has been set. This time can be set to a value between 100 and 500 ms. This results in a maximum switchover delay of less than 100 to 500 ms.

PCD3.M6880

Redundant PCD3 controllers for standby operation are based on the PCD3.Mxx50 CPU platform. They feature two independent processors:

CPU0 uses the Ethernet interface ETH1 and has the same properties/functions as a PCD3.Mxx60 controller. SCADA and other systems are connected to the standby controller via ETH1.

Non-redundant tasks such as general communication, automation server and local I/O modules are handled on CPU0.

CPU1 uses the Ethernet interface ETH2.x. It monitors the active controller, synchronises data with the standby controller, executes the redundant user program and controls the connected PCD3.T668 smart RI/Os.

PCD3.T668

These are specifically and exclusively designed for operation with PCD3.M6880 standby controllers. With the exception of the redundancy function, they support the same properties/functions as a PCD3.T666 remote I/O station.

Order information

PCD3.M6880	Modular PCD3 standby controller with 2 Ethernet TCP/IP ports and co-processor for standby operation
PCD3.T668	Modular PCD3 smart RIO for connection to the standby controller

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