# ABB PM864AK02 3BSE018164R1

## 01 Redundant CPU identity and application

### Identify the processor pair

Record both PM864A markings, TP830 identities and their assigned primary/backup positions. Preserve the complete kit reference and distinguish supplied kit components from separately installed interfaces.

### Capture the running application

Back up the controller application and retain firmware versions, network settings and redundancy state. Establish the permitted plant operating condition before changing either processor.

| | |
|---|---|
| Processor architecture | MPC862 |
| CPU clock | 96 MHz |
| SDRAM | 32 MB per processor |
| Firmware flash | 2 MB per processor |

## 02 RCU pairing and CEX architecture

### Trace the RCU connection

Identify the dedicated redundancy cable and its two endpoints. Keep this path distinct from Ethernet and serial wiring so that a physically similar connector is not used for the wrong service.

### Review CEX segmentation

Record communication-interface order, termination and any BC810 interconnection arrangement. Check the intended topology before disturbing a controller or baseplate connection.

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|---|---|
| Communication expansion | CEX-Bus |
| CPU arrangement | Redundant primary/backup pair |

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## 03 Control-network and service interfaces

### Restore the control network

Recreate the CN1 and CN2 assignments using the retained network plan. Confirm addresses and network roles before allowing the replacement controller to join the control system.

### Select the correct service port

Use the appropriate COM4 configuration connection and its 9,600-baud setting. Keep COM3 process or modem communication separate from service activities.

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|---|---|
| Control-network ports | 2 × RJ45 Ethernet per TP830 |
| Serial interfaces | COM3 RS-232C; isolated COM4 configuration port |
| COM3 data rate | Up to 19,200 baud |
| COM4 data rate | 9,600 baud |

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## 04 Primary-to-backup transfer verification

### Establish compatible controller states

Load the approved firmware and application configuration according to the AC 800M replacement procedure. Verify that the pair reaches the expected primary and backup states.

### Test the planned transfer

Use the site's controlled redundancy test to assess transfer of the control task. Observe process continuity, communication quality and application alarms rather than relying only on a green indicator.

| | |
|---|---|
| CPU arrangement | Redundant primary/backup pair |
| SDRAM | 32 MB per processor |

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## 05 I/O availability and redundancy record

### Check the I/O architecture

Verify that the installed I/O uses a supported redundant-controller arrangement. Do not add a single-CPU electrical ModuleBus cluster without confirming its applicability to the pair.

### Retain the redundancy results

Save the tested CPU states, application backup, firmware identities, RCU/CEX layout and communication results. Release the system only when both normal operation and the intended backup behavior are established.

Technical basis: ABB AC 800M 5.1 Controller Hardware Product Guide, 3BSE036352-510 A.

## Related product navigation

ABB PM866K01 3BSE050198R1

ABB PM825 3BSE010796R1

These are related references, not confirmed substitutes or an automatically approved assembly.