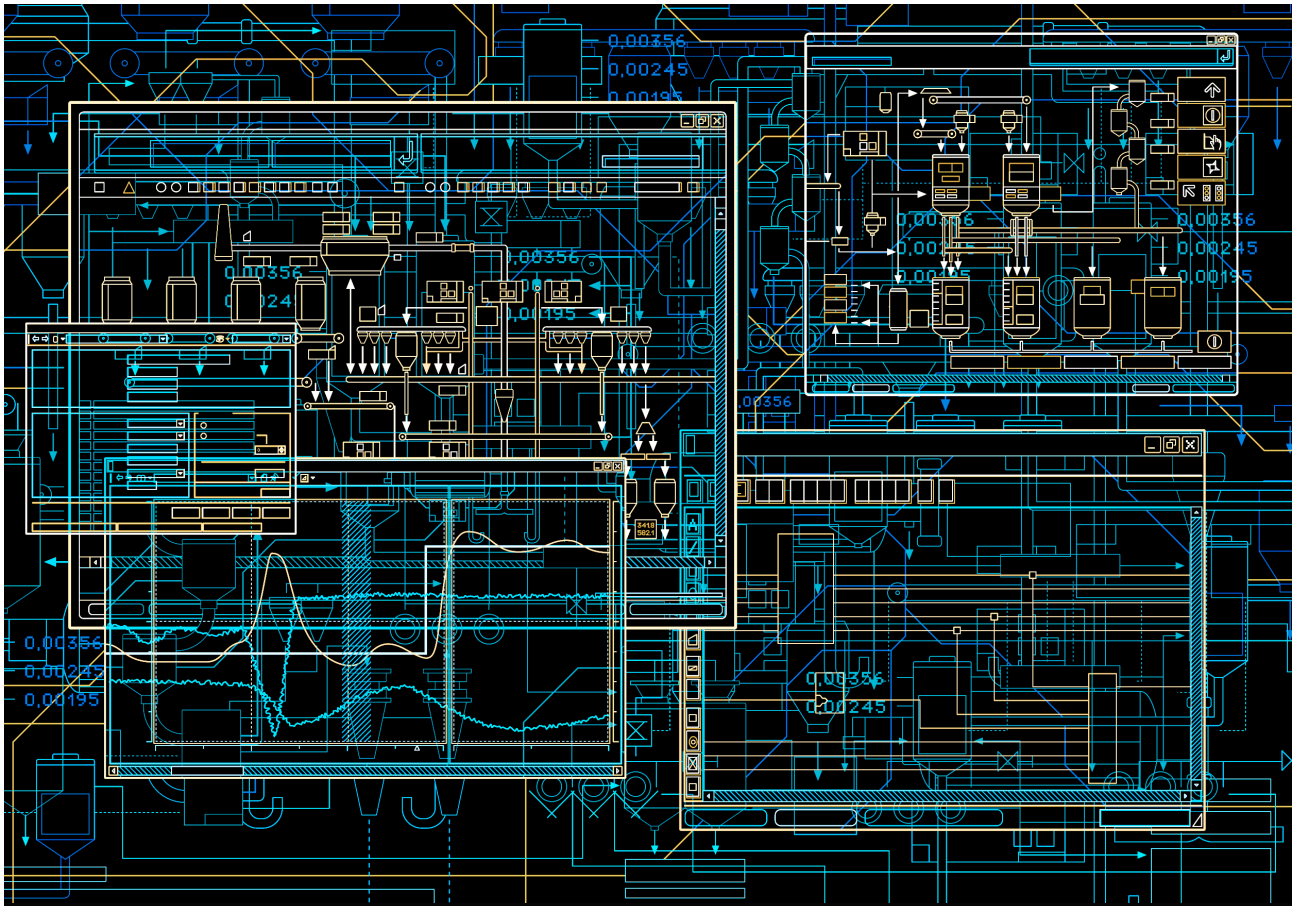


AC 800M

Controller Hardware
Product Guide

System Version 5.1

Power and productivity
for a better world™

I/O System

There are several methods of connecting I/O systems to the AC 800M Controller:

- S100 I/O via CI856.
- S800 I/O units via the ModuleBus. Support for hot configuration during run, redundancy on all levels, HART routing, and Sequence-of-Events (SOE).
- S800 I/O units via CI854/CI854A and CI840, PROFIBUS DP. Support for HART routing, redundancy on all levels, and hot configuration during run.
- S800 I/O units via CI854/CI854A and CI801, PROFIBUS DP. Support for HART routing, and hot configuration during run.
- S900 I/O units via CI854/CI854A, PROFIBUS DP.
- ABB Drives can be connected to the ModuleBus, via CI801. Some Drives equipment can be connected directly to PROFIBUS or PROFINET IO. Please refer to Drives-specific documentation for more information.
- Genius remote I/O (TRIO) via the CI862.
- Satt I/O on ControlNet (19” Satt rack I/O, S200 I/O and S200L I/O) via the CI865.
- PROFINET IO via CI871

For further information about supported I/O-units, refer to I/O-specific documentation, see Related Documentation on page 15.

S800 I/O

See Figure 8 on page 40 for examples of AC 800M / S800 I/O interconnection.

The top right area of Figure 8 on page 40 shows one cluster (or group) of units, connected to the built-in electrical ModuleBus of an AC 800M Controller. The maximum number of units per cluster is 12. However, a further seven clusters, each

comprising of up to 12 units, can be added to the optical ModuleBus. This results in a total count of 96 units for the local ModuleBus.

In redundant CPU configuration, connection of S800 I/O is done only with the optical ModuleBus. See Figure 9 on page 41. Each cluster of I/O units is connected to two TB840s. Each processor unit is connected to one of the TB840s. Note that the built-in electrical ModuleBus can not be used in redundant CPU configuration.

Note that a PM851 is restricted to one optical ModuleBus cluster.

S100 I/O

S100 I/O are connected to the AC 800M, via the communication unit CI856. A bus extension cable TK575/TK580, together with DSBC174/DSBC176 or DSBC173A, connects the S100 I/O units to the base plate, TP856, of CI856. Up to five S100 I/O racks can be connected to the CI856.

Redundant S100 I/O bus extension can not be connected to CI856.

S900 I/O

S900 I/O are connected to the AC 800M, via PROFIBUS DP and CI854/CI854A. The S900 I/O system is a remote I/O system for use in hazardous areas. Due to its explosion protection certificates, the S900 process I/O system can be installed in both hazardous areas (zone 1 and zone 2) and safe areas.

Other I/O Systems

A PROFIBUS DP segment (or node), shown on the top left-hand side of Figure 8 on page 40, allows for a large increase in the numbers of units connected to each AC 800M Controller. The segment is shown here with a Fieldbus Communications Interface (FCI) unit (type CI840), connected to the PROFIBUS DP network. The use of FCI units, or other types of adapters, allows the selection of units from several I/O families.

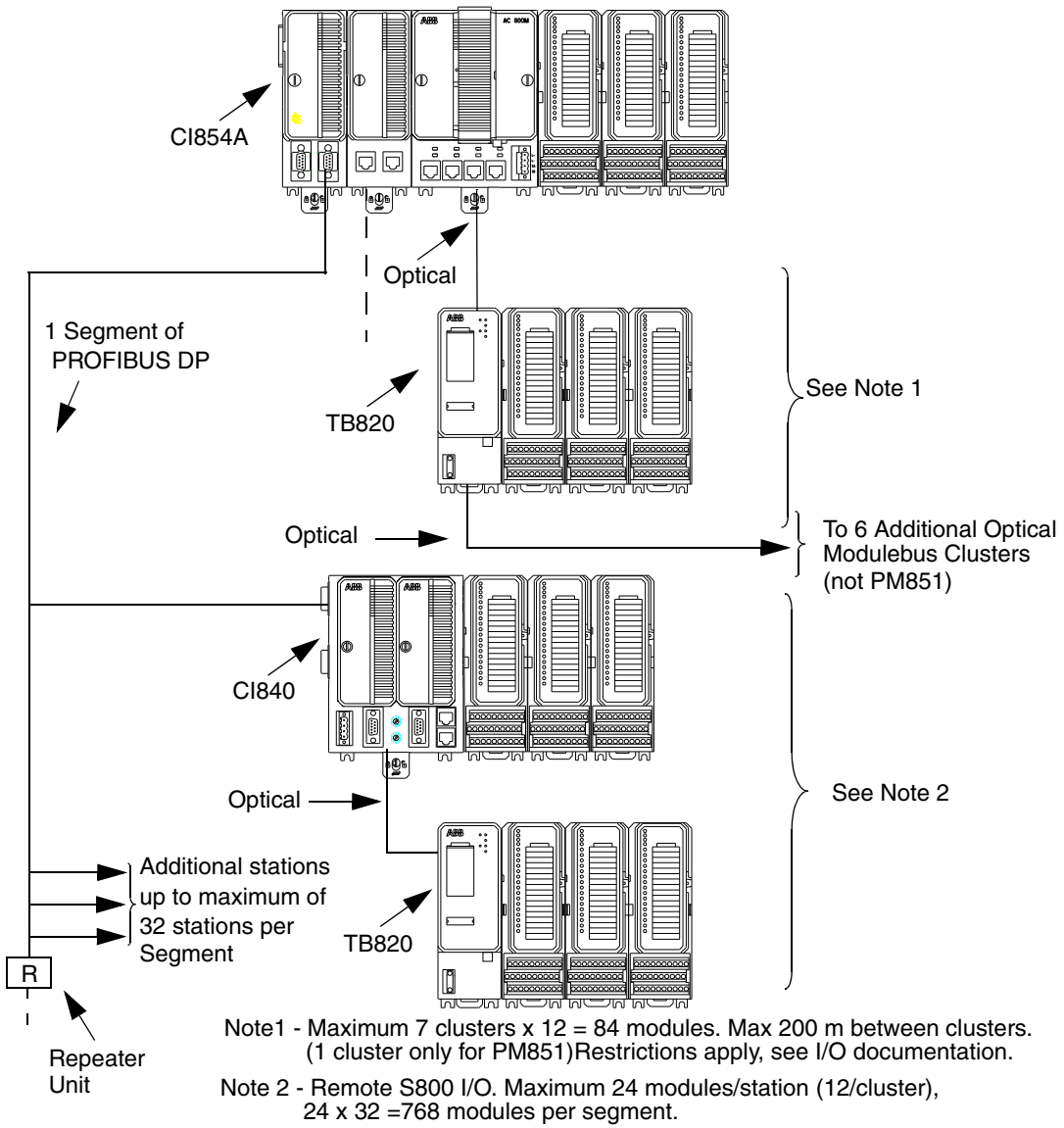


Figure 8. Example of AC 800M / S800 I/O Interconnection in Single CPU Configuration

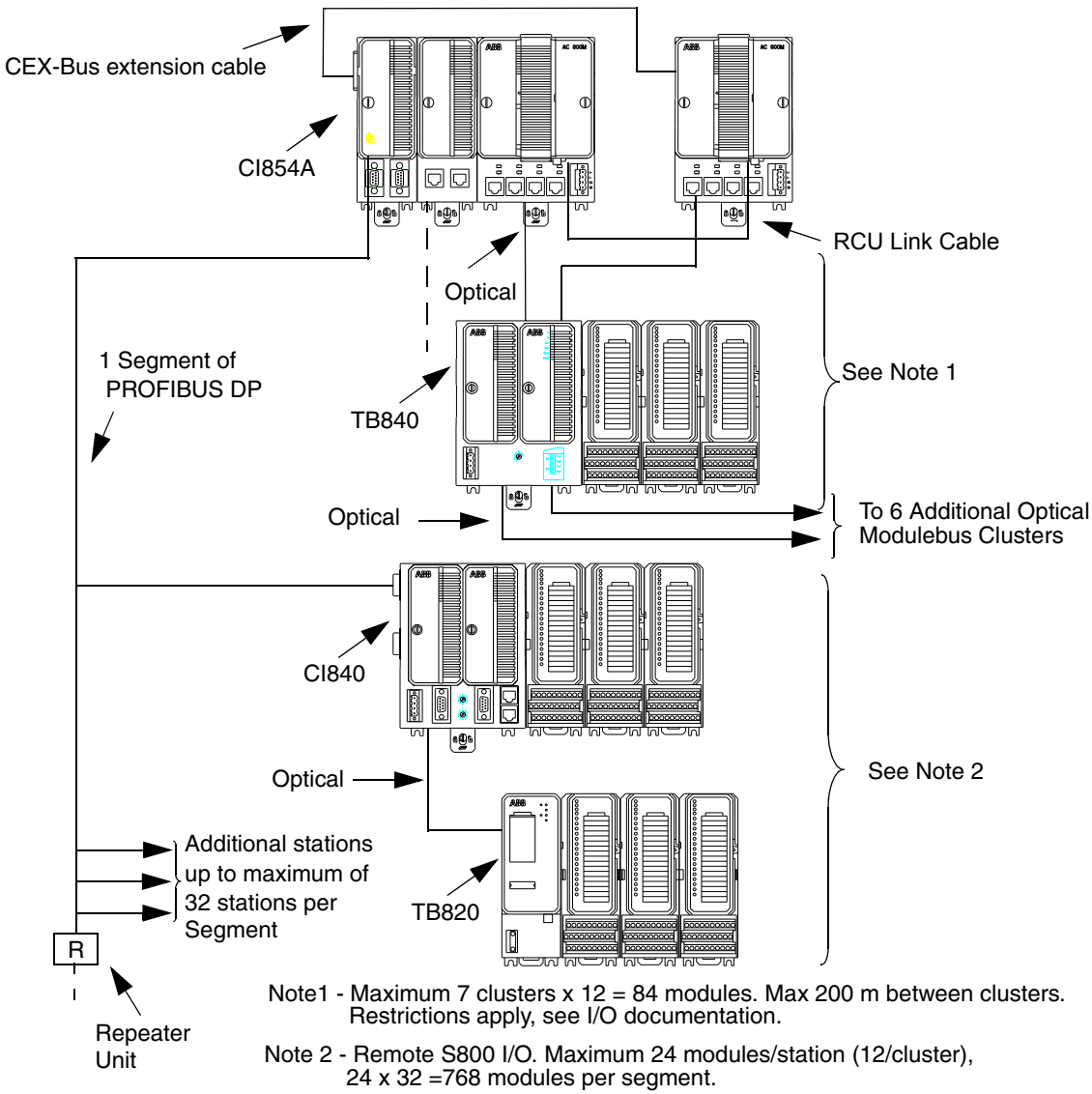


Figure 9. Example of AC 800M / S800 I/O Interconnection in Redundant CPU Configuration

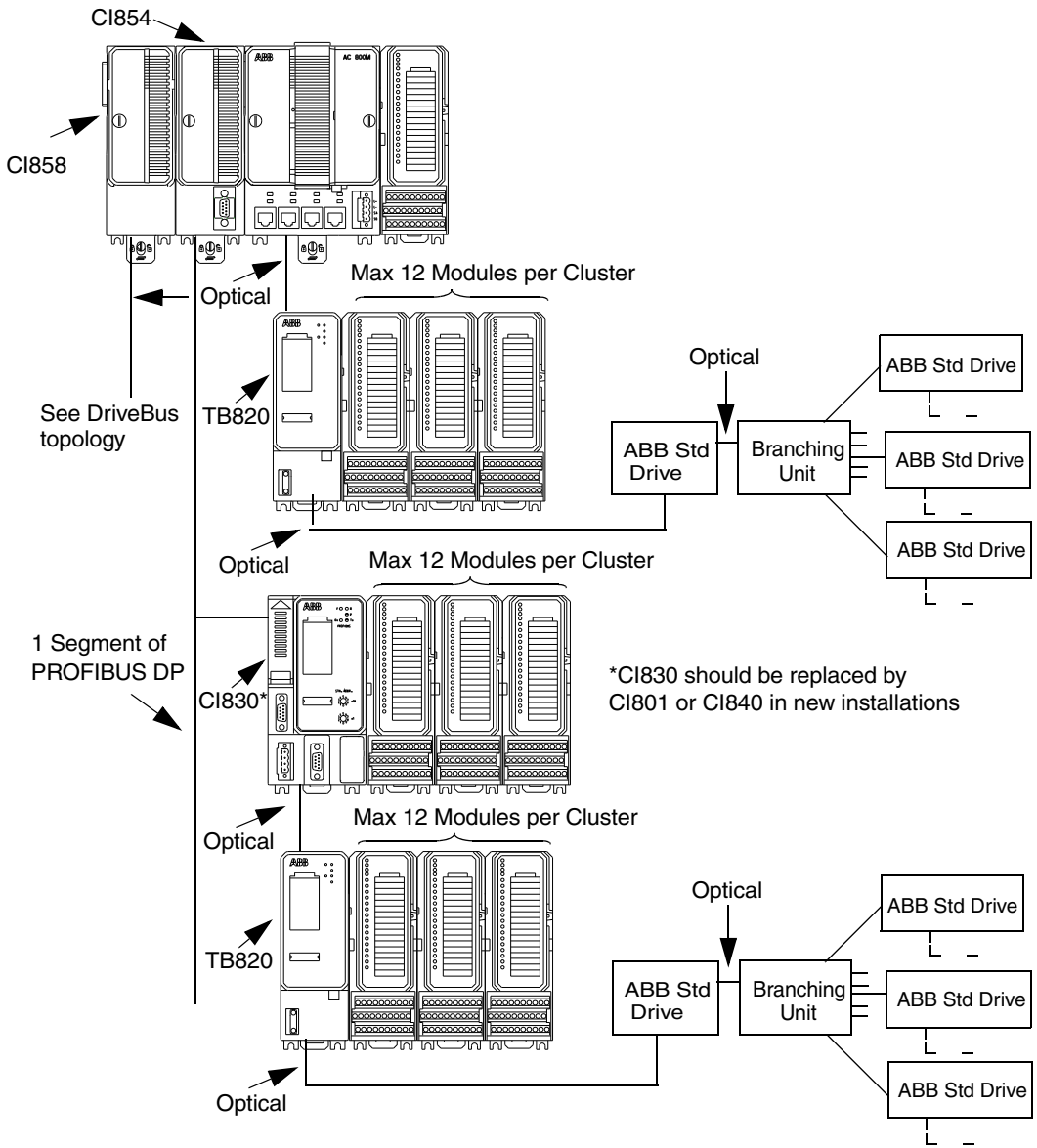


Figure 12. Example of Connection of ABB Drives in Single CPU Configuration

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