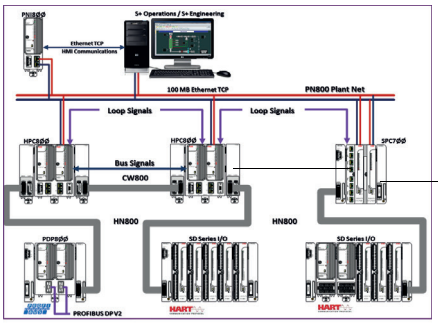
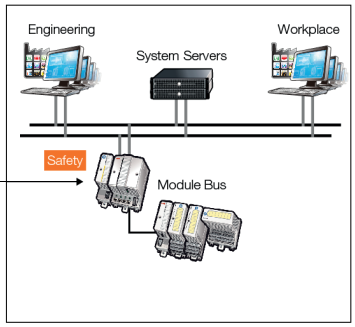
DATA SHEET

System Controller Connect

New Ethernet based peer-to-peer communication





The System Controller Connect software provides a real time dedicated and secure interface between Harmony/Symphony Plus systems and 800xA systems or Safety systems.

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Symphony Plus DCS deployed at a Plant Wide Distributed Control System with real time data exchange to an 800xA based Safety System

Ethernet based communication
The System Controller Connect provides a dedicated, high speed, and secure interface between Symphony Harmony/Symphony Plus systems and 800xA systems/safety systems.

Applications
The System Controller Connect software can be used in applications requiring a:
- Fast and reliable interface between electrical and process controllers
- Controller Connectivity for real-time data exchange in mixed systems
- Interface between Symphony Harmony/S+ based DCS controller and AC 800M High Integrity safety controller

Overview
System Controller Connect is a software product which is loaded and executed in a Symphony Harmony/Symphony Plus controller.
System Controller Connect supports Manufacturing Message Specification (MMS) protocol in the Symphony Controller. The System Controller Connect software is deployed as an MMS Client Application. The AC 800M controller acts as a Server and responds to MMS commands sent from the System Controller Connect client. The client application reads/writes blocks of data in order to maximize efficiency. This is accomplished by forming scan groups containing a set number of access variable values.

The System Controller Connect interface performs non-SIL based communications that can be used for 'high speed' real-time data exchange communication.

Features and benefits
- Transfer of 800xA tag values to the Symphony Harmony / Symphony Plus system using MMS protocol. MMS is a native protocol of the System 800xA AC 800M controllers and thus needs minimal configuration effort and no additional hardware components.
- MMS access variables in the AC 800M controller are supported in the user friendly interface. Entries are defined as either read or write.
- Communication rates are fully tunable to meet requirements.

System 800xA values now available within the Harmony blockware can be displayed in the Symphony Harmony HMI.

System Controller Connect supports a fully redundant interface. Redundant failovers are 'bumpless'. Redundant Ethernet address of the AC 800M controller using RNRP is fully supported.

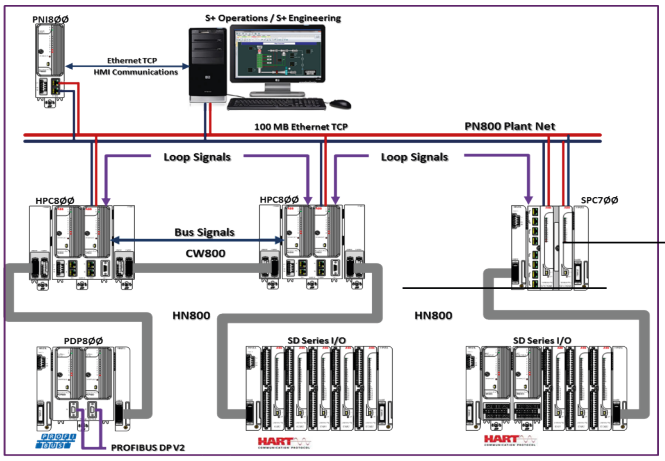
Hardware and Software Requirements	Characteristic/Value
Pc Workstation	Must be compatible with the operating system used.
Operating System	Windows 7 Enterprise SP1 64-bit Windows Server 2008 R2 64-bit Windows 10 Enterprise LTSB 2016 Windows Server 2016
Controller Module - Client	BRC410 HC800
Controller Module - Server	AC 800M
Redundancy	Controller Redundancy RNRP network
Features and Specifications	
Data Types Supported	32-bit real 16-bit integer signed/ 16-bit unsigned integer Boolean
Connections	One Controller Module Pair (BRC410 or HC800) can connect to 12 AC 800M Servers (maximum 4,000 points total)
Point Count Based Licensing	100, 250, 500, 1500, 3000, 4000

Harmony Function Block	Point	System 800xA Data Point
FC 30 Block	<- WXR ---	Analog Output/Input
FC 137 Block	<- W ---	Analog Output/Input
FC 15 Block[1]	--- R ->	Analog Output/Input
FC 68 Block[1]	--- R ->	Analog Output/Input
FC 45 Block	<-WXR ---	Analog/Digital Output/Input
FC 138 Block	<-W ---	Analog/Digital Output/Input
FC 39 Block[2]	--- R ->	Analog/Digital Output/Input
FC 62 Block[2]	--- R ->	Analog/Digital Output/Input

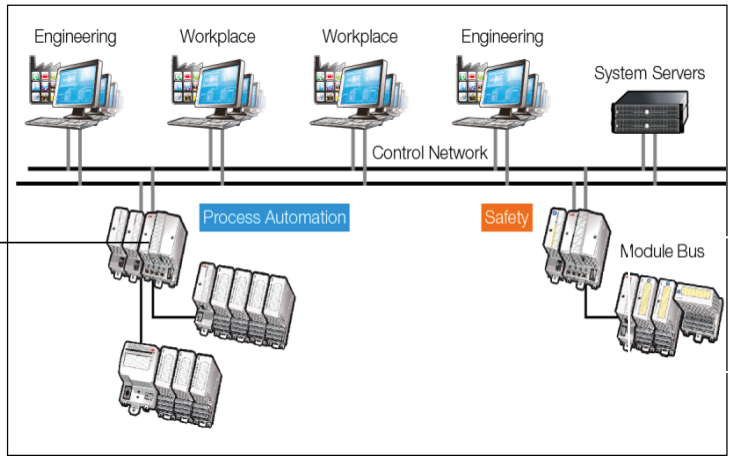
[1] Any Harmony function code that provides a real output value at the block number referenced may be used for Analog System Controller Connect points.
[2] Any Harmony function code that provides a Boolean output value at the block number referenced may be used for Boolean System Controller Connect points.

Control Builder is used to define Access Variables to align with the System Controller Connect client configuration.

Solution for plant and electrical automation



DCS: Plant control system



DCS: Electrical control system

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