

Experion Process Knowledge System (PKS) C300 Controller Specifications EP03-320-300, Version 1, June 2006



Product Introduction

C300 Controller

Honeywell's C300 Controller provides powerful and robust control for the Experion platform. Released with Experion® R300, the C300 joins the C200 and the Application Control Environment (ACE) node in operating Honeywell's field-proven deterministic Control Execution Environment (CEE) core software. The CEE software provides a superior control execution and scheduling environment. Control strategies for each controller node are configured and loaded through a common Control Builder, an easy and intuitive engineering tool.

Architecture Overview

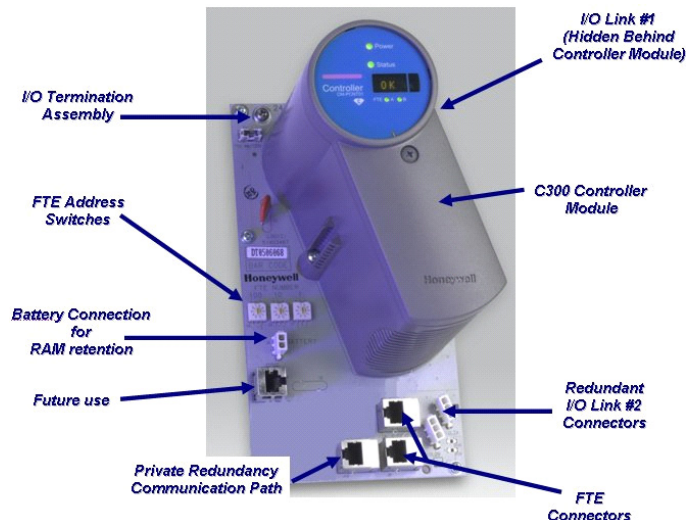
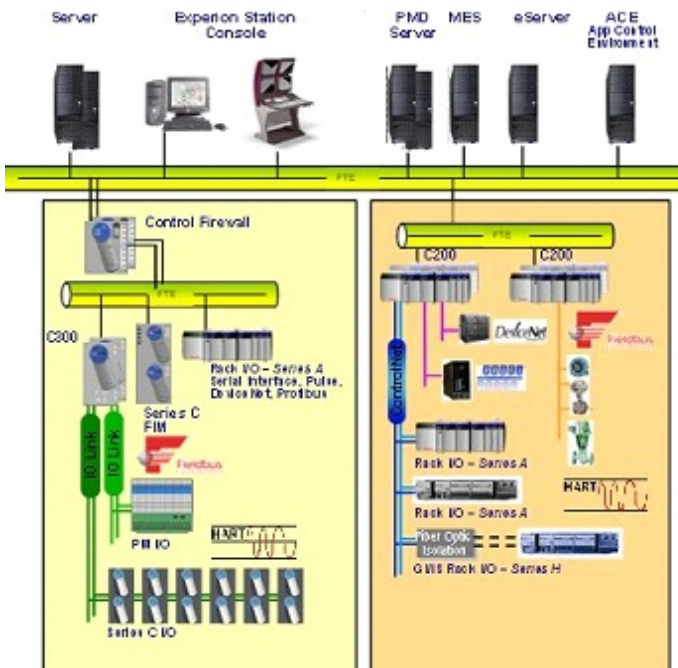
The architecture diagram depicts the C300 controller deployed in an Experion R300 platform configuration. The Honeywell Fault Tolerant Ethernet (FTE) network infrastructure appears below as

a bussed topology for diagram purposes, in implementation, it is a switched network topology. The C300 controller is optionally redundant and simply requires an additional module and cable to implement redundancy.

Standard Functions Specifications

C300 Controller Hardware

The C300 controller shares its hardware design with the Series C I/O, offering an innovative design that reduces footprint and installation and maintenance costs. The C300 controller module is mounted on the C300 Input Output Termination Assembly (IOTA). The C300 IOTA contains only passive devices such as FTE address switches, FTE cable connectors and I/O Link cable connectors to connect to other Honeywell I/O families, such as PM I/O. The picture below depicts the IOTA components. For more general hardware information, consult the Series C I/O product specification document



C300 Controller Specifications

Specification	Limit
Power requirement	24 V (provided through power bars by the Series C power system)
IOTA Dimension	220 mm (9 ") height, 120 mm (4,75 ") width
Agency Approvals	
FM, CSA	Class I, Division 2, Group A, B, C, D Class I, Zone 2, AEx nA IIC
ATEX	II 3 G EEx nA IIC, for use in Zone 2 hazardous locations
CE	EN 61326 -1998 Electrical equipment for measurement, control and laboratory use - EMC requirements. EN 50082-2-1995 Electromagnetic Compatibility -Generic Immunity Standard, Part 2: Industrial Environment. EN 55011-1991 Limits and Methods of Measurement of Radio Disturbance Characteristics of Industrial, Scientific and Medical (ISM) Radio-Frequency Equipment. EN 6101 0-1-1993 Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use. Part 1: General Requirements
C-Tick	Australian Radio Communications Act of 1997, Section 182
Operating Temperature	0-60 degrees Celsius (0-50 degrees Celsius ambient)
Relative Humidity	5 to 95 % (non condensing)
Vibration	Frequency 10 to 60 Hz Acceleration 0.5 g max Displacement 0.1 Inch
Mechanical Shock	Acceleration 5 g max Duration 30 msec maximum
Barometric Pressure Altitude	-300 to +3000 m
EMI	15 V/M External to cabinet with doors closed
ESD	15 kV 20 x once per 5 seconds
Harsh Environment (ANSI/ISA-S71.04-1985 corrosion standard)	CC- model number designation support the harsh environment or G3 level
Module Removal and Insertion Under Power	Supported
Supported I/O Types	Series A (Serial interface, Pulse Input, ProfiBus and DeviceNet interface), Series C and PMIO in any combination
Supported I/O Links	2 I/O Links, each I/ O Link configurable for either PM or Series C I/O.
Supported Number of IO Modules	64 I/O Units (see system specification for further detail)
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Specification	Limit
Processor	PowerPC 8270
Control Capacity	
Execution Units	5500 Execution Units (single or redundant)
Tagged Objects	4095 objects
Processing Units	2400 Processing Units (average)
Memory Units	16000 Memory Units
Execution Period	50 msec – 2000 msec (adjustable per control strategy)
RAM Retention	50 hour through optional rechargeable battery pack
Controller Communication	
CEE-based Platforms	Native peer to peer
Rockwell Devices	Exchange block peer to peer

Model Numbers

Model Number	Description
CC-PCNT01	C300 Control Processor Module
CC-TCNT01	C300 Control Processor I/O Termination Assembly (IOTA)
TC-SWCS30	C300 Control Solver 50 msec CEE (license only)
TC-SWCB31	CB10 Control Builder Client License
51305980-836	Redundancy Cable
Redundancy is implemented with two modules/IOTAs and a redundancy cable. Each controller (single or redundant) requires a corresponding Control Solver license.	

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For More Information

Learn more about how Honeywell's Experion C300 controller, visit our website www.honeywell.com/ps or contact your Honeywell account manager.

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