

## Selecting Series C Power System

The Series C Power System provides +24 Vdc power to compatible assemblies in one or more cabinet sides.

### Series C power system parts

The power systems listed in the following table provide 24Vdc power to compatible assemblies in one or more cabinet sides. Each power system includes the following at a minimum:

- The metal enclosure that holds up to two power supplies and a 24 V backup assembly, if provided.
- An eight-connector interface at the top of the metal enclosure for six 24 Vdc power distribution connectors, one connector interface to C300 Controller memory battery backup assemblies, and one connector interface for power system alarm contacts.

Description	Model or Part Number
<b>Standard Power Systems</b>	
Power System (20A), redundant (2 power supplies), 120/240 VAC, with 24V Backup Battery Assembly	CC-PWRB01 (51199940-100)
Power System (20A), redundant (2 power supplies), 120/240 VAC	CC-PWRR01 (51199939-100)
Power Subsystem (20A), non-redundant (one power supply), 120/240 VAC	CC-PWRN01 (51199937-100)
<b>Spare/Loose Items</b>	
24V Backup Battery Rack (no batteries)	51199945-100
24V Backup Battery Kit (3 batteries and interconnecting cables)	51199946-100
20A Power Supply	51199299-100

### **Model CC-PWRB01 power system**

The model CC-PWRB01 power system has two 24 Vdc (20 amperes) output power supplies for redundancy as well as a 24V backup assembly. The battery backup assembly has rechargeable batteries and battery charger to sustain the 24 Vdc (20 amperes) output for up to 30 minutes in the event of an ac power input failure. Each 24 Vdc power supply can be powered by a separate ac power source (ac line or uninterruptible power supply), if desired. The output is 25 to 26 Vdc (20 amperes) while the ac input is present and 24 to 25 (20 amperes) while the battery backup is available.

### **Model CC-PWRR01 Power System**

The model CC-PWRR01 power system only has two 24 Vdc (20 amperes) output power supplies for redundancy and no 24V backup assembly to sustain the 24 Vdc output in the event of an ac power input failure. Each 24 Vdc power supply can be powered by a separate ac power source (ac line or uninterruptible power supply), if desired. The output is 25 to 26 Vdc (20 amperes) while the ac input is present.

### **Model CC-PWRN01 power system**

The model PWRN01 power system only has a single (non-redundant) 24 Vdc (20 amperes) output power supply and no 24V backup battery assembly to sustain the 24 Vdc output of the power system in the event of ac power input failure. The output is 25 to 26 Vdc (20 amperes) while the ac input is present.

### **24V Backup Assembly**

The 24 V backup assembly consists for one battery rack and one 24 V backup battery kit as described in the previous Series C power system parts section. When a 24V backup assembly is included in a power system installed in a cabinet, the battery rack is installed in the cabinet but the battery kit is shipped separately in a box for field installation.

## Power Distribution Subsystem

The power distribution subsystem consists of the hardware listed in the following table to distribute 24 Vdc from a Series C power system to one or more CCAs in one or both sides of a cabinet containing the power system.

Description	Model or Part Number
Power Distribution Subsystem (includes the following parts)	51199406-100
<b><i>Spare/Loose Parts</i></b>	
DC Power Cable (connects one of the six 24 Vdc power distribution connectors in the 8-connector interface on the subsystem to the Horizontal DC Power Bus Bar (HDPB)), 9-inches (229 mm) long	51202324-100
Horizontal DC Power Bus Bar (HDPB) (includes mounting hardware)	51403896-100
Pair of Red and Black Conductors (Wires) (provide +24 Vdc and 24 Vdc common from the HDPB to one CCA in a cabinet side. Additional pairs are needed to connect to additional CCAs in the same or opposite cabinet side.)	51202335-300

### Horizontal dc power bus bar (HDPB)

The HDPB provides dc power to the tops of up to three (vertical) CCAs (mounted on IOTA Channels) at the top of the cabinet in one cabinet side. the +24 Vdc and 24 Vdc common are provided to IOTAs and their IOMs through two buses (conductors) in each CCA. Each CCA also contains a third bus that serves as a connection point for field wiring shield wires.

If a Series C Power System and HDPB must also power additional CCAs in the other cabinet side of a dual-access cabinet, additional red/black wire pairs (51202335-300) must be added for each vertically-adjacent pair of CCAs in the other cabinet side. The HDPB has three additional terminals for connection of a total of six pairs of red and black wires, so it can support CCAs in both the front and rear sides of a dual-access cabinet, as long as the Power System can provide enough current for both cabinet sides. Otherwise, another Power System and another Power Distribution Subsystem must be used to power the CCAs in the other cabinet side.

## C300 Controller Memory Backup

The controller memory backup assembly consists of the following parts and provides up to 50 hours of memory backup to one or two connected C300 Controllers.

Description	Model or Part Number
C300 Memory Backup Assembly (MBA) - For 1 to 2 C300s	CC-SCMB01
C300 Memory Backup Assembly (MBA) - For 2 or more C300s	CC-SCMB02
<b><i>Spare/Loose Parts</i></b>	
RAM Charger Assembly	51199932-100
RAM Charger Mounting Assembly (3 inches, 76 mm)	51202340-100
Cable, MBA to one C300 Controller, 30 inches (0.7 m) long	51202330-100
Power cable, MBA to Power System, 55 inches (1.4 m) long	51202331-100
Cable, MBA to one C300 Controller, 84 inches (2 m) long	51202330-200

### Memory backup assembly cabling guidelines

- You can use the 30-inch (0.7 meter) long cable to connect the MBA to C300, when the RAM charger mounting assembly is mounted adjacent to its associated C300 IOTA on the same CCA. Use the 84-inch (2 m) long cable when the RAM charger mounting assembly is **not** adjacent to its associated C300 IOTA on the same CCA.
- You can connect up to two C300s to the RAM charger mounting assembly using either the 30-inch (0.7 m) or 84-inch (2 m) long cables, as required.
- The 55-inch (1.4 m) long power cable restricts the mounting location of the MBA to the upper CCA on the left side of a cabinet side adjacent to the Series C power system.

### Memory backup hold-up times

The following table lists the hold-up time for a fully charged RAM battery charger depending on the number of C300 Controllers that are connected.

Number of C300s	Hold-Up Time in Hours	Hold-Up Time in Days
1	110	4.58

**Series C Hardware Configuration**  
Series C DC Power Connections

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<b>Number of C300s</b>	<b>Hold-Up Time in Hours</b>	<b>Hold-Up Time in Days</b>
2	55	2.23
3	36.6	1.52
4	27.5	1.14

### **Series C DC Power Connections**

The following figure illustrates the typical dc power and battery backup connections made in Series C cabinets. For more information about the components shown in the figure, refer to the previous power system and memory backup sections.