

I/O Link Cables

You can connect the following types of I/O Link cables to the redundant I/O Link cable connector ports (IOL1A/B and IOL2A/B) on the C300 Controller IOTA:

- Series C I/O Link (750 KBaud), to support Series C IOMs in their IOTAs
- PM I/O Link (375 KBaud), to support PM IOPs in PM files

Both types always require a pair of cables (Cable A and Cable B). See the previous section about cable color coding schemes.

Series C I/O Link cable types

The following table provides a summary of the types of I/O Link cables that are used in the Series C system.

Cable Name and Type	Description
Header, 3 Drop	<p>The Header cable is a multi-drop cable that distributes the I/O Link horizontally to multiple CCAs in a cabinet side or sides. Header cables can be extended to other header cables. Normally, a header cable runs across the top of the cabinet.</p> <p>This cable can be connected to additional cables of the same type to span cabinet sides with or without extension cables.</p>
Header, 6 Drop	<p>This cable can span two cabinet sides in the front and back of the same cabinet or the same side of adjacent cabinets</p>
Drop, Special	<p>The Drop cable is a multi-drop cable that runs vertically in a CCA. Two drop cables can be plugged together to distribute the I/O Link in a pair of vertical CCAs. The top connector of the topmost drop cable plugs into a connector on the header cable. There are several configurations of drop cables to handle the three different Series C IOTA dimensions [6-inches (152 mm), 9-inches (229 mm) and 12-inches (305 mm)]. There are many situations where a connector on a drop cable is not used. This occurs primarily when there is a mixture of different size IOTAs in a CCA, or the hardware configuration does not fill the CCA.</p> <p>This cable connects C300s to header and bypasses redundant Control Firewalls above.</p>
Drop, 6 Connections on 6-inch Pitch	<p>Use this cable to connect to non redundant HLA I and AO IOTAs, as well as LLAI IOTAs. Since every other connector is on a 12-inch (305 mm) pitch it can also be used with a mix of 6-inch (152 mm) and 12-inch (305 mm) IOTAs.</p>

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Cable Name and Type	Description
Drop, 4 Connections on 9-inch Pitch	Use this cable to connect to non redundant DI and DO IOTAs.
Drop, 3 Connections on 12-inch pitch	Use this cable to connect to all redundant IOTAs.
Extension, 36 inches	<p>An extension cable is used to extend the I/O Link through an area where there are no IOTA connections or to another cabinet side. Extension cables come in a variety of lengths. They can plug into taps on a header cable, the end of a header cable, or the bottom of a drop cable (although this is not a normal use). Extension cables are normally used for three purposes:</p> <ul style="list-style-type: none"> • To extend a header cable to another cabinet side in a complex; • To by pass the top CCA in a vertical pair (when there are no I/O Link connections in the top CCA); or • To connect to PM I/O in another cabinet side or cabinet. <p>Obviously, there are situations where the length of an extension cable will be non standard (custom). There are no inherent limitations on the length of an extension cable; but there are stringent grounding rules for the I/O Link that restrict where an extension cable can go. As a result, the maximum extension cable length should be 30 feet (9 m) or less.</p> <p>Use this extension to bypass an upper CCA where there are no I/O Link connections. It can also extend a header cable past an adjacent cabinet side where there are no connections needed.</p>
Adapter, to PM	<p>An adapter cable is used to connect a Series C extension cable to a PM file.</p> <p>This short cable plugs into Series C extension cable and has the mating connector to plug into a PM file I/O Link connector.</p>
Tap Expander, 1:2	<p>A tap expander cable is used to expand a tap (connector) on a drop cable to multiple taps. The most common use is to expand one tap to two. For example, if a 12 inch (305 mm) space is available on CCA and the user wants to install two 6-inch (152 mm) IOTAs and the drop cable has only one connector left, a 1:2 tap expander is used instead of removing the existing drop cable and replacing it with one with more connectors.</p> <p>Expands any connector on a drop cable to 2 connectors that can plug into IOTAs.</p>

Series C I/O Link cable parts

Each I/O Link cable is available in an A version (marked yellow) and a B version (marked green). They are normally sold as a pair, since both are needed. The I/O Link 2 (IOL2) cable part numbers have similar tab numbers as the I/O Link 1 (IOL1) cables but with the second digit equal to 1 instead of zero.

Description	Model or Part Number
Series C I/O Link 1 (IOL1) Cable Assemblies	
Gray Header Cable, 3 drops, yellow label (cable A)	51202329-600
Gray Header Cable, 3 drops, green label (cable B)	51202329-601
<i>Cable pair consisting of one each of the preceding two cables</i>	<i>51202329-602</i>
Gray Header Cable, 3 drops, daisy-chain, yellow label (cable A)	51202329-604
Gray Header Cable, 3 drops, daisy-chain, green label (cable B)	51202329-605
<i>Cable pair consisting of one each of the preceding two cables</i>	<i>51202329-606</i>
Gray Header Cable, 6 drops, yellow label (cable A)	51202329-500
Gray Header Cable, 6 drops, green label (cable B)	51202329-501
<i>Cable pair consisting of one each of the preceding two cables</i>	<i>51202329-502</i>
Gray Drop Cable, 3 drops, for channel containing two Control Firewalls (CF9s) plus two C300s plus one 6-inch (152 mm) IOTA, yellow label (cable A)	51202329-300
Gray Drop Cable, 3 drops, for channel containing two CF9s plus two C300s plus one 6-inch (152 mm) IOTA, green label (cable B)	51202329-301
<i>Cable pair consisting of one each of the preceding two cables</i>	<i>51202329-302</i>
Gray Drop Cable, 3 drops, 12-inch (305 mm) pitch, yellow label (cable A)	51202329-400
Gray Drop Cable, 3 drops, 12-inch (305 mm) pitch, green label (cable B)	51202329-401
<i>Cable pair consisting of one each of the preceding two cables</i>	<i>51202329-402</i>
Gray Drop Cable, 4 drops, 9-inch (229 mm) pitch, yellow label (cable A)	51202329-200
Gray Drop Cable, 4 drops, 9-inch (229 mm) pitch, green label (cable B)	51202329-201
<i>Cable pair consisting of one each of the preceding two cables</i>	<i>51202329-202</i>

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Description	Model or Part Number
Gray Drop Cable, 6 drops, 6-inch (152 mm) pitch, yellow label (cable A)	51202329-100
Gray Drop Cable, 6 drops, 6-inch (152 mm) pitch, green label (cable B)	51202329-101
<i>Cable pair consisting of one each of the preceding two cables</i>	51202329-102
Gray Extension Cable, 9-inches (229 mm) long, yellow label (cable A)	51202329-700
Gray Extension Cable, 9-inches (229 mm) long, green label (cable B)	51202329-701
<i>Cable pair consisting of one each of the preceding two cables</i>	51202329-702
Gray Extension Cable, 25-inches (635 mm) long, yellow label (cable A)	51202329-704
Gray Extension Cable, 25-inches (635 mm) long, green label (cable B)	51202329-705
<i>Cable pair consisting of one each of the preceding two cables</i>	51202329-706
Gray Extension Cable, 36-inches (1 m) long, yellow label (cable A)	51202329-720
Gray Extension Cable, 36-inches (1 m) long, green label (cable B)	51202329-721
<i>Cable pair consisting of one each of the preceding two cables</i>	51202329-722
Gray Extension Cable, 48-inches (1.2 m) long, yellow label (cable A)	51202329-724
Gray Extension Cable, 48-inches (1.2 m) long, green label (cable B)	51202329-725
<i>Cable pair consisting of one each of the preceding two cables</i>	51202329-726
Gray Tap Expander 1:2, yellow label (cable A)	51202329-800
Gray Tap Expander 1:2, green label (cable B)	51202329-801
<i>Cable pair consisting of one each of the preceding two cables</i>	51202329-802
Series C I/O Link 2 (IOL2) Cable Assemblies	
Violet Header Cable, 3 drops, yellow label (cable A)	51202329-610
Violet Header Cable, 3 drops, green label (cable B)	51202329-611
<i>Cable pair consisting of one each of the preceding two cables</i>	51202329-612
Violet Header Cable, 3 drops, daisy-chain, yellow label (cable A)	51202329-614
Violet Header Cable, 3 drops, daisy-chain, green label (cable B)	51202329-615

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Description	Model or Part Number
<i>Cable pair consisting of one each of the preceding two cables</i>	51202329-616
Violet Header Cable, 6 drops, yellow label (cable A)	51202329-510
Violet Header Cable, 6 drops, green label (cable B)	51202329-511
<i>Cable pair consisting of one each of the preceding two cables</i>	51202329-512
Violet Drop Cable, 3 drops, for channel containing two CF9s plus two C300s plus one 6-inch (152 mm) IOTA, yellow label (cable A)	51202329-310
Violet Drop Cable, 3 drops, for channel containing two CF9s plus two C300s plus one 6-inch (152 mm) IOTA, green label (cable B)	51202329-311
<i>Cable pair consisting of one each of the preceding two cables</i>	51202329-312
Violet Drop Cable, 3 drops, 12-inch (305 mm) pitch, yellow label (cable A)	51202329-410
Violet Drop Cable, 3 drops, 12-inch (305 mm) pitch, green label (cable B)	51202329-411
<i>Cable pair consisting of one each of the preceding two cables</i>	51202329-412
Violet Drop Cable, 4 drops, 9-inch (229 mm) pitch, yellow label (cable A)	51202329-210
Violet Drop Cable, 4 drops, 9-inch (229 mm) pitch, green label (cable B)	51202329-211
<i>Cable pair consisting of one each of the preceding two cables</i>	51202329-212
Violet Drop Cable, 6 drops, 6-inch (152 mm) pitch, yellow label (cable A)	51202329-110
Violet Drop Cable, 6 drops, 6-inch (152 mm) pitch, green label (cable B)	51202329-111
<i>Cable pair consisting of one each of the preceding two cables</i>	51202329-112
Violet Extension Cable, 9-inches (229 mm) long, yellow label (cable A)	51202329-710
Violet Extension Cable, 9-inches (229 mm) long, green label (cable B)	51202329-711
<i>Cable pair consisting of one each of the preceding two cables</i>	51202329-712
Violet Extension Cable, 25-inches (635 mm) long, yellow label (cable A)	51202329-714
Violet Extension Cable, 25-inches (635 mm) long, green label (cable B)	51202329-715
<i>Cable pair consisting of one each of the preceding two cables</i>	51202329-716

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Description	Model or Part Number
Violet Extension Cable, 36-inches (1 m) long, yellow label (cable A)	51202329-730
Violet Extension Cable, 36-inches (1 m) long, green label (cable B)	51202329-731
<i>Cable pair consisting of one each of the preceding two cables</i>	<i>51202329-732</i>
Violet Extension Cable, 48-inches (1.2 m) long, yellow label (cable A)	51202329-734
Violet Extension Cable, 48-inches (1.2 m) long, green label (cable B)	51202329-735
<i>Cable pair consisting of one each of the preceding two cables</i>	<i>51202329-736</i>
Violet Tap Expander 1:2, yellow label (cable A)	51202329-810
Violet Tap Expander 1:2, green label (cable B)	51202329-811
<i>Cable pair consisting of one each of the preceding two cables</i>	<i>51202329-812</i>