

Cardinal Health EPCIS Onboarding Guide for DSCSA

Version 4.0

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Version Notes

Version 2.0 – Original

Version 3.0 – Add clarification to EPCList usage, SGLNs, and example changes.

Version 4.0 – Added testing feedback we will provide with each iteration.

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Introduction

The purpose of this document is to provide easy to follow, self-help instructions to enable Trading Partners to successfully adhere to Cardinal Health requirements for serialized EPCIS data exchange for the purposes of November 2019 saleable returns verifications and future DSCSA interoperability requirements in November 2023.

Since 2007 Cardinal Health has been working with various early adopters of serialized EPCIS, initially for proof of concept in readiness for the pre-empted 2015 California serialization law and more recently in preparation for DSCSA. Due to the increased volume of requests and time needed for kick-off calls and follow-up, we have applied our past learnings to develop this guide to simplify the approach, address common questions and concerns, minimize unnecessary meetings and streamline the process.

Should Trading Partners decide to send serialized EPCIS files before November 2023, they are not a replacement for the existing lot-level ASNs being sent today. EPCIS files should be sent in parallel to lot-level ASNs.

Please invest the time to read this document in its entirety. We hope you agree our guide will provide you everything needed, address most if not all your questions, and expedite the testing process.

If you have questions on our approach, please contact drugtracing@cardinalhealth.com.

If you have questions on barcodes, please refer to the HDA guide below and if you still have questions contact barcodes@cardinalhealth.com.

Please check periodically for revisions to this guide at www.cardinalhealth.com/trace in the Manufacturer section.

Important Reference Material

It is our desire to align tightly with GS1 standards and HDA industry guidance for serialization in order to minimize or eliminate any special requirements that manufacturers will need to follow for Cardinal Health. Our hope is that all companies in the supply chain will do the same so that efficiencies are maximized for everyone.

In recognition of that, and so that we don't duplicate guidance content published by those organizations, most of this document contains references to external documents published by FDA, GS1 and HDA.

Document Title
GS1 US Healthcare Implementation Guideline using EPCIS 1.1. Reference this guide to applying GS1 EPCIS 1.1 standards to U.S. Pharmaceutical Supply Chain to support DSCSA.
GS1 US Healthcare Implementation Guideline: Applying GS1 Standards for DSCSA and Traceability . Reference this guide to applying GS1 EPCIS 1.2 standards to U.S. Pharmaceutical Supply Chain to support DSCSA.
H.R. 3024; Drug Quality and Security Act (DQSA), Title II – Drug Supply Chain Security Act (DSCSA) .
HDA Guidelines for Bar Coding in the Pharmaceutical Supply Chain . This guide published by the Healthcare Distribution Alliance provides a comprehensive and succinct list of information needed to understand the data elements at play for DSCSA as well as encode them on products governed under DSCSA.

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What You Need Before You Start

Before contacting Cardinal Health for testing, please ensure you have the following:

1. Ability to send your EPCIS file (1.1 or 1.2) using AS2 protocol.
 - a. We will need your AS2 ID, AS2 URL and AS2 certificate for your non-production and production environments.
 - b. After you provide these, we will provide you the Cardinal Health certificate. Cardinal Health AS2 IDs and URLs are [here](#).
2. Global Location Number (GLN) values that identify your company as the owning party, and possibly other GLN values for each ship-from location depending on your situation. If you have questions on GLNs, please reference the GS1 FAQ guide [here](#).
3. Global Location Number (GLN) values for Cardinal Health. They are located [here](#). Use our corporate GLN (0096295000009) as the sold-to party for all shipments.
4. Cardinal Health requires all vendor and product master data to be specified within the EPCIS file. It is Cardinal Health's interpretation that the master data reside in the electronic file transmission as is done today for lot-level data sent via the ASN. Please refer to our EPCIS 1.1 and 1.2 [examples](#) if there are questions on how to do this.
5. We expect trading partners to verify their EPCIS files for accuracy prior to sending to Cardinal Health.

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Testing Process

Please review the information in this guide in its entirety and confirm you can transmit serialized data via EPCIS over AS2.

Cardinal Health's non-production environment is ready to receive your test files now. There is no need to contact us first. Our goal is to pass 3 distinct test files which are representative of your typical shipments. Once achieved, we will qualify you for production transmissions.

Please note the following:

- If your solution provider already has an AS2 connection with Cardinal Health you can proceed to step 3.
- We cannot accept test data in our production environment. Our EPCIS system is immutable and we cannot remove the data.
- Do not set up automated, recurring non-production transmissions outside the tests mentioned below.
- We reserve the right to cease testing and recommend you solicit independent conformance testing assistance should we encounter an inordinate amount of iterations due to failures.
- Ideally, we would like testing to cover all manufacturer GTINs but we realize this is not pragmatic in many cases. Should we have successful testing but then experience problems in production we may require you to requalify in the test environment. If you rely on several CMOs or have packaging facilities with varying software capabilities or providers, you should consider conducting the test cycle below for each facility.
- Many ask if they can send serialized data from previous shipments. We will accept those, but only for serialized product you can confirm was shipped to Cardinal Health.

Process Steps for Non-Production Testing

1. If you or the 3rd party you're using needs to set up an AS2 connection with Cardinal Health, send an email request to EPCISsupport@cardinalhealth.com and include your AS2 URL, AS2 ID and AS2 certification as described above. Please include your company name in the subject on all correspondence. Within a couple business days Cardinal Health will return our certificate.
2. Once our certificate is received, send a simple text file and confirm you receive an AS2 MDN acknowledgement before moving forward.
3. Once the AS2 connection is confirmed, send your first EPCIS file. This can be a small file if necessary, but it should include all master data as well as conforming to our EPCIS requirements outlined in this guide. Send an email to EPCISsupport@cardinalhealth.com to request the result. **In the email subject, please include company name, lot number and "Test 1"**. If multiple lots, please include one to help us search our repository. Repeat this step until there are no more errors.
 - a. With each iteration we will provide feedback on the following:
 - i. Pass/Fail results
 - ii. Cardinal Health requirements or GS1 EPCIS for Healthcare standards violations
 - iii. Appropriate looking GLNs
 - iv. Hierarchy counts by Lot
4. The second and third test files should be representative of those that would accompany production product shipments. As in the previous step, send an email request for evaluation and designate each with "Test 2" and "Test 3". Repeat this step until there are no more errors.
5. Upon satisfactory testing, Cardinal Health will send you permission to move forward to production and will request your production AS2 URL, AS2 ID and AS2 certificate. Within a couple business days Cardinal Health will return our production certificate.

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6. Once our certificate is received, send a simple text file and confirm you receive an AS2 MDN acknowledgement. Once you confirm the production AS2 connection you can move forward with production files at your own discretion. There is no need to contact us. Our EPCIS support team will respond to failed events and contact you with any issues.

This concludes the testing process.

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EPCIS Event Requirements and Examples

The following requirements include Cardinal Health requirements and those found in the “GS1 US HealthCare Implementation Guidelines” document that we want to underscore. Following this are event examples to illustrate.

- Events must conform to the GS1 EPCIS US Healthcare standard, versions 1.1 or 1.2.
- All trade item master data and company master data are required. This includes readPoint locations.
 - o Locations should be expressed in SGLN URI format. Refer to examples.
- Commission events (Object event, bizStep “commissioning”) are required.
- Aggregation events (Aggregation event, bizStep “packing”) are required.
- Shipping events (Object event, bizStep “shipping”) are required.
 - o In the Shipping event extension, we require owning party source and destination SGLNs. Moreover, you must specify source and destination locations if they are different than the owning party values. Please refer to the Cardinal Health Global Location Numbers section.
 - o Shipping Event bizTransactionList must include PO number. Refer to examples for proper URI format.
 - o Shipping event should contain the outermost container serial numbers only (typically pallets, e.g.).
- Within the document, events must be arranged in the order commission, aggregation, and shipping.
- All serial numbers in the shipping and packing events must be present in commission event.
- The full packaging hierarchy must be expressed in the Aggregation event provided.
- Pallet level aggregation is optional but recommended.
- EPC lists must be used in all events to minimize file size and processing time. Do not send a single EPC for each commission event. Ideally, you should send a single commission event for each lot.
- Our systems strictly enforce GS1 EPCIS chronology sequence standard to be upheld for any single EPC:
 - o For example, for any single EPC, Commission time < Aggregation time < Shipping time;
 - o Another example, Case 123 aggregation as a parent to its children < Case 123 aggregation as a child to a parent pallet;
 - o Any single EPC cannot share the same timestamp in 2 separate events.
- Do not pass custom extensions as they only contribute to file size. Custom extensions unnecessarily add to processing time and will be ignored and all contents within. For example, if Lot and Expiration are passed in a custom extension like “<SAPextension>”, they will be ignored and our system will consider them missing.
- All events are expected in a single file. We cannot manage Commission, Aggregation and Shipping events sent in separate files at different times due to the chronological constraints.
- Serial numbers should be expressed as SGTIN in URI format. Please refer to examples below.
- Avoid splitting the same lot over multiple EPCIS payloads. It is strongly preferred to contain a single lot in a single payload.

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EPCIS 1.1 Example

```
▼<epcis:EPCISDocument xmlns:gs1ushc="http://epcis.gs1us.org/hc/ns" xmlns:epcis="urn:epcglobal:epcis:xsd:1" schemaVersion="1.0"
creationDate="2012-03-25T17:10:16Z">
▼<EPCISBody>
▼<EventList>
▼<ObjectEvent>
▼<eventTime>2012-03-25T17:10:16Z</eventTime>
▼<eventTimeZoneOffset>-05:00</eventTimeZoneOffset>
▼<epcList>
▼<epc>urn:epc:id:sgtin:0355154.057795.40044193797406</epc>
▼<epc>urn:epc:id:sgtin:0355154.057795.40088387102236</epc>
▼<epc>urn:epc:id:sgtin:0355154.057795.40094856568735</epc>
▼<epc>urn:epc:id:sgtin:0355154.057795.40075026686687</epc>
▼<epc>urn:epc:id:sgtin:0355154.357795.40041814445131</epc>
</epcList>
▼<action>ADD</action>
▼<bizStep>urn:epcglobal:cbv:bizstep:commissioning</bizStep>
▼<disposition>urn:epcglobal:cbv:disp:active</disposition>
<!-- readPoint is an optional field -->
▼<readPoint>
▼<id>urn:epc:id:sgln:030001.111116.0</id>
</readPoint>
▼<bizLocation>
▼<id>urn:epc:id:sgln:030001.111116.0</id>
</bizLocation>
▼<extension>
▼<ilmd>
▼<!--
Trade item master data is optional in the Healthcare specification
however Cardinal Health requires it. If tradeItemMasterData tag
is present then ALL fields related to master data below are required.
-->
▼<gs1ushc:tradeItemMasterData>
▼<gs1ushc:additionalTradeItemIdentification>
▼<gs1ushc:additionalTradeItemIdentificationValue>5515457795</gs1ushc:additionalTradeItemIdentificationValue>
▼<gs1ushc:additionalTradeItemIdentificationType>NDC442</gs1ushc:additionalTradeItemIdentificationType>
</gs1ushc:additionalTradeItemIdentification>
▼<gs1ushc:drugName>Epcistra new</gs1ushc:drugName>
▼<gs1ushc:manufacturer>GS1 Pharma LLC</gs1ushc:manufacturer>
▼<gs1ushc:dosageForm>PILL</gs1ushc:dosageForm>
▼<gs1ushc:strength>100mg</gs1ushc:strength>
▼<gs1ushc:containerSize>500</gs1ushc:containerSize>
</gs1ushc:tradeItemMasterData>
▼<gs1ushc:lotNumber>PR123</gs1ushc:lotNumber>
▼<gs1ushc:itemExpirationDate>2015-03-15</gs1ushc:itemExpirationDate>
</ilmd>
</extension>
</ObjectEvent>
▼<AggregationEvent>
▼<eventTime>2012-03-25T17:10:17Z</eventTime>
▼<eventTimeZoneOffset>-05:00</eventTimeZoneOffset>
▼<parentID>urn:epc:id:sgtin:0355154.357795.40041814445131</parentID>
▼<childEPCs>
▼<epc>urn:epc:id:sgtin:0355154.057795.40044193797406</epc>
▼<epc>urn:epc:id:sgtin:0355154.057795.40088387102236</epc>
▼<epc>urn:epc:id:sgtin:0355154.057795.40094856568735</epc>
▼<epc>urn:epc:id:sgtin:0355154.057795.40075026686687</epc>
</childEPCs>
▼<action>ADD</action>
▼<bizStep>urn:epcglobal:cbv:bizstep:packing</bizStep>
▼<disposition>urn:epcglobal:cbv:disp:in_progress</disposition>
<!-- readPoint is optional -->
▼<readPoint>
▼<id>urn:epc:id:sgln:030001.111116.0</id>
</readPoint>
▼<bizLocation>
▼<id>urn:epc:id:sgln:030001.111116.0</id>
</bizLocation>
</AggregationEvent>
▼<ObjectEvent>
▼<eventTime>2012-03-25T17:10:18Z</eventTime>
▼<eventTimeZoneOffset>-05:00</eventTimeZoneOffset>
▼<!--
epcList should have epc of the outermost package of shipment
-->
▼<epcList>
▼<epc>urn:epc:id:sgtin:0355154.357795.40041814445131</epc>
</epcList>
▼<action>OBSERVE</action>
▼<bizStep>urn:epcglobal:cbv:bizstep:shipping</bizStep>
```

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```
<disposition>urn:epcglobal:cbv:disp:in_transit</disposition>
<!-- readPoint is optional -->
▼<readPoint>
  <id>urn:epc:id:sgln:030001.111116.0</id>
</readPoint>
▼<!--
  bizTransactionList is optional per the Healthcare guide however Cardinal Health requires
  the Purchase Order. All other types are optional.
-->
▼<bizTransactionList>
  <bizTransaction type="urn:epcglobal:cbv:btt:inv">urn:epcglobal:cbv:bt:0300011111116:A123</bizTransaction>
  <bizTransaction type="urn:epcglobal:cbv:btt:po">urn:epcglobal:cbv:bt:0399999999991:XYZ567</bizTransaction>
</bizTransactionList>
▼<extension>
  ▼<sourceList>
    <source type="urn:epcglobal:cbv:sdt:owning_party">urn:epc:id:sgln:030001.111116.0</source>
    ▼<!--
      The sourceList location is optional. Use this only when the ship-from GLN or SGLN
      location is different than the party transferring ownership.
    -->
    <source type="urn:epcglobal:cbv:sdt:location">urn:epc:id:sgln:030001.111117.0</source>
  </sourceList>
  ▼<destinationList>
    <destination type="urn:epcglobal:cbv:sdt:owning_party">urn:epc:id:sgln:049999.999999.0</destination>
    ▼<!--
      The destinationList location is optional. Use when the ship-to GLN or SGLN
      location is different than the party taking ownership.
    -->
    <destination type="urn:epcglobal:cbv:sdt:location">urn:epc:id:sgln:030001.111255.0</destination>
  </destinationList>
</extension>
▼<!--
  companyMasterData is optional in the Healthcare specification however Cardinal Health requires it.
  If companyMasterData tag present then ALL fields related to master data below are required.
-->
▼<gs1ushc:companyMasterData>
  ▼<gs1ushc:companyMasterDataRecord>
    <gs1ushc:identifier>urn:epc:id:sgln:030001.111116.0</gs1ushc:identifier>
    <gs1ushc:companyName>Test Source company</gs1ushc:companyName>
    <gs1ushc:street1>1295 S George Ave</gs1ushc:street1>
    <gs1ushc:street2>Room 378</gs1ushc:street2>
    <gs1ushc:city>Washington</gs1ushc:city>
    <gs1ushc:stateOrRegion>DC</gs1ushc:stateOrRegion>
    <gs1ushc:postalCode>12345-6789</gs1ushc:postalCode>
    <gs1ushc:country>US</gs1ushc:country>
  </gs1ushc:companyMasterDataRecord>
  ▼<gs1ushc:companyMasterDataRecord>
    <gs1ushc:identifier>urn:epc:id:sgln:049999.999999.0</gs1ushc:identifier>
    <gs1ushc:companyName>Test Destination company</gs1ushc:companyName>
    <gs1ushc:street1>230 Park Ave S</gs1ushc:street1>
    <gs1ushc:city>New York</gs1ushc:city>
    <gs1ushc:stateOrRegion>NY</gs1ushc:stateOrRegion>
    <gs1ushc:postalCode>10003-1502</gs1ushc:postalCode>
    <gs1ushc:country>US</gs1ushc:country>
  </gs1ushc:companyMasterDataRecord>
  ▼<gs1ushc:companyMasterDataRecord>
    <gs1ushc:identifier>urn:epc:id:sgln:030001.111117.0</gs1ushc:identifier>
    <gs1ushc:companyName>Test Source company</gs1ushc:companyName>
    <gs1ushc:street1>1296 S George Ave</gs1ushc:street1>
    <gs1ushc:street2>Room 379</gs1ushc:street2>
    <gs1ushc:city>Washington</gs1ushc:city>
    <gs1ushc:stateOrRegion>DC</gs1ushc:stateOrRegion>
    <gs1ushc:postalCode>12345-6789</gs1ushc:postalCode>
    <gs1ushc:country>US</gs1ushc:country>
  </gs1ushc:companyMasterDataRecord>
  ▼<gs1ushc:companyMasterDataRecord>
    <gs1ushc:identifier>urn:epc:id:sgln:030001.111255.0</gs1ushc:identifier>
    <gs1ushc:companyName>Test Destination company</gs1ushc:companyName>
    <gs1ushc:street1>230 Park Ave N</gs1ushc:street1>
    <gs1ushc:city>New York</gs1ushc:city>
    <gs1ushc:stateOrRegion>NY</gs1ushc:stateOrRegion>
    <gs1ushc:postalCode>10003-1502</gs1ushc:postalCode>
    <gs1ushc:country>US</gs1ushc:country>
  </gs1ushc:companyMasterDataRecord>
</gs1ushc:companyMasterData>
</ObjectEvent>
</EventList>
</EPCISBody>
</epcis:EPCISDocument>
```

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EPCIS 1.2 Example

```
▼<epcis:EPCISDocument xmlns:cbvmda="urn:epcglobal:cbv:mda" xmlns:epcis="urn:epcglobal:epcis:xsd:1"
xmlns:sbdh="http://www.unece.org/cefact/namespaces/StandardBusinessDocumentHeader" schemaVersion="1.2" creationDate="2012-03-
25T17:10:16Z">
  ▼<!--
    EPCISHeader is optional however if EPCISHeader is present then it should have all the elements of StandardBusinessDocumentHeader
  -->
  ▼<EPCISHeader>
    ▼<sbdh:StandardBusinessDocumentHeader>
      <sbdh:HeaderVersion>1.0</sbdh:HeaderVersion>
      ▼<sbdh:Sender>
        <sbdh:Identifier Authority="SGLN">urn:epc:id:sgln:030001.111124.0</sbdh:Identifier>
      </sbdh:Sender>
      ▼<sbdh:Receiver>
        <sbdh:Identifier Authority="SGLN">urn:epc:id:sgln:039999.999929.0</sbdh:Identifier>
      </sbdh:Receiver>
      ▼<sbdh:DocumentIdentification>
        <sbdh:Standard>EPCGlobal</sbdh:Standard>
        <sbdh:TypeVersion>1.0</sbdh:TypeVersion>
        <sbdh:InstanceIdentifier>urn:uuid:8bcd79de-c9fc-49a9-ab69-52890a8a0f04</sbdh:InstanceIdentifier>
        <sbdh:Type>Events</sbdh:Type>
        <sbdh:CreationDateAndTime>2018-01-15T08:36:05.732000-08:00</sbdh:CreationDateAndTime>
      </sbdh:DocumentIdentification>
    </sbdh:StandardBusinessDocumentHeader>
  ▼<!--
    EPCISMasterData extension is optional in the Healthcare specification however Cardinal Health requires it.
    If EPCISMasterData tag present then ALL fields related to master data below are required.
  -->
  ▼<extension>
    ▼<EPCISMasterData>
      ▼<VocabularyList>
        ▼<Vocabulary type="urn:epcglobal:epcis:vtype:EPCClass">
          ▼<VocabularyElementList>
            ▼<VocabularyElement id="urn:epc:idpat:sgtin:0355154.094495.*">
              <attribute id="urn:epcglobal:cbv:mda#additionalTradeItemIdentification">05515494495</attribute>
              <attribute id="urn:epcglobal:cbv:mda#additionalTradeItemIdentificationTypeCode">FDA_NDC_11</attribute>
              <attribute id="urn:epcglobal:cbv:mda#regulatedProductName">EpcistraITEM</attribute>
              <attribute id="urn:epcglobal:cbv:mda#manufacturerOfTradeItemPartyName">GS1 Pharma LLC</attribute>
              <attribute id="urn:epcglobal:cbv:mda#dosageFormType">PILL</attribute>
              <attribute id="urn:epcglobal:cbv:mda#strengthDescription">100mg</attribute>
              <attribute id="urn:epcglobal:cbv:mda#netContentDescription">500 pills</attribute>
            </VocabularyElement>
            ▼<VocabularyElement id="urn:epc:idpat:sgtin:0355154.394495.*">
              <attribute id="urn:epcglobal:cbv:mda#additionalTradeItemIdentification">05515494495</attribute>
              <attribute id="urn:epcglobal:cbv:mda#additionalTradeItemIdentificationTypeCode">FDA_NDC_11</attribute>
              <attribute id="urn:epcglobal:cbv:mda#regulatedProductName">EpcistraCASE</attribute>
              <attribute id="urn:epcglobal:cbv:mda#manufacturerOfTradeItemPartyName">GS1 Pharma LLC</attribute>
              <attribute id="urn:epcglobal:cbv:mda#dosageFormType">PILL</attribute>
              <attribute id="urn:epcglobal:cbv:mda#strengthDescription">100mg</attribute>
              <attribute id="urn:epcglobal:cbv:mda#netContentDescription">500 pills</attribute>
            </VocabularyElement>
          </VocabularyElementList>
        </Vocabulary>
        ▼<Vocabulary type="urn:epcglobal:epcis:vtype:Location">
          ▼<VocabularyElementList>
            ▼<VocabularyElement id="urn:epc:id:sgln:030001.111124.0">
              <attribute id="urn:epcglobal:cbv:mda#name">GS1 Pharma LLC</attribute>
              <attribute id="urn:epcglobal:cbv:mda#streetAddressOne">1295 S George Ave</attribute>
              <attribute id="urn:epcglobal:cbv:mda#streetAddressTwo">Room 378</attribute>
              <attribute id="urn:epcglobal:cbv:mda#city">Washington</attribute>
              <attribute id="urn:epcglobal:cbv:mda#state">DC</attribute>
              <attribute id="urn:epcglobal:cbv:mda#postalCode">12345-6789</attribute>
              <attribute id="urn:epcglobal:cbv:mda#countryCode">US</attribute>
            </VocabularyElement>
            ▼<VocabularyElement id="urn:epc:id:sgln:030001.111125.0">
              <attribute id="urn:epcglobal:cbv:mda#name">GS1 Pharma LLC</attribute>
              <attribute id="urn:epcglobal:cbv:mda#streetAddressOne">1299 S George Ave</attribute>
              <attribute id="urn:epcglobal:cbv:mda#streetAddressTwo">Room 378</attribute>
              <attribute id="urn:epcglobal:cbv:mda#city">Washington</attribute>
              <attribute id="urn:epcglobal:cbv:mda#state">DC</attribute>
              <attribute id="urn:epcglobal:cbv:mda#postalCode">12345-6789</attribute>
              <attribute id="urn:epcglobal:cbv:mda#countryCode">US</attribute>
            </VocabularyElement>
            ▼<VocabularyElement id="urn:epc:id:sgln:039999.999929.0">
              <attribute id="urn:epcglobal:cbv:mda#name">GS1 Drug Distro LLC</attribute>
              <attribute id="urn:epcglobal:cbv:mda#streetAddressOne">230 Park Ave S</attribute>
              <attribute id="urn:epcglobal:cbv:mda#streetAddressTwo">Room 378</attribute>
              <attribute id="urn:epcglobal:cbv:mda#city">New York</attribute>
              <attribute id="urn:epcglobal:cbv:mda#state">NY</attribute>
              <attribute id="urn:epcglobal:cbv:mda#postalCode">10003-1502</attribute>
              <attribute id="urn:epcglobal:cbv:mda#countryCode">US</attribute>
            </VocabularyElement>
          </VocabularyElementList>
        </Vocabulary>
      </EPCISMasterData>
    </extension>
  </epcis:EPCISDocument>
```

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```
▼<VocabularyElement id="urn:epc:id:sgln:039999.999928.0">
  <attribute id="urn:epcglobal:cbv:mda#name">GS1 Drug Distro LLC</attribute>
  <attribute id="urn:epcglobal:cbv:mda#streetAddressOne">231 Park Ave S</attribute>
  <attribute id="urn:epcglobal:cbv:mda#streetAddressTwo">Room 378</attribute>
  <attribute id="urn:epcglobal:cbv:mda#city">New York</attribute>
  <attribute id="urn:epcglobal:cbv:mda#state">NY</attribute>
  <attribute id="urn:epcglobal:cbv:mda#postalCode">10003-1502</attribute>
  <attribute id="urn:epcglobal:cbv:mda#countryCode">US</attribute>
</VocabularyElement>
</VocabularyElementList>
</Vocabulary>
</VocabularyList>
</EPCISMasterData>
</extension>
</EPCISHeader>
▼<EPCISBody>
▼<EventList>
▼<ObjectEvent>
  <eventTime>2012-03-25T17:10:16Z</eventTime>
  <eventTimeZoneOffset>-05:00</eventTimeZoneOffset>
  ▼<epcList>
    <epc>urn:epc:id:sgtin:0355154.094495.40095247428196</epc>
    <epc>urn:epc:id:sgtin:0355154.094495.40023811077021</epc>
    <epc>urn:epc:id:sgtin:0355154.094495.40075808151866</epc>
    <epc>urn:epc:id:sgtin:0355154.094495.40047623652721</epc>
    <epc>urn:epc:id:sgtin:0355154.394495.40072894693743</epc>
  </epcList>
  <action>ADD</action>
  <bizStep>urn:epcglobal:cbv:bizstep:commissioning</bizStep>
  <disposition>urn:epcglobal:cbv:disp:active</disposition>
  <!-- readPoint is optional -->
  ▼<readPoint>
    <id>urn:epc:id:sgln:030001.111124.0</id>
  </readPoint>
  ▼<bizLocation>
    <id>urn:epc:id:sgln:030001.111124.0</id>
  </bizLocation>
  ▼<extension>
    ▼<ilmd>
      <cbvmda:lotNumber>PR456</cbvmda:lotNumber>
      <cbvmda:itemExpirationDate>2015-03-15</cbvmda:itemExpirationDate>
    </ilmd>
  </extension>
</ObjectEvent>
▼<AggregationEvent>
  <eventTime>2012-03-25T17:10:17Z</eventTime>
  <eventTimeZoneOffset>-05:00</eventTimeZoneOffset>
  <parentID>urn:epc:id:sgtin:0355154.394495.40072894693743</parentID>
  ▼<childEPCs>
    <epc>urn:epc:id:sgtin:0355154.094495.40095247428196</epc>
    <epc>urn:epc:id:sgtin:0355154.094495.40023811077021</epc>
    <epc>urn:epc:id:sgtin:0355154.094495.40075808151866</epc>
    <epc>urn:epc:id:sgtin:0355154.094495.40047623652721</epc>
  </childEPCs>
  <action>ADD</action>
  <bizStep>urn:epcglobal:cbv:bizstep:packing</bizStep>
  <disposition>urn:epcglobal:cbv:disp:in_progress</disposition>
  <!-- readPoint is optional -->
  ▼<readPoint>
    <id>urn:epc:id:sgln:030001.111124.0</id>
  </readPoint>
  ▼<bizLocation>
    <id>urn:epc:id:sgln:030001.111124.0</id>
  </bizLocation>
</AggregationEvent>
```

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```
▼<ObjectEvent>
  <eventTime>2012-03-27T17:10:18Z</eventTime>
  <eventTimeZoneOffset>-05:00</eventTimeZoneOffset>
  ▼<!--
    This should be the serial numbers of outermost package of shipment
  -->
  ▼<epcList>
    <epc>urn:epc:id:sgtin:0355154.394495.40072894693743</epc>
  </epcList>
  <action>OBSERVE</action>
  <bizStep>urn:epcglobal:cbv:bizstep:shipping</bizStep>
  <disposition>urn:epcglobal:cbv:disp:in_transit</disposition>
  <!-- readPoint is optional -->
  ▼<readPoint>
    <id>urn:epc:id:sgln:030001.111124.0</id>
  </readPoint>
  ▼<!--
    bizTransactionList is optional as per the Healthcare specification however Cardinal Health requires
    the Purchase Order. All other types are optional.
  -->
  ▼<bizTransactionList>
    <bizTransaction type="urn:epcglobal:cbv:btt:inv">urn:epcglobal:cbv:bt:030001111116:A123</bizTransaction>
    <bizTransaction type="urn:epcglobal:cbv:btt:po">urn:epcglobal:cbv:bt:0399999999991:XYZ567</bizTransaction>
  </bizTransactionList>
  ▼<extension>
    ▼<sourceList>
      <source type="urn:epcglobal:cbv:sdt:owning_party">urn:epc:id:sgln:030001.111124.0</source>
      ▼<!--
        The sourcelist location is optional. Use this only when the ship-from GLN or SGLN
        location is different than the party transferring ownership.
      -->
      <source type="urn:epcglobal:cbv:sdt:location">urn:epc:id:sgln:030001.111125.0</source>
    </sourceList>
    ▼<destinationList>
      <destination type="urn:epcglobal:cbv:sdt:owning_party">urn:epc:id:sgln:039999.999929.0</destination>
      ▼<!--
        The destinationList location is optional. Use when the ship-to GLN or SGLN
        location is different than the party taking ownership.
      -->
      <destination type="urn:epcglobal:cbv:sdt:location">urn:epc:id:sgln:039999.999928.0</destination>
    </destinationList>
  </extension>
</ObjectEvent>
</EventList>
</EPCISBody>
</epcis:EPCISDocument>
```

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EPCIS Event Exchange

Cardinal Health AS2 Profile Information for EPCIS Event Files

This profile provides the URL and server IP addresses for access through the firewall into Cardinal Health's EPCIS Event Community

Test Environment:

AS2 ID: CARDINALEPCISTEST

AS2 URL: <http://stgedigateway.cardinalhealth.com:4080/exchange/CARDINALEPCISTEST>

Production Environment:

AS2 ID: CARDINALEPCIS

AS2 URL: <http://edigateway.cardinalhealth.com:4080/exchange/CARDINALEPCIS>

- To transact, we will need your AS2 ID, AS2 URL and AS2 certificate for any production and non-production source from which you will send your EPCIS.
- If you need an AS2 certificate from Cardinal Health, please request it from the email address below. The same AS2 certificate will work for both production and non-production URLs above.
- Many, if not most AS2 solutions automatically request MDNs (acknowledgments) for file transfers by default. Cardinal Health will send an MDN for your EPCIS transmission by default.
- Please send the requirements above to EPCISsupport@cardinalhealth.com.

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Cardinal Health Global Location Numbers

The following data is required for Cardinal Health to receive EPCIS events.

Owning party: GLN, SGLN, Company Prefix, Business Name, Address Line 1, Address Line 2, City, State/Territory and Zip Code.

Shipping party (if different from owning party): GLN, SGLN, Company Prefix, Business Name, Address Line 1, Address Line 2, City, State/Territory and Zip Code. The GLN should be used for the “shipped from” or source list location.

Owning party is mandatory both for source and destination per the EPCIS Healthcare standard. If the situation requires, distinguish the source owning party, destination owning party, source location, and destination location. (See table below)

Tag	Type	What is it?	When to use it?
<source>	type="urn:epcglobal:cbv:sdt:owning_party"	This is the GLN or SGLN of the owning party transferring the product.	Always
<source>	type="urn:epcglobal:cbv:sdt:location"	This is the GLN or SGLN of the ship-from location.	Use when the ship-from GLN or SGLN location is different than the party transferring ownership.
<destination>	type="urn:epcglobal:cbv:sdt:owning_party"	This is the GLN or SGLN of the transfer-to party taking ownership of the product.	Always
<destination>	type="urn:epcglobal:cbv:sdt:location"	This is the GLN or SGLN of the ship-to location.	Use when the ship-to GLN or SGLN location is different than the party taking ownership.

The table below includes the GLN information for Cardinal Health owning party and ship-to locations.

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Use the first GLN (0096295000009) as the sold-to party for all shipments.

Street	City	St	Zip	Company Prefix	GLN	SGLN
7000 Cardinal Pl	Dublin	OH	43017	0096295	0096295000009	urn:epc:id:sgln:0096295.00000.0
5995 Commerce Center Road	Groveport	OH	43125	0096295	0096295000993	urn:epc:id:sgln:0096295.00099.0
3238 Dwight Road	Elk Grove	CA	95758	0096295	0096295000344	urn:epc:id:sgln:0096295.00034.0
4875 Florence Street	Denver	CO	80238	0096295	0096295002980	urn:epc:id:sgln:0096295.00298.0
6012 Molloy Road	Syracuse	NY	13211	0096295	0096295003055	urn:epc:id:sgln:0096295.00305.0
2045 Interstate Dr	Lakeland	FL	33805	0096295	0096295002904	urn:epc:id:sgln:0096295.00290.0
851 Henrietta Creek Road	Roanoke	TX	76262	0096295	0096295003093	urn:epc:id:sgln:0096295.00309.0
2353 Prospect Drive	Aurora	IL	60502	0096295	0096295002911	urn:epc:id:sgln:0096295.00291.0
11 Centennial Drive	Peabody	MA	1960	0096295	0096295002843	urn:epc:id:sgln:0096295.00284.0
4 Cardinal Health Court	Greensboro	NC	27407	0096295	0096295002973	urn:epc:id:sgln:0096295.00297.0
13651 Dublin Court	Stafford	TX	77477	0096295	0096295002874	urn:epc:id:sgln:0096295.00287.0
2901 Enloe Street	Hudson	WI	54016	0096295	0096295002959	urn:epc:id:sgln:0096295.00295.0
1240 Gluckstadt Road	Madison	MS	39110	0096295	0096295002867	urn:epc:id:sgln:0096295.00286.0
7601 NE Gardner Ave	Kansas City	MO	64120	0096295	0096295003079	urn:epc:id:sgln:0096295.00307.0
2512 Westcott Blvd	Knoxville	TN	37931	0096295	0096295002928	urn:epc:id:sgln:0096295.00292.0
600 North 83rd Avenue	Tolleson	AZ	85353	0096295	0096295003048	urn:epc:id:sgln:0096295.00304.0
2840 Elm Point Industrial Drive	St. Charles	MO	63301	0096295	0096295002942	urn:epc:id:sgln:0096295.00294.0
955 West 3100 South	S. Salt Lake City	UT	84119	0096295	0096295003116	urn:epc:id:sgln:0096295.00311.0
801 C. Street	Auburn	WA	98001	0096295	0096295003086	urn:epc:id:sgln:0096295.00308.0
1120 Commerce Boulevard	Swedesboro	NJ	8085	0096295	0096295002850	urn:epc:id:sgln:0096295.00285.0
27680 Avenue Mentry	Valencia	CA	91355	0096295	0096295002935	urn:epc:id:sgln:0096295.00293.0
71 MI-Acres Drive	Wheeling	WV	26003	0096295	0096295003062	urn:epc:id:sgln:0096295.00306.0
3540 E Pike	Zanesville	OH	43701	0096295	0096295003192	urn:epc:id:sgln:0096295.00319.0
850 Air Park Drive	Zanesville	OH	43701	0096295	0096295003208	urn:epc:id:sgln:0096295.00320.0
152-35 10th Avenue	Whitestone	NY	11357	0096295	0096295000276	urn:epc:id:sgln:0096295.00027.0
5960 E. Shelby Dr, Ste 100	Memphis	TN	38141	0096295	0096295004199	urn:epc:id:sgln:0096295.00419.0
15 Ingram Blvd.	La Vergne	TN	37086	0096295	0096295003369	urn:epc:id:sgln:0096295.00336.0
6640 Echo Avenue	Reno	NV	89506	0096295	0096295003406	urn:epc:id:sgln:0096295.00340.0
501 Mason Road	LaVergne	TN	37086	0096295	0096295004038	urn:epc:id:sgln:0096295.00403.0
International Trade Center State Rd #165, K.M. 2.4	Guaynabo	PR	00965	0096295	0096295003888	urn:epc:id:sgln:0096295.00388.0

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