IBM CICS Transaction Server for z/OS, V5.3 is further enhanced with the continuous delivery model and the IBM CICS Transaction Server for z/OS, V5.4 open beta offering is updated

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At a glance

IBM CICS(R) Transaction Server for z/OS(R) (CICS TS) is a powerful, mixed-language application server that is capable of processing hundreds of thousands of business transactions every second.

IBM is committed to a continuous delivery roadmap that delivers regular capability updates for current releases of CICS TS. The following key features are part of this continuous delivery release of CICS TS V5.3:

• Enhancements to Java(TM) Enterprise Edition (Java EE) messaging in CICS Liberty JVM server
• Support for IBM MQ as a JMS provider in CICS Liberty JVM server
• Support for new deployment tasks in DFHDPLOY
• CICS system autoinstall option for Language Environment(R) to simplify IBM z(TM)/OS upgrades
• New and enhanced CICS Explorer(R) capabilities

Additionally, the CICS TS V5.4 open beta offering is refreshed to add major new and enhanced capabilities in the following areas:

• Enhanced CICS asynchronous API
• Flow control at start-up and shutdown
• CICSplex(R) System Manager (SM) integration and resiliency

The CICS TS V5.4 open beta offering is available now for clients to provide further feedback on potential future capabilities.

The CICS provisioning toolkit, which was introduced in an earlier CICS TS V5.4 open beta offering, is enhanced and extended. It is now generally available as the IBM z/OS Provisioning Toolkit, V1.0.

Overview

CICS TS for z/OS, V5.3 continuous delivery
CICS TS V5.3 is updated to deliver a number of new and enhanced capabilities that are delivered by using the standard CICS TS service channel and continuous delivery model.

**Enhancements to Java EE messaging in the CICS Liberty JVM server**

For a complete messaging solution, this update to CICS TS V5.3 supports the latest JMS 2.0 and MDB 3.2 APIs, together with the WebSphere® Liberty embedded JMS provider in the Liberty JVM server.

**Support for IBM MQ as a JMS provider in the CICS Liberty JVM server**

IBM MQ for z/OS (MQ) V9.0.1 resource adapter is now supported as a JMS provider in the CICS Liberty JVM server. The MQ JMS provider can connect by using the TCP/IP-based client mode transport with MQ V7.1 on any platform that is supported by IBM MQ, or by using cross-memory-based bindings mode to IBM MQ on the same logical partition (LPAR).

**Support for new deployment tasks in DFHDPLOY**

DFHDPLOY is enhanced to perform PIPELINE SCAN, PROGRAM NEWCOPY, and PROGRAM PHASEIN. This enables automation to be written to update these resources without requiring the direct use of the CICSPlex System Manager (SM) API.

**CICS system autoinstall for Language Environment to simplify z/OS upgrades**

CICS TS V5.3 now uses system autoinstall to install program definitions for Language Environment as required. This removes the need to maintain definitions in the CICS TS system definition (CSD) group CEE and dramatically simplifies the upgrade process when upgrading z/OS releases because the CEE group on all CICS CSDs does not have to be refreshed.

**New and enhanced CICS Explorer capabilities**

- CICS Explorer V5.3 is enhanced to import view configurations from a web server.
- zFS paths within CICS Explorer resource tables and editors are now rendered as hyperlinks. This enables rapid navigation to the underlying file or path.
- When installing a bundle definition, the installation dialog can be set to verify that the bundle has enabled fully. This avoids the need to switch to the bundle operations view and perform a refresh manually.

**CICS TS V5.4 open beta offering update**

The CICS TS V5.4 open beta offering delivers updated capability to allow clients to assess and provide feedback on further, potential future CICS TS capabilities. New and enhanced features of this latest open beta offering include:

- Enhanced CICS asynchronous API
- Flow control at start-up and shutdown
- CICSPlex SM integration and resiliency

**Enhanced CICS asynchronous API**

The EXEC CICS FETCH ANY command allows a parent transaction to receive a response from any completed child transaction, rather than waiting for a specific child to complete. In addition, both EXEC CICS FETCH commands now have non-suspending wait options, and also timeout controls.

Statistics for asynchronous services are now available to enable workload analysis and monitoring.

Flow control is enabled for asynchronous transactions to ensure stability for high and mixed workloads.
Flow control at start-up and shutdown

Flow control capability addresses the flow of work into a region at startup and shutdown. It now utilizes the z/OS WLM Health API so that Sysplex Distributor flows work gradually to a CICS region at CICS initialization. This helps to avoid problems whereby work arrives in a region before the region is truly ready to process it. The controlled shutdown of a region is also enhanced.

CICSPlex SM integration and resiliency

CICSPlex SM management tasks within a managed CICS region now run as system tasks. This removes the CICSPlex SM tasks from user task views and avoids problems caused by the inadvertent purging of these tasks.

Availability of the CICS TS V5.4 open beta offering

The CICS TS V5.4 open beta offering is available for clients who want to explore potential new CICS capability and assess the value to their business. It can be downloaded free, directly from the IBM CICS open beta website.

IBM z/OS Provisioning Toolkit

The CICS provisioning toolkit, which was introduced in an earlier CICS TS V5.4 open beta offering, is enhanced and made generally available as the IBM z/OS Provisioning Toolkit, V1.0. It is fully supported by IBM and delivers a simple command line utility for the rapid provisioning of development environments. It is available now, direct from IBM, to existing clients of IBM z/OS V2.1, or later, at no additional charge.

Key prerequisites

**CICS TS V5.3 (includes CICS TS Value Unit Edition V5.3 and CICS TS Developer Trial V5.3)**

Minimum required hardware and software levels include:

- IBM z Systems™ z9™ or subsequent 64-bit z/Architecture® processors
- z/OS V1.13 (5694-A01) operating system, with APAR OA38409
- IBM 64-bit SDK for z/OS, Java Technology Edition, V7.0 SR1

**CICS TS V5.4 open beta offering**

Minimum required hardware and software levels include:

- z Systems™ z10™ or subsequent 64-bit z/Architecture processors
- z/OS V2.1 (5650-ZOS) operating system
- IBM 64-bit SDK for z/OS, Java Technology Edition, V7.0 SR1

Planned availability date

- The majority of CICS TS V5.3 continuous delivery enhancements that are presented in this announcement are available on January 10, 2017. The remainder of the continuous delivery enhancements will be available no later than March 31, 2017.
- IBM CICS TS V5.4 open beta offering is available on January 10, 2017.

Description

**CICS TS V5.3 update by using continuous delivery**
CICS TS for z/OS, V5.3 was generally available in December 2015, enhanced again in July 2016, and in October 2016, by using a continuous delivery model. With this release, CICS TS V5.3 is updated to deliver a number of new and enhanced capabilities that are delivered by using the standard CICS TS service channel and the continuous delivery model.

1 Details of CICS TS V5.3 and related software announcements for continuous delivery and general availability, containing ordering information, are available in the Reference information section.

Enhancements to Java EE messaging in the CICS Liberty JVM server

The WebSphere Liberty support for Java EE includes the ability for applications to communicate by using asynchronous messages. The Java JMS API enables applications to produce and consume messages, and JMS providers implement the JMS interfaces together with administrative and control features. The JMS API is commonly used by MDB as part of the Enterprise JavaBeans™ (EJB) specification to allow messages to be processed by Java EE components.

For a complete messaging solution, CICS TS V5.3 now supports the latest JMS 2.0 and MDB 3.2 APIs, together with the Liberty embedded JMS provider in the CICS Liberty JVM server.

Support for IBM MQ as a JMS provider in the CICS Liberty JVM server

IBM MQ provides robust, secure, and scalable enterprise messaging for connecting applications, systems, and services on-premise, in the cloud, or in hybrid environments. The MQ V9.0.1 resource adapter is now supported as a JMS provider in the CICS Liberty JVM server. The MQ JMS provider connects by using the TCP/IP-based client mode transport with MQ V7.1, or later, on the same LPAR, on another LPAR, or any platform that is supported by MQ.

Optionally, when using the CICS standard-mode Liberty and the CICS and MQ servers are located on the same LPAR, the MQ JMS provider can connect using the cross-memory based bindings mode transport.

2 The MQ JMS provider, when used in the CICS Liberty JVM server, connects directly to the MQ server and is independent to the CICS-MQ adapter.

Support for new deployment tasks in DFHDPROY

DFHDPROY is a batch utility that was introduced in CICS TS V5.3 to support the automated deployment and undeployment of CICS bundles, Java applications within CICS bundles, and CICS applications. This DFHDPROY utility is now enhanced to enable the update of the non-bundle-related PIPELINE and PROGRAM resources.

DFHDPROY is enhanced to perform PIPELINE SCAN, PROGRAM NEWCOPY and PROGRAM PHASEIN. This enables automation to be written to update these resources without requiring the direct use of the CICSPlex SM API. These operations can now be performed using a simple batch script.

CICS system autoinstall for Language Environment to simplify z/OS upgrades

CICS TS V5.3 is enhanced to use system autoinstall to install program definitions for Language Environment as required. This removes the need to maintain definitions in the CICS CSD CEE group. An upgrade to the CSD is required to remove the CEE group from DFHLIST and to define a new group DFHLE, which contains four definitions for the CLER transaction. Any user-defined lists should add the DFHLE group and remove the CEE group.

By installing the program definitions for Language Environment automatically, only those programs that are used will have their definitions installed. This drastically reduces the number of installed definitions and simplifies the upgrade process when...
upgrading z/OS releases, because the CEE group on all CICS CSDs does not have to be refreshed.

This capability was originally introduced in the CICS TS V5.4 open beta offering. It is now enhanced and made available on CICS TS V5.3 using continuous delivery.

**New and enhanced CICS Explorer capabilities**

In addition to the previously available capability to import files containing view configurations, view configurations can now be added from a central Web server.

zFS paths within CICS Explorer V5.3 resource tables and editors are now rendered as hyperlinks. This enables rapid navigation to the underlying file or path.

When installing a bundle definition, the installation dialog can now be set to verify that the bundle has enabled fully. This avoids the need to switch to the bundle operations view and refresh manually.

CICS Explorer V5.3 views are updated to show information about local shared resources pools and buffer usage. These Local Shared Resource (LSR) Pools and LSR Pool Buffers views are located within the Files menu, under Operations.

In support of the Link to Liberty capability provided in an earlier continuous delivery release of CICS TS V5.3, a Link to Liberty sample is included with this release of CICS Explorer V5.3.

The following table provides details on the new capabilities that are made available:

<table>
<thead>
<tr>
<th>Capability</th>
<th>Availability method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhancements to Java EE messaging in the CICS Liberty JVM server</td>
<td>Use CICS TS V5.3 APAR PI67640 and APAR PI58375.</td>
</tr>
<tr>
<td>Support for IBM MQ as a JMS provider in the CICS Liberty JVM server</td>
<td>Use IBM MQ Version 9.0.1 resource adapter, available from IBM Fix Central. The resource adapter can connect to MQ V7.1, or later, servers.</td>
</tr>
<tr>
<td>Support for new deployment tasks in DFHDPLOY</td>
<td>For CICS TS V5.1, CICS TS V5.2, and CICS TS V5.3 use APAR PI72104.</td>
</tr>
<tr>
<td>CICS system autoinstall for Language Environment, to simplify z/OS upgrades</td>
<td>For CICS TS V5.3, use APAR PI60389. For CICS TS V5.1 and CICS TS V5.2 use APAR PI60388 and APAR PI73184.</td>
</tr>
<tr>
<td>New and enhanced CICS Explorer capabilities</td>
<td>CICS Explorer V5.3.0.9 is required, available on the IBM Mainframe Developer Center and Aqua update website.</td>
</tr>
</tbody>
</table>

**CICS TS V5.4 open beta offering**

The CICS TS V5.4 open beta offering delivers updated capability to allow clients to assess and provide feedback on further, potential future CICS TS capabilities. New, enhanced features of this open beta offering include:

- Enhanced CICS asynchronous API
- Flow control at start-up and shutdown
- CICSPlex SM integration and resiliency

**Enhanced CICS asynchronous API**

The CICS asynchronous API is a set of commands, which was introduced in an earlier CICS TS 5.4 open beta offering, enables application developers to rapidly create asynchronous processing models in their business applications.

The addition of the EXEC CICS FETCH ANY command allows a parent transaction to receive a response from any completed child transaction, rather than waiting for a specific child to complete. In addition, both EXEC CICS FETCH commands now have non-suspending wait options, and also timeout controls.
Statistics for asynchronous services are now available to enable workload analysis and monitoring. In addition, flow control has been enabled for asynchronous transactions to ensure stability for high and mixed workloads.

**Flow control at start-up and shutdown**

This flow control capability addresses the flow of work into a CICS region at startup and shutdown. The z/OS WLM Health API is now utilized so that Sysplex Distributor flows work gradually to a CICS region at CICS initialization. This helps to avoid problems when work arrives in a region before the region is truly ready to process it. The controlled shutdown of a region is also enhanced.

**CICSPlex SM integration and resiliency**

CICSPlex SM management tasks within a managed CICS region now run as system tasks. This enhancement removes the CICSPlex SM tasks from user task views and avoids problems caused by the inadvertent purging of these tasks.

**Availability of the CICS TS V5.4 open beta offering**

The CICS TS V5.4 open beta offering is available for clients who want to explore potential new CICS capability and assess the value to their business. It can be downloaded free of charge, direct from the IBM CICS open beta website.

You can register interest in future, managed CICS TS beta programs by email at CICS Early Programs coordinator.

**IBM software beta programs overview**

IBM software beta programs allow clients to sign up for and acquire early releases of a product for the purposes of testing, before it is made commercially available. Open beta programs do not usually require clients to register before taking part in the program. Typically, product offerings that are provided by a beta program:

- Are free of charge.
- Are not warranted.
- Have no support of any kind.
- May not be used for productive purposes.
- Contain a disabling device that will prevent it from being used after the test period ends.

Details of the terms and conditions of the software beta program are found in the supplied license files for the offering.

Participants in the beta program gain insight into IBM strategy and direction. They may also afford earlier benefit and payback from new function, and may gain competitive edge and the opportunity for public recognition as a technology leader. Participants are encouraged to provide feedback and articulate their own requirements to IBM, with the potential to help influence and shape future IBM products.

**IBM z/OS Provisioning Toolkit**

The CICS provisioning toolkit that was introduced in an earlier CICS TS V5.4 open beta offering has been enhanced and made generally available as the IBM z/OS Provisioning Toolkit, V1.0.

The z/OS Provisioning Toolkit, V1.0, delivers a simple command line utility for the rapid provisioning of development environments. It is fully supported and available to existing clients of IBM z/OS V2.1, or later, at no additional charge. It can be downloaded direct from IBM.

For further information on the z/OS Provisioning Toolkit, V1.0, refer to the Reference information section.
Section 508 of the US Rehabilitation Act

CICS TS V5.3 and the CICS TS V5.4 open beta offering are capable, when used in accordance with associated IBM documentation, of satisfying the applicable requirements of Section 508 of the Rehabilitation Act, provided that any assistive technology used with the product properly interoperates with it. A US Section 508 Voluntary Product Accessibility Template (VPAT) can be requested.

Statement of direction

IBM makes the following statements of general direction:

- IBM intends that a future release of IBM z/OS Connect Enterprise Edition will provide the ability for IBM z/OS subsystems to become consumers of REST/JavaScript™ Open APIs.
- IBM intends that a future release of IBM z/OS Connect Enterprise Edition will include an alternative service provider component for IBM CICS integration, based on the CICS IP interconnectivity (IPIC) capability.
- IBM intends that each service provider component supplied with a future release of IBM z/OS Connect Enterprise Edition will be supported when deployed in a CICS Liberty JVM server runtime.

IBM's statements regarding its plans, directions, and intent are subject to change or withdrawal without notice at IBM's sole discretion. Information regarding potential future products is intended to outline our general product direction and it should not be relied on in making a purchasing decision. The information mentioned regarding potential future products is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. Information about potential future products may not be incorporated into any contract. The development, release, and timing of any future features or functionality described for our products remain at our sole discretion.

Hardware and software support services

SmoothStart/installation services

IBM Services has the breadth, depth, and reach to manage your services needs. You can leverage the deep technical skills of our WebSphere lab-based services and the business consulting, project management, and infrastructure expertise of our IBM Global Services team. Also, IBM Services extends our reach through IBM Business Partners to provide an unmatched portfolio of capabilities. Together, IBM provides the global reach, intellectual capital, industry insight, and technology leadership to support any critical-business need. Further information about CICS services is also available.

Reference information

IBM Software Announcements


For information on the July-2016 continuous delivery update of CICS TS V5.3, refer to Software Announcement 216-036, dated July 12, 2016.

For information on IBM z/OS Provisioning Toolkit, V1.0, refer to Software Announcement 217-020, dated January 10, 2017.

The following software announcement is relevant to CICS TS V5.3 and includes information on each of the following CICS Tools:

- CICS Configuration Manager for z/OS (CICS CM) V5.3
- CICS Deployment Assistant for z/OS (CICS DA) V5.3
- CICS Interdependency Analyzer for z/OS (CICSIA™) V5.3
- CICS Performance Analyzer for z/OS (CICS PA) V5.3


For information on IBM Explorer for z/OS, V3.0, refer to Software Announcement 215-373, dated October 5, 2015.

**CICS web pages**

For up-to-date information on CICS, refer to the [CICS home page](#).

For the latest information on CICS TS V5.3, refer to the [CICS TS for z/OS home page](#).

The [CICS support](#) web page can be used to search for terms, phrases, error codes, and APAR numbers.

**CICS SupportPacs**

[CICS SupportPacs](#) are available, at no charge, which extend and complement CICS TS.

### Program number

<table>
<thead>
<tr>
<th>Program number</th>
<th>VRM</th>
<th>Program name</th>
</tr>
</thead>
<tbody>
<tr>
<td>5655-Y04</td>
<td>5.3.0</td>
<td>CICS Transaction Server for z/OS</td>
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<tr>
<td>5722-DFJ</td>
<td>5.3.0</td>
<td>CICS Transaction Server for z/OS Value Unit Edition</td>
</tr>
<tr>
<td>5722-DFK</td>
<td>1.1.0</td>
<td>CICS Transaction Server for z/OS Value Unit Edition S&amp;S</td>
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<td>5655-Y30</td>
<td>5.3.0</td>
<td>CICS Transaction Server for z/OS Developer Trial</td>
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<tr>
<td>5655-Y15</td>
<td>1.1.0</td>
<td>CICS Transaction Server for z/OS Developer Trial S&amp;S</td>
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<tr>
<td>5655-BTA</td>
<td>5.4.0</td>
<td>CICS Transaction Server for z/OS open beta</td>
</tr>
</tbody>
</table>

### Business Partner information

If you are a Direct Reseller - System Reseller acquiring products from IBM, you may link directly to [BP Attachment for Announcement Letter 217-006](#) for this announcement. A PartnerWorld ID and password are required (use IBMid).

### Ordering information
Unlicensed documentation

Product documentation

For CICS TS V5.3, IBM Knowledge Center includes the changes to product documentation as a result of the enhancements that are described in this announcement. These changes are not provided in other formats or other languages. For details of the product documentation that was provided at general availability of CICS TS V5.3, see relevant IBM Knowledge Center product pages.

For the CICS TS V5.4 open beta offering, product documentation is provided in IBM Knowledge Center. This open beta documentation is provided in English only.

Additional information, presented as articles, samples, and other downloads, is available in the CICS Developer Center website.

Subsequent updates (technical newsletters or revisions between releases) to the publications shipped with the product will be distributed to the user of record for as long as a license for this software remains in effect. A separate publication order or subscription is not needed.

Customized Offerings

Product deliverables are shipped only through CBPDO and ServerPac. These customized offerings are offered for Internet delivery in countries where Shopz product ordering is available. Internet delivery reduces software delivery time and allows you to install software without the need to handle tapes. For more details on Internet delivery, go to the Help section on the Shopz website.

You choose the delivery method when you order the software. IBM recommends Internet delivery. In addition to Internet and DVD, the supported tape delivery options include:

- 3590
- 3592

Most products can be ordered in ServerPac the month following their availability in CBPDO. z/OS can be ordered through CBPDO and ServerPac at general availability. Many products will also be orderable in a Product ServerPac without also having to order the z/OS operating system or subsystem.

Shopz and CFSW will determine the eligibility based on product requisite checking. For more details on the product ServerPac, go to the Help section on the Shopz website.

For additional information on the Product ServerPac option, refer to Software Announcement 212-272, dated July 31, 2012.

Production of software product orders will begin on the planned general availability date.

- CBPDO shipments will begin one week after general availability.
- ServerPac shipments will begin two weeks after general availability.

Terms and conditions

The terms are unaffected by this announcement.

Statement of good security practices
IT system security involves protecting systems and information through prevention, detection, and response to improper access from within and outside your enterprise. Improper access can result in information being altered, destroyed, or misappropriated or can result in misuse of your systems to attack others. Without a comprehensive approach to security, no IT system or product should be considered completely secure and no single product or security measure can be completely effective in preventing improper access. IBM systems and products are designed to be part of a lawful, comprehensive security approach, which will necessarily involve additional operational procedures, and may require other systems, products, or services to be most effective.

**Important:** IBM does not warrant that any systems, products, or services are immune from, or will make your enterprise immune from, the malicious or illegal conduct of any party.

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**IBM Electronic Services**

Electronic Service Agent™ and the IBM Electronic Support web portal are dedicated to providing fast, exceptional support to IBM Systems customers. The IBM Electronic Service Agent tool is a no-additional-charge tool that proactively monitors and reports hardware events, such as system errors, performance issues, and inventory. The Electronic Service Agent tool can help you stay focused on your company’s strategic business initiatives, save time, and spend less effort managing day-to-day IT maintenance issues. Servers enabled with this tool can be monitored remotely around the clock by IBM Support, all at no additional cost to you.

Now integrated into the base operating system of AIX® V5.3, AIX V6.1, and AIX V7.1, Electronic Service Agent is designed to automatically and electronically report system failures and utilization issues to IBM, which can result in faster problem resolution and increased availability. System configuration and inventory information collected by the Electronic Service Agent tool also can be viewed on the secure Electronic Support web portal, and used to improve problem determination and resolution by you and the IBM support team. To access the tool main menu, simply type smitty esa_main, and select Configure Electronic Service Agent. In addition, ESA now includes a powerful web user interface, giving the administrator easy access to status, tool settings, problem information, and filters. For more information and documentation on how to configure and use Electronic Service Agent, go to the IBM Electronic Support website.

The IBM Electronic Support portal is a single internet entry point that replaces the multiple entry points traditionally used to access IBM Internet services and support. This portal enables you to gain easier access to IBM resources for assistance in resolving technical problems. The My Systems and Premium Search functions make it even easier for Electronic Service Agent tool-enabled customers to track system inventory and find pertinent fixes.

**Benefits**

**Increased uptime:** The Electronic Service Agent™ tool is designed to enhance the Warranty or Maintenance Agreement by providing faster hardware error reporting and uploading system information to IBM Support. This can translate to less wasted time monitoring the symptoms, diagnosing the error, and manually calling IBM Support to open a problem record. Its 24 x 7 monitoring and reporting mean intervention is not required to report errors.

**Security:** The Electronic Service Agent tool is designed to be secure in monitoring, reporting, and storing the data at IBM. The Electronic Service Agent tool is designed to securely transmit either through the internet (HTTPS or VPN) or modem to provide customers a single point of exit from their site. Communication is one way. Activating Electronic Service Agent does not enable IBM to call into a customer's system.
For additional information, go to the IBM Electronic Service Agent website.

**More accurate reporting:** Because system information and error logs are automatically uploaded to the IBM Support Center in conjunction with the service request, you are not required to find and send system information, decreasing the risk of misreported or misdiagnosed errors. Once inside IBM, problem error data is run through a data knowledge management system and knowledge articles are appended to the problem record.

**Customized support:** Using the IBMid entered during activation, you can view system and support information in the My Systems and Premium Search sections of the IBM Electronic Support page.

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For more information on how to utilize the power of IBM Electronic Services, contact your IBM Systems Services Representative, or go to the IBM Electronic Support website.

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**Reference:**

LE001

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**Note:** Shipments will begin after the planned availability date.

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