



IBM XL Fortran for Linux, V15.1.5 (on little endian distributions) offers a no-charge community edition and XL C/C++ for Linux, V13.1.5 and XL Fortran for Linux, V15.1.5 supports partial OpenMP 4.5

Table of contents

1 Overview	6 Publications
2 Key prerequisites	7 Technical information
2 Planned availability date	9 Ordering information
2 Description	11 Terms and conditions
3 Product positioning	14 Prices
5 Program number	14 Order now
	15 Corrections

At a glance

IBM[®] XL C/C++ for Linux[™], V13.1.5 (on little endian distributions) and XL Fortran for Linux, V15.1.5 (on little endian distributions) are standards-based, high-performance compilers with advanced optimization and performance-tuning features. These compilers deliver the following features and enhancements:

- XL Fortran for Linux (on little endian distributions) is also available as a community edition compiler.
- Optimization level 5 is introduced into the community editions so you can generate applications with the highest level of optimization.
- XL C/C++ for Linux and XL Fortran for Linux (on little endian distributions) support features of OpenMP 4.5 on the POWER[®] CPU host.
- XL C/C++ for Linux and XL Fortran for Linux (on little endian distributions) provides for high performance computing with support for Power[®] System servers such as the S822LC (Minsky), which contain two POWER8[®] CPUs, four NVIDIA Tesla P100 GPUs, and NVIDIA's accelerated NVLink interconnect.
- XL C/C++ for Linux, V13.1.5 and XL Fortran for Linux, V15.1.5 deliver quality improvements from their earlier releases by including fixes in released PTFs.

Overview

A key strength of the XL C/C++ for Linux (on little endian distributions) and XL Fortran for Linux (on little endian distributions) compiler products is their ability to generate highly optimized code for execution on IBM Power Systems[™]. The performance gain from years of IBM compiler optimization experience on the XL compiler family, which include XL C/C++ for Linux and XL Fortran for Linux, is apparent in the release-to-release compiler improvements up to and including the current IBM POWER8 processor.

Over the course of multiple releases, the XL C/C++ for Linux (on little endian distributions) and XL Fortran for Linux (on little endian distributions) compilers offered new and enhanced functions that provide the necessary tools to modernize and maintain applications to meet your critical business needs. The following are some of the new and improved features within XL C/C++ for Linux, V13.1.5 and XL Fortran for Linux, V15.1.5:

- XL Fortran for Linux (on little endian distributions) now also offers an alternative no-charge community edition.
- XL C/C++ for Linux (on little endian distributions) and XL Fortran for Linux (on little endian distributions) support a number of OpenMP 4.5 constructs so that applications can accelerate by offloading computation and data to the NVIDIA GPU.
- Increased quality is provided across XL C/C++ for Linux and XL Fortran for Linux.

All of the expertise and heritage that served enterprise businesses over the years are upgraded and refined for programmers of the latest Linux distributions for IBM Power technology to allow these programmers to take advantage of proven IBM XL (XL = exceptional) compiler technology.

Key prerequisites

XL C/C++ for Linux, V13.1.5 (on little endian distributions)

- Selected IBM Power Systems servers
- Hard disk space of 160 MB

XL Fortran for Linux, V15.1.5 (on little endian distributions)

- Selected IBM Power Systems servers
- Hard disk space of 230 MB

For details, refer to the [Hardware requirements](#) and [Software requirement](#) sections.

Planned availability date

December 15, 2016

Description

XL C/C++ for Linux, V13.1.5 (on little endian distributions) and XL Fortran for Linux, V15.1.5 (on little endian distributions) continue to provide additional functionality and enhancements.

XL Fortran for Linux Community Edition (on little endian distributions) and XL C/C++ Community Edition (on little endian distributions)

XL C/C++ for Linux Community Edition (on little endian distributions) was released in June 2016. XL Fortran for Linux Community Edition (on little endian distributions) is now also available for download and deployment.

Both the XL C/C++ for Linux Community Edition (on little endian distributions) and the XL Fortran for Linux Community Edition (on little endian distributions) now provide full functions and can be used to develop production-level applications. However, these no-charge community edition compilers are not warranted and do not provide subscription, service, or support.

The fully supported XL C/C++ for Linux and XL Fortran for Linux compilers continue to be available for order, at a cost, for clients who wish to obtain full-warranty, and world-class support from IBM, including subscription, service, and support.

The release of the full function community editions allows application programmers to use the XL C/C++ for Linux and the XL Fortran for Linux compilers to experience the advantages of IBM compiler technology on the POWER8 platform, including support for optimization level 5, offloading OpenMP target regions on an NVIDIA GPU, and using CUDA Fortran.

To download the XL C/C++ for Linux Community Edition compiler, refer to the [XL Fortran for Linux compiler](#) website.

Partial support for OpenMP 4.5

The OpenMP API supports multiplatform, shared-memory, parallel programming in C, C++, and Fortran on many architectures that use UNIX™ and Microsoft™ Windows™ platforms. OpenMP is a portable, scalable programming model that gives programmers a simple and flexible, standard interface for developing parallel applications for platforms ranging from the desktop to the supercomputer.

This specification is defined by the OpenMP ARB, a group of leading hardware and software vendors and research organizations, including IBM. You can find more information about the OpenMP specifications at openmp.org.

In this release, XL C/C++ for Linux (on little endian distributions) and XL Fortran on Linux (on little endian distributions) support OpenMP 4.5 features, such as device constructs and data mapping. These features can be used to help offload compute-intensive parts of an application and associated data to the NVIDIA GPU (graphic processing unit) that comes with a number of POWER8 servers.

When combined with the POWER8 CPU, the NVIDIA GPU provides a unique platform for heterogeneous, high-performance computing, which has proven to be highly efficient for running several technical computing workloads. This computational capability is built on top of massively parallel and multi-threaded cores within the NVIDIA GPUs and the IBM POWER8 processors. Parallel operations within applications, such as data analysis or HPC (high-performance computing) workloads, can now be offloaded to GPUs.

The goal is to deliver higher performance and greater energy efficiency to companies and data centers. To fully leverage the computational power of the Power Systems with an NVIDIA GPU, you need to offload highly parallel operations to the GPU. This can be accomplished by using the OpenMP programming model for parallel computing.

The NVIDIA CUDA Toolkit v8.0 for POWER8 is required during the compilation and linking process. CUDA Toolkit v8.0 for POWER8 is available from NVIDIA.

Quality improvements

New releases of XL C/C++ for Linux (on little endian distributions) and XL Fortran for Linux (on little endian distributions) deliver quality improvements over earlier releases with the inclusion of fixes from all previous released PTFs and other resolved known issues.

Product positioning

The release of XL C/C++ for Linux Community Edition (on little endian distributions) and XL Fortran for Linux Community Edition (on little endian distributions) provides no-charge, full function compilers to developers. The community editions, which do not provide subscription, service, or support, are available for download from IBM. The release of the community edition allows for convenient availability of the XL C/C++ and XL Fortran compilers so that developers can experience the advantages of IBM compiler technology on the POWER8 platform. Users who require a fully warranted and fully supported compiler can license the XL C/C++ for Linux and XL Fortran for Linux compilers.

Ability to unleash the full power of IBM processors

At a basic level, compilers are a bridge between your applications and the hardware architectures on which you run your business. IBM compilers are designed to unleash the full power of IBM processors, which include those for the different

architectures that are shipped in the popular Power Systems. IBM compilers exploit the POWER8 technology.

IBM compilers are designed to improve programmer productivity. The advanced compilation technology enables programmers to exploit leading-edge performance of new hardware without source code changes. Developers only need to focus on the business logic of the applications and let the compiler figure out the best way to transform and optimize the code generation for the systems the application will run on.

Powerful, no-hassle performance optimization

Well written and thoroughly debugged code, which is fully conformant to its language standard, can take maximum advantage of the optimizing technology in XL C/C++ and XL Fortran and may provide an increase in performance. The optimization and hardware features in XL C/C++ and XL Fortran help improve developer productivity. These compilers can generate code that exploits the leading-edge performance in existing and new hardware, often with minimal or no source code changes.

XL C/C++ and XL Fortran support several levels of increasingly, aggressive code transformations. Advanced optimization techniques, such as inter-procedural analysis (IPA) and profile-directed feedback (PDF), are available only at high levels of optimization but can result in increased performance improvements. IPA analyzes and optimizes your application as a whole, rather than on a file-by-file basis. PDF generates information that instructs the optimizer to focus on trade-offs that favor code that executes more frequently.

Get more performance from the POWER platform with minimal or no source code changes. Upgrade to the latest XL C/C++ or XL Fortran compiler, which incorporates the latest advances in optimization and hardware technology support.

Clang infrastructure from LLVM

XL C/C++ for Linux (on little endian distributions) is built on the Clang (C language) technology from the open source community. Clang is a component of the LLVM open source compiler and toolchain project and provides the C and C++ language family front end for LLVM (formerly low level virtual machine). XL C/C++ for Linux (on little endian distributions) combines the Clang front-end technology with the advanced optimization technology from the IBM compiler back-end. The Clang front end within XL C/C++ for Linux (on little endian distributions) provides for a compiler that has a much greater level of GNU source compatibility. With the higher level of GNU source compatibility, porting of applications, which were originally developed with gcc and g++ compilers, is easier than ever before. Also, there is binary compatibility with GNU-built objects, archives, and other shared objects. You now have the versatility to use the IBM compilers to build parts of your application that will benefit from the higher performance that can be offered and still bind the IBM and GNU compiled parts together in a single application.

CUDA support for XL Fortran (on little endian distributions)

With CUDA Fortran support within XL Fortran for Linux, you can create applications that exploit both the POWER8 architecture and the NVIDIA GPU, and compile the complete application with the IBM compiler. You can continue to obtain the benefits of the IBM optimization technology within the XL Fortran compiler while fully leveraging the highly parallel capability of the NVIDIA GPU.

XL C/C++ for Linux and XL Fortran for Linux (on little endian distributions) Community Editions

The release of XL C/C++ for Linux Community Edition (on little endian distributions) and XL Fortran for Linux Community Edition (on little endian distributions) provides no-charge, entry-level compilers to developers and partners. The community editions are available for download from IBM. The release of the community edition allows for convenient availability of the XL C/C++ and XL Fortran compilers so that developers can experience the advantages of IBM compiler technology on the

POWER8 platform. Users, who require a fully warranted, fully functional, and fully supported compiler, can license the XL C/C++ for Linux and XL Fortran for Linux compilers.

An infrastructure that matters

The XL family of compilers, in conjunction with Power Systems, continues to serve the high performance computing (HPC) and commercial sectors. This makes the high-performance XL C/C++ for Linux or XL Fortran for Linux compilers (on little endian distributions) an optimal fit for the requirements of big data and data analytics. One of the most discussed topics in the IT world is the migration of applications to a cloud environment. With an infrastructure that includes POWER8, the latest Linux distributions and the XL C/C++ for Linux or XL Fortran for Linux compilers, the effort to implement a cloud environment is easier. Organizations that need to invest in open standards and open source-based architectures, should consider the new XL C/C++ or XL Fortran compilers. Make XL C/C++ for Linux and XL Fortran for Linux the backbone of your IT application development environment to drive competitive differentiation.

IBM Service and Support

The XL C/C++ for Linux and XL Fortran for Linux compilers are delivered with IBM Service and Support. The IBM Service and Support organization is made up of teams of individuals who work together to provide you with the responsive platform and cross-platform software support that you require. For complex or code-related problems, IBM has specialized, skilled service teams with access to the experts in IBM development laboratories, as required. You have access to the right level of IBM expertise when you need it and no matter where they are located. The vision of IBM Service and Support is to achieve a level of support excellence that exceeds client expectations and differentiates IBM in the marketplace.

XL, which stands for exceptional

Originally coined in 1990 in the first edition of the compiler user guide, XL was described as a short form for exceptional. The original text, reproduced below, continues to apply today.

The exceptional (XL) family of compilers provide consistency and high performance across multiple programming languages by sharing the same code optimization technology.

Program number

Program number	VRM	Program name
5765-J08	13.1.5	XL C/C++ for Linux- AAS
5725-C73	13.1.5	XL C/C++ for Linux- PA
5765-J10	15.1.5	XL Fortran for Linux- AAS
5725-C75	15.1.5	XL Fortran for Linux- PA

Product identification number

Product	Program PID number	Subscription and Support PID number	S&S Description
XL C/C++ for Linux, V13.1.5	5765-J08	5648-F60	SW S&S No-charge Registration/1-year Renewal
	5765-J08	5648-F61	SW S&S 3-year Renewal
	5765-J08	5648-F62	SW S&S 1 year after license
	5765-J08	5648-F63	SW S&S 3 year after license

Product	Program PID number	Subscription and Support PID number	S&S Description
	5765-J08	5648-F64	SW S&S 3-year Registration
XL Fortran Linux, V15.1.5	5765-J10	5648-F55	SW S&S No-charge Registration/1-year Renewal
	5765-J10	5648-F56	SW S&S 3-year Renewal
	5765-J10	5648-F57	SW S&S 1 year after license
	5765-J10	5648-F58	SW S&S 3 year after license
	5765-J10	5648-F59	SW S&S 3-year Registration

Offering Information

Product information is available on the [IBM Offering Information](#) website.

More information is also available on the [Passport Advantage^{\(R\)}](#) and [Passport Advantage Express^{\(R\)}](#) website.

Business Partner information

If you are a Direct Reseller - System Reseller acquiring products from IBM, you may link directly to Business Partner information for [BP Attachment for Announcement Letter 216-475](#). A PartnerWorld^(R) ID and password are required (use IBMid).

Publications

Links to PDF and xhtml versions of product publications are available at the following IBM Knowledge Center websites:

- [XL C/C++ for Linux](#)
- [XL Fortran for Linux](#)

Effective December 15, 2016, softcopy publications for XL C/C++ for Linux, V13.1.5 and XL Fortran for Linux, V15.1.5 will be available at IBM Knowledge Center.

No hardcopy publications are shipped with these programs.

The [IBM Publications Center](#) is a worldwide central repository for IBM product publications and marketing material with a catalog of 70,000 items. Extensive search facilities are provided. A large number of publications are available online in various file formats, and they can all be downloaded by all countries.

Services

Software Services

IBM Software Services has the breadth, depth, and reach to manage your services needs. You can leverage the deep technical skills of our lab-based, software services team and the business consulting, project management, and infrastructure expertise of our IBM Global Services team. Also, we extend our IBM Software Services reach through IBM Business Partners to provide an extensive portfolio of capabilities.

Together, we provide the global reach, intellectual capital, industry insight, and technology leadership to support a wide range of critical business needs.

To learn more about IBM Software Services, contact your Lab Services Sales or Delivery Leader.

Technical information

Specified operating environment

Hardware requirements

For XL C/C++ for Linux, V13.1.5 (on little endian distributions)

- System: IBM Power Systems servers that are configured for the little endian architecture and supported by:
 - Ubuntu Server 14.04 for IBM POWER8
 - Ubuntu Server 14.10 for IBM POWER8
 - Ubuntu Server 16.04 for IBM POWER8
 - SUSE Linux Enterprise Server 12 for Power
 - SUSE Linux Enterprise Server 12 SP1 for Power
 - Red Hat Enterprise Linux 7.1 for IBM POWER
 - Red Hat Enterprise Linux 7.2 for IBM POWER
 - Red Hat Enterprise Linux 7.3 for IBM POWER
 - Community Enterprise Operating System 7 (CentOS 7)
- Disk space: 160 MB

For XL Fortran for Linux, V15.1.5 (on little endian distributions)

- System: IBM Power Systems servers that are configured for the little endian architecture and supported by:
 - Ubuntu Server 14.04 for IBM POWER8
 - Ubuntu Server 14.10 for IBM POWER8
 - Ubuntu Server 16.04 for IBM POWER8
 - SUSE Linux Enterprise Server 12 for Power
 - SUSE Linux Enterprise Server 12 SP1 for Power
 - Red Hat Enterprise Linux 7.1 for IBM POWER
 - Red Hat Enterprise Linux 7.2 for IBM POWER
 - Red Hat Enterprise Linux 7.3 for IBM POWER
 - Community Enterprise Operating System 7 (CentOS 7)
- Disk space: 230 MB

Software requirements

For XL C/C++ for Linux, V13.1.5 (on little endian distributions)

One of the following operating systems running on an IBM Power System server:

- Ubuntu Server 14.04 for IBM POWER8
- Ubuntu Server 14.10 for IBM POWER8
- Ubuntu Server 16.04 for IBM POWER8
- SUSE Linux Enterprise Server 12 for Power
- SUSE Linux Enterprise Server 12 SP1 for Power
- Red Hat Enterprise Linux 7.1 for IBM POWER
- Red Hat Enterprise Linux 7.2 for IBM POWER

- Red Hat Enterprise Linux 7.3 for IBM POWER
- Community Enterprise Operating System 7 (CentOS 7)

Required software for documentation:

- HTML browser to access HTML documentation
- PDF viewer to view any PDF files

For XL Fortran for Linux, V15.1.5 (on little endian distributions)

One of the following operating systems running on an IBM Power System server:

- Ubuntu Server 14.04 for IBM POWER8
- Ubuntu Server 14.10 for IBM POWER8
- Ubuntu Server 16.04 for IBM POWER8
- SUSE Linux Enterprise Server 12 for Power
- SUSE Linux Enterprise Server 12 SP1 for Power
- Red Hat Enterprise Linux 7.1 for IBM POWER
- Red Hat Enterprise Linux 7.2 for IBM POWER
- Red Hat Enterprise Linux 7.3 for IBM POWER
- Community Enterprise Operating System 7 (CentOS 7)

Required software for documentation:

- HTML browser to access HTML documentation
- PDF viewer to view any PDF files

NVIDIA CUDA Toolkit v8.0 for POWER8 is invoked by the XL C/C++ for Linux (on little endian distributions) or XL Fortran for Linux (on little endian distributions) compilers during the compilation and linking process for programs that use OpenMP 4.5 to offload computation to the NVIDIA GPU or for programs that use CUDA Fortran constructs. CUDA Toolkit v8.0 for POWER8 is available from NVIDIA.

Note: Applications that use OpenMP 4.5 to offload computation to the NVIDIA GPU or applications that use XL Fortran for Linux with CUDA Fortran constructs run on Ubuntu 16.04 for IBM POWER8 or Red Hat Enterprise Linux 7.3 for IBM POWER.

The program's specifications and specified operating environment information may be found in documentation accompanying the program, if available, such as a readme file, or other information published by IBM, such as an announcement letter. Documentation and other program content may be supplied only in the English language.

Planning information

Web information

For more information regarding XL C/C++, refer to the [C and C++ compiler family](#) website.

For more information regarding XL Fortran, refer to the [Fortran compiler family](#) website.

For more information regarding IBM Application Development, refer to the [IBM products by capability](#) website.

Packaging

Packaging Information

Each IBM XL Compiler package contains:

- One DVD-ROM, which contains the product
- Product Quickstart Guide
- Passport Advantage customer letter

This program, when downloaded from a website, contains the applicable IBM license agreement and License Information, if appropriate, and will be presented for acceptance at the time of installation of the program. For future reference, the license and License Information will be stored in a directory such as LICENSE.TXT.

Security, auditability, and control

XL C/C++ for Linux, V13.1.5 and XL Fortran for Linux, V15.1.5 use the security and auditability features of the host hardware or software. Clients are responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

Ordering information

Product	PID	Product Category
XL C/C++ for Linux, V13.1.5	5765-J08	IBM Compiler
XL C/C++ for Linux, V13.1.5	5725-C73	IBM Compiler
XL Fortran for Linux, V15.1.5	5765-J10	IBM Compiler
XL Fortran for Linux, V15.1.5	5725-C75	IBM Compiler

Ordering through Passport Advantage Part Numbers

The ordering information remains the same as previously announced, except for the updated media pack part numbers.

For ordering information on XL Fortran for Linux, V15.1.5, refer to Software Announcement [214-164](#), dated April 28, 2016.

Program name/Description	Part number
XL Fortran for Linux, V15.1.5 - Media Package Multilingual	BA1AMML

For ordering information on XL C/C++ for Linux, V13.1.5, refer to Software Announcement [214-160](#), dated April 28, 2014.

Program name/Description	Part number
XL C/C++ for Linux, V13.1.5 - Media Package Multilingual	BA1ALML

Ordering through product identifier and feature codes, basic license, electronic delivery, maintenance and trade up

The ordering information for basic license, electronic delivery, maintenance offering media supply details, and tradeup remain unchanged.

For detailed ordering information on XL Fortran for Linux, V15.1.5, refer to Software Announcement [214-164](#), dated April 28, 2014.

Clients with active Software Maintenance for XL Fortran for Linux are entitled to receive the media supply that corresponds to XL Fortran for Linux, V15.1.5 or a previous level of the program as long as the level of the program continues to be active. Media supply for versions before Version 15.1.1 only contain the XL Fortran for Linux (on big endian distributions) compiler.

For detailed ordering information on XL C/C++ for Linux, V13.1.5, refer to Software Announcement [214-160](#), dated April 28, 2014.

Clients with active Software Maintenance for XL C/C++ for Linux are entitled to receive the media supply corresponding to XL C/C++ for Linux, V13.1.5 or a previous level of the program as long as the level of the program continues to be active. Media supply for versions before Version 13.1.1 only contain the XL C/C++ for Linux (on big endian distributions) compiler.

This software license includes Software Maintenance, which was previously referred to as Software Subscription and Technical Support.

Extending coverage for a total of three years from the date of acquisition may be elected. Order the program number, feature number, and quantity to extend coverage for your software licenses. If maintenance has expired, specify the after license feature number.

For ordering details for software maintenance for XL Fortran for Linux, V15.1.5, refer to Software Announcement [214-164](#), dated April 28, 2014.

For ordering details for software maintenance on XL C/C++ for Linux, V13.1.5, refer to Software Announcement [214-160](#), dated April 28, 2014.

Charge metric

Program name	Part number or PID number	Charge metric
XL C/C++ for Linux, V13.1.5	5725-C73, 5765-J08	Authorized User, Concurrent User
XL Fortran for Linux, V15.1.5	5725-C75, 5765-J10	Authorized User, Concurrent User

Authorized User

Authorized User is a unit of measure by which the program can be licensed. An Authorized User is a unique person who is given access to the program. The program may be installed on any number of computers or servers and each Authorized User may have simultaneous access to any number of instances of the program at one time. Licensee must obtain separate, dedicated entitlements for each Authorized User given access to the program in any manner directly or indirectly (for example, through a multiplexing program, device, or application server) through any means. An entitlement for an Authorized User is unique to that Authorized User and may not be shared, nor may it be reassigned other than for the permanent transfer of the Authorized User entitlement to another person.

Note: Some programs may be licensed where devices are considered users. In that case, the following applies. Any computing device that requests the execution of or receives for execution a set of commands, procedures, or applications from the program or that is otherwise managed by the program is considered a separate user of the program and requires an entitlement as if that device were a person.

Concurrent User

Concurrent User is a unit of measure by which the program can be licensed. A Concurrent User is a person who is accessing the program at any particular point in time. Regardless of whether the person is simultaneously accessing the program multiple times, the person counts only as a single Concurrent User. The program may be installed on any number of computers or servers, but licensee must obtain entitlements for the maximum number of Concurrent Users simultaneously accessing the program. Licensee must obtain an entitlement for each simultaneous Concurrent User accessing the program in any manner directly or indirectly (for

example, through a multiplexing program, device, or application server) through any means.

Note: Some programs may be licensed where devices are considered users. In that case, the following applies. Any computing device that requests the execution of or receives for execution a set of commands, procedures, or applications from the program or that is otherwise managed by the program is considered a separate user of the program and requires an entitlement as if that device were a person.

Withdrawal of previous Passport Advantage part numbers

Effective December 15, 2016, the following IPLA software media pack part numbers will be replaced and are obsolete as a result of this announcement. Orders for these part numbers will not be accepted after December 15, 2016, nor will normal marketing activities or educational support be available unless previous agreement exists between the client and IBM.

Withdrawn part numbers from marketing

Program name/Description	Part number
XL C/C++ for Linux, V13.1.4	BA1ABML
XL Fortran for Linux, V15.1.4	BA1ACML

New media pack part numbers

Program name/Description	Part number
XL C/C++ for Linux, V13.1.5	BA1ALML
XL Fortran for Linux, V15.1.5	BA1AMML

Terms and conditions

The information provided in this announcement letter is for reference and convenience purposes only. The terms and conditions that govern any transaction with IBM are contained in the applicable contract documents such as the IBM International Program License Agreement, IBM International Passport Advantage Agreement, and the IBM Agreement for Acquisition of Software Maintenance.

Licensing

IBM International Program License Agreement including the License Information document and Proof of Entitlement (PoE) govern your use of the program. PoEs are required for all authorized use. Part number products only, offered outside of Passport Advantage, where applicable, are license only and do not include Software Maintenance.

This software license includes Software Subscription and Support (also referred to as Software Maintenance).

Agreement for Acquisition of Software Maintenance

The IBM Agreement for Acquisition of Software Maintenance (Z125-6011) applies for Subscription and Support (also referred to as Software Maintenance) and does not require customer signatures.

These programs are licensed under the IBM Program License Agreement (IPLA) and the associated Agreement for Acquisition of Software Maintenance, which provide for support with ongoing access to releases and versions of the program. IBM includes one year of Software Subscription and Support (also referred to as Software Maintenance) with the initial license acquisition of each program acquired. The initial period of Software Subscription and Support (also referred to as Software Maintenance) can be extended by the purchase of a renewal option, if available. These programs have a one-time license charge for use of the program

and an annual renewable charge for the enhanced support that includes telephone assistance (voice support for defects during normal business hours), as well as access to updates, releases, and versions of the program as long as support is in effect.

The Agreement for Acquisition of Software Maintenance does not apply to XL C/C++ for Linux Community Edition nor XL Fortran for Linux Community Edition.

License Information number

Program	License information number
XL C/C++ for Linux, V13.1.5	L-JYIP-AEMRKB
XL C/C++ for Linux, V13.1.5 Community Edition (on little endian distributions)	L-JYIP-AEMRYC
XL Fortran for Linux, V15.1.5	L-JYIP-AEMRLZ
XL Fortran for Linux, V15.1.5 Community Edition (on little endian distributions)	L-JYIP-AEMRZJ

See the [License Information documents](#) page on the IBM Software License Agreement website for more information.

Limited warranty applies

Yes

Limited warranty

IBM warrants that when the program is used in the specified operating environment, it will conform to its specifications. The warranty applies only to the unmodified portion of the program. IBM does not warrant uninterrupted or error-free operation of the program or that IBM will correct all program defects. You are responsible for the results obtained from the use of the program.

IBM provides you with access to IBM databases containing information on known program defects, defect corrections, restrictions, and bypasses at no additional charge. For further information, see the [IBM Software Support Handbook](#).

IBM will maintain this information for at least one year after the original licensee acquires the program (warranty period).

Program technical support

Technical support of a program product version or release will be available for a minimum of five years from the general availability date, as long as your Software Subscription and Support (also referred to as Software Maintenance) is in effect.

This technical support allows you to obtain assistance (by telephone or electronic means) from IBM for product-specific, task-oriented questions regarding the installation and operation of the program product. Software Subscription and Support (Software Maintenance) also provides you with access to updates (modifications or fixes), releases, and versions of the program. You will be notified, through an announcement letter, of discontinuance of support with 12 months' notice. If you require additional technical support from IBM, including an extension of support beyond the discontinuance date, contact your IBM representative or IBM Business Partner. This extension may be available for a fee.

Money-back guarantee

If for any reason you are dissatisfied with the program and you are the original licensee, you may obtain a refund of the amount you paid for it, if within 30 days of your invoice date you return the program and its PoE to the party from whom you obtained it. If you downloaded the program, you may contact the party from whom you acquired it for instructions on how to obtain the refund.

For clarification, note that (1) for programs acquired under the IBM International Passport Advantage offering, this term applies only to your first acquisition of the program and (2) for programs acquired under any of IBM's On/Off Capacity on Demand (On/Off CoD) software offerings, this term does not apply since these offerings apply to programs already acquired and in use by you.

Volume orders (IVO)

Yes. Contact your IBM representative.

Passport Advantage applies

Yes, information is available on the [Passport Advantage and Passport Advantage Express](#) website.

Software Subscription and Support applies

Yes. Software Subscription and Support, also referred to as Software Maintenance, is now included in the Passport Advantage Agreement. Installation and technical support for the products announced in this announcement is provided by the Software Subscription and Support offering of the IBM International Passport Advantage Agreement. This fee service enhances customer productivity by providing voice or electronic access into the IBM support organizations.

IBM includes one year of Software Subscription and Support with the initial license acquisition of each program acquired. The initial period of Software Subscription and Support can be extended by the purchase of a renewal option.

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Educational allowance available

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Passport Advantage

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Corrections

(Corrected on January 18, 2017)

The Description and Product positioning sections are revised.