XPression

CII Gateway User Guide

VERSION 3.05



ROSS

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Our mission is to:

1. Provide a Superior Customer Experience
    - offer the best product quality and support
2. Make Cool Practical Technology
    - develop great products that customers love

Ross has become well known for the Ross Video Code of Ethics. It guides our interactions and empowers our employees. I hope you enjoy reading it below.

If anything at all with your Ross experience does not live up to your expectations be sure to reach out to us at solutions@rossvideo.com.



David Ross

CEO, Ross Video

dross@rossvideo.com

Ross Video Code of Ethics

Any company is the sum total of the people that make things happen. At Ross, our employees are a special group. Our employees truly care about doing a great job and delivering a high quality customer experience every day. This code of ethics hangs on the wall of all Ross Video locations to guide our behavior:

1. We will always act in our customers' best interest.
2. We will do our best to understand our customers' requirements.
3. We will not ship crap.
4. We will be great to work with.
5. We will do something extra for our customers, as an apology, when something big goes wrong and it's our fault.
6. We will keep our promises.
7. We will treat the competition with respect.
8. We will cooperate with and help other friendly companies.
9. We will go above and beyond in times of crisis. *If there's no one to authorize the required action in times of company or customer crisis - do what you know in your heart is right. (You may rent helicopters if necessary.)*

XPression CII Gateway User Guide

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- Version: 3.05
- Document Revision: 1
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Patents

Patent numbers US 7,034,886; US 7,508,455; US 7,602,446; US 7,802,802 B2; US 7,834,886; US 7,914,332; US 8,307,284; US 8,407,374 B2; US 8,499,019 B2; US 8,519,949 B2; US 8,743,292 B2; GB 2,419,119 B; GB 2,447,380 B; and other patents pending.

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1. **INTERPRETATION.** In this Agreement, (a) words signifying the singular number include the plural and vice versa, and words signifying gender include all genders; (b) every use of the words "herein", "hereof", "hereto" "hereunder" and similar words shall be construed to refer to this Agreement in its entirety and not to any particular provision hereof; (c) reference to any agreement or other document herein will be construed as referring to such agreement or other document as from time to time amended, modified or supplemented (subject to any restrictions on such amendment, modification or supplement set forth therein); (d) every use of the words "including" or "includes" is to be construed as meaning "including, without limitation" or "includes, without limitation", respectively; and (e) references to an Article or a Section are to be construed as references to an Article or Section of or to this Agreement unless otherwise specified.

2. **DEFINITIONS.** In this Agreement, in addition to the terms defined elsewhere in this Agreement, the following terms have the meanings set out below:

   "**Affiliate**" means, with respect to any Person, any other Person who directly or indirectly controls, is controlled by, or is under direct or indirect common control with, such Person. A Person shall be deemed to control a Person if such Person possesses, directly or indirectly, the power to direct or cause the direction of the management and policies of such Person, whether through the ownership of voting securities, by contract or otherwise; and the term "controlled" and "controlling" shall have a similar meaning.

   "**Agreement**" means this End User Software License Agreement including the recitals hereto, as the same may be amended from time to time in accordance with the provisions hereof.

   "**Backup System**" means the secondary piece of Designated Equipment upon which the Software is installed and mirrored for the sole purpose of replacing a Primary System in the event such Primary System is not available or functioning properly for any reason.

   "**Change of Control**" means (a) the direct or indirect sale, transfer or exchange by the shareholders of a Party of more than fifty percent (50%) of the voting securities of such Party, (b) a merger or amalgamation or reorganization or other transaction to which a Party is party after which the shareholders of such Party immediately prior to such transaction hold less than fifty percent (50%) of the voting securities of the surviving entity, (c) the sale, exchange, or transfer of all or substantially all of the assets of a Party.

"Confidential Information" means all data and information relating to the business and management of either Party, including the Software, trade secrets and other technology to which access is obtained or granted hereunder by the other Party, and any materials provided by Ross Video to Licensee; provided, however, that Confidential Information shall not include any data or information which:

(i) is or becomes publicly available through no fault of the other Party;

(ii) is already in the rightful possession of the other Party prior to its receipt from the other Party;

(iii) is already known to the receiving Party at the time of its disclosure to the receiving Party by the disclosing Party and is not the subject of an obligation of confidence of any kind;

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(v) is rightfully obtained by the other Party from a third party; or

(vi) is disclosed with the written consent of the Party whose information it is.

"Designated Equipment" shall mean (a) the hardware products sold by Ross Video to Licensee on which the Software is installed and licensed for use, as the same may be replaced from time to time by Ross Video; or (b) in the case of Software licensed on a stand-alone basis, the equipment of Licensee on which the Software is to be installed and meets the minimum specifications set out in the Documentation.

"Documentation" shall mean manuals, instruction guides, user documentation and other related materials of any kind pertaining to the Software (whether in electronic, hard-copy or other media format) that are furnished to Licensee by or on behalf of Ross Video in relation to the Software.

"Freeware" means Software that is available free of charge from Ross Video, and includes, without limitation the master control system software known as "DashBoard".

"Governmental Authority" means (a) any federal, provincial, state, local, municipal, regional, territorial, aboriginal, or other government, governmental or public department, branch, ministry, or court, domestic or foreign, including any district, agency, commission, board, arbitration panel or authority and any subdivision of any of them exercising or entitled to exercise any administrative, executive, judicial, ministerial, prerogative, legislative, regulatory, or taxing authority or power of any nature; and (b) any quasi-governmental or private body exercising any regulatory, expropriation or taxing authority under or for the account of any of them, and any subdivision of any of them.

"Improvements" means all inventions, works, discoveries, improvements and innovations of or in connection with the Software, including error corrections, bug fixes, patches and other updates in Object Code form to the extent made available to Licensee in accordance with Ross Video's release schedule.

"License Fee" means the fee(s), if any, payable in respect of the Software in accordance with the relevant invoice(s) or other purchase documents delivered in connection with this Agreement.

"License Period" means the period of time that Licensee will have the rights granted under this Agreement, as may be specified in an Order.

"**Modifications**" means any enhancements, changes, corrections, translations, adaptations, revisions, developments, upgrades or updates thereto; and "Modify" shall mean the creation of any of the foregoing.

"**Object Code**" means the machine readable executable form of a computer software program.

"Open Source Components" means third party Open Source software, libraries or other components.

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"Order" means the documents provided by Ross Video to Licensee detailing the Ross Video products contemplated for purchase, the corresponding fees and License Period that may apply to the Software, including any and all quotations, purchase orders, acknowledgments, pro formas, invoices and other purchase documentation.

"**Parties**" means both Ross Video and Licensee and "Party" means either one of them as the context requires.

"**Person**" will be broadly interpreted and includes (a) a natural person, whether acting in his or her own capacity, or in his or her capacity as executor, administrator, estate trustee, trustee or personal or legal representative; (b) a corporation or a company of any kind, a partnership of any kind, a sole proprietorship, a trust, a joint venture, an association, an unincorporated association, an unincorporated syndicate, an unincorporated organization or any other association, organization or entity of any kind; and (c) a Governmental Authority.

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"Released Claims" has the meaning ascribed to it in Section 9(b).

"Released Parties" has the meaning ascribed to it in Section 9(b).

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   c. Licensee will not Use the Freeware to engage in any activity that will violate the rights of others, including, without limitation, by using it for operations that involve child labour, suppressing the right of freedom of expression or endangering the security of person.

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b. Notwithstanding the above, Ross Video reserves the right to terminate this Agreement and the License granted hereunder on immediate notice to Licensee, and without liability to Licensee, in the event that the Software or Documentation constitutes or may, in Ross Video's determination, constitute, an infringement of the rights of a third party that Ross Video, in its sole discretion, does not consider to be affordably remediable.

c. Either party may terminate this Agreement immediately should any Software become, or in either party's opinion be likely to become, the subject of a claim of infringement of any intellectual property right and, in such event, there shall be no claim by either Licensee or Ross Video against the other arising out of such termination, provided that the foregoing shall not apply to a claim for infringement by Ross Video against Licensee in the event that Licensee is alleged to have infringed Ross Video's intellectual property rights, in which case Licensee shall remain liable for all outstanding License Fees and other amounts owing to Ross Video.

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    Either party may disclose certain Confidential Information if it is expressly required to do so pursuant to legal, judicial, or administrative proceedings, or otherwise required by law, provided that (i) such Party provides the other Party with reasonable written notice prior to such disclosure; (ii) such Party seeks confidential treatment for such Confidential Information; (iii) the extent of such disclosure is only to the extent expressly required by law or under the applicable court order; and (iv) such Party complies with any applicable protective or equivalent order.

    Each of Ross Video and Licensee (the **"Indemnifying Party"**, as applicable) agree to indemnify the other (the **"Indemnified Party"**, as applicable) for all Losses incurred by the Indemnified Party as a result of a failure of the Indemnifying Party to comply with its obligations under this Section 12 provided that the Indemnified Party has given prompt notice of any such claim and, to the extent that a claim may lie against a third party for the unauthorized disclosure of such Confidential Information, the right to control and direct the investigation, preparation, action and settlement of each such claim and, further, provided that the Indemnified Party reasonably co-operates with the Indemnifying Party in connection with the foregoing and provides the Indemnifying Party with all information in the Indemnified Party's possession related to such claim and such further assistance as reasonably requested by the Indemnifying Party.

    The Parties acknowledge and agree that any breach of the confidentiality provisions of this Agreement by one Party may cause significant and irreparable injury to the other Party that is not compensable monetarily, as well as damages that may be difficult to ascertain, and agrees that, in addition to such other remedies that may be available at law or in equity, the other Party shall be entitled to seek injunctive relief (including temporary restraining orders, interim injunctions and permanent injunctions) in a court of competent jurisdiction in the event of the breach or threatened breach by such party of any of the confidentiality provisions of this Agreement. The relief contemplated in this Section shall be available to each Party without the necessity of having to prove actual damages and without the necessity of having to post any bond or other security. Each Party further agrees to notify the other Party in the event that it learns of or has reason to believe that any Person has breached the confidentiality provisions of this Agreement.

13. **LIMITATION OF LIABILITY.** The limitation of liability provisions of this Agreement reflect an informed voluntary allocation of the risks (known and unknown) that may exist in connection with the licensing of the Software or Documentation hereunder by Ross Video, and that voluntary risk allocation represents a material part of the Agreement reached between Ross Video and Licensee. Should Ross Video be in breach of any obligation, Licensee agrees that Licensee's remedies will be limited to those set forth in this Agreement. No action, regardless of form, arising out of this Agreement may be brought by Licensee more than twelve (12) months after the facts giving rise to the cause of action have occurred, regardless of whether those facts by that time are known to, or reasonably ought to have been discovered by, Licensee.

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    (B) IN NO EVENT SHALL ROSS VIDEO, ITS AFFILIATES AND LICENSORS, AND THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES AND AGENTS, BE LIABLE FOR ANY CLAIM FOR INDIRECT, CONSEQUENTIAL, SPECIAL, INCIDENTAL, PUNITIVE, EXEMPLARY, AGGRAVATED DAMAGES; LOST PROFITS, OR LOST REVENUE ARISING FROM OR IN CONNECTION WITH THIS AGREEMENT, REGARDLESS OF THE FORM OF ACTION, WHETHER IN CONTRACT, OR IN TORT, EVEN IF THE PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

    (C) IN ANY EVENT THE AGGREGATE LIABILITY OF ROSS VIDEO, ITS AFFILIATES AND LICENSORS, AND THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES AND AGENTS, FOR ANY CLAIM FOR DIRECT DAMAGES WITH RESPECT TO THE SUBJECT MATTER OF THIS AGREEMENT SHALL NOT EXCEED THE AMOUNT OF THE PURCHASE PRICE PAID TO ROSS VIDEO UNDER THIS AGREEMENT.

14. **TERM AND TERMINATION**.

    (1) Unless terminated earlier in accordance with the terms of this Agreement, the term of this Agreement shall commence upon Licensee's first download, access, installation, or other use of the Software or Documentation and continues until, in the case of Software licensed with Designated Equipment provided by Ross Video, the earliest of (a) the end of the License Period, or (b) if the Designated Equipment is assigned or transferred in accordance with this Agreement, the date on which the Designated Equipment is no longer owned by Licensee;

    (2) Either Party shall have the right to terminate this Agreement on notice to the other Party if:

        (a) the other Party fails to pay any fees or other amounts when due hereunder or under any other agreement between the Parties (or any Affiliates of the Parties, as applicable) in connection with the Software and/or Designated Equipment and such breach is not cured within thirty (30) days after written notice of such failure to pay is given to the defaulting Party by the non-defaulting Party;

        (b) the other Party shall file a voluntary petition in bankruptcy or insolvency or shall petition for reorganization under any bankruptcy law, consent to an involuntary petition in bankruptcy, or if a receiving order is given against it under the Bankruptcy and Insolvency Act (Canada) or the comparable law of any other jurisdiction (and such is not dismissed within ten (10) days);

(c) there shall be entered an order, judgment or decree by a court of competent jurisdiction, upon the application of a creditor, approving a petition seeking reorganization or appointing a receiver, trustee or liquidator of all or a substantial part of the other Party's assets and such order, judgment or decree continues in effect for a period of thirty (30) consecutive days; or

(d) the other Party shall fail to perform any of the other material obligations set forth in this Agreement and such default, in the case of a default which is remediable, continues for a period of thirty (30) days after written notice of such failure has been given by the non-defaulting Party or, in the case of a non-remediable default, immediately upon notice.

(3) Notwithstanding anything to the contrary contained in this Agreement:

(a) Ross Video may forthwith terminate this Agreement if Licensee is in breach of any of sections 3, 4 or 12 of this Agreement. For greater certainty, in such instances Ross Video shall provide written notice of such termination as soon as practicable but written notice shall not be a necessary prerequisite to such termination; and

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(c) Ross Video may terminate the License immediately on the date on which it provides notice to Licensee, if its agreements for Third Party Software are terminated.

(4) Upon the termination or expiry of this Agreement:

(a) Licensee shall immediately cease and desist all use of the Software and Documentation;

(b) Licensee shall immediately deliver to Ross Video any of Ross Video's Confidential Information provided hereunder (including the Software and Documentation) then in its possession or control, if any, and shall deliver a certificate of an officer of Licensee certifying the completeness of same;

(c) Licensee shall refrain from further use of such Confidential Information; and

(d) Licensee shall forthwith pay all amounts owing to Ross Video or any of its Affiliates hereunder.

15. **SURVIVAL.** The provisions of sections 1, 2, 6, 8, 9, 10, 11, 12, 13, 14, 18, 22, 23, and 24 herein shall survive the expiry or termination of this Agreement.

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19. **LANGUAGE.** The Parties have expressly required that this Agreement and all documents relating thereto be prepared in English. Les parties ont expressément exigé que cette convention ainsi que tous les documents qui s'y rattachent soient rédigés en anglais.

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23. **SEVERABILITY.** Each Section of this Agreement is distinct and severable. If any Section of this Agreement, in whole or in part, is or becomes illegal, invalid, void, voidable or unenforceable in any jurisdiction by any court of competent jurisdiction, the illegality, invalidity or unenforceability of that Section, in whole or in part, will not affect (a) the legality, validity or enforceability of the remaining Sections of this Agreement, in whole or in part; or (b) the legality, validity or enforceability of that Section, in whole or in part, in any other jurisdiction.

24. **ENTIRE AGREEMENT.** This Agreement, and any other documents referred to herein, constitutes the entire agreement between the Parties relating to the subject matter of this Agreement and supersedes all prior written or oral agreements, representations and other communications between the Parties.

Updated: November 1, 2023

Warranty and Repair Policy

Ross Video Limited (Ross) warrants its XPression CII Gateway systems to be free from defects under normal use and service for the following time periods from the date of shipment:

- XPression CII Gateway Server — 12 months
- XPression CII Gateway Software Upgrades — 12 months free of charge
- System and Media hard drives — 12 months

If an item becomes defective within the warranty period Ross will repair or replace the defective item, as determined solely by Ross.

Warranty repairs will be conducted at Ross, with all shipping FOB Ross dock. If repairs are conducted at the customer site, reasonable out-of-pocket charges will apply. At the discretion of Ross, and on a temporary loan basis, plug in circuit boards or other replacement parts may be supplied free of charge while defective items undergo repair. Return packing, shipping, and special handling costs are the responsibility of the customer.

This warranty is void if products are subjected to misuse, neglect, accident, improper installation or application, or unauthorized modification.

In no event shall Ross Video Limited be liable for direct, indirect, special, incidental, or consequential damages (including loss of profit). Implied warranties, including that of merchantability and fitness for a particular purpose, are expressly limited to the duration of this warranty.

This warranty is TRANSFERABLE to subsequent owners, subject to Ross' notification of change of ownership.

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For customers that require a longer warranty period, Ross offers an extended warranty plan to extend the standard warranty period by one year increments. For more information about an extended warranty for your XPression CII Gateway system, contact your regional sales manager.

Environmental Information

The equipment that you purchased required the extraction and use of natural resources for its production. It may contain hazardous substances that could impact health and the environment.

To avoid the potential release of those substances into the environment and to diminish the need for the extraction of natural resources, Ross Video encourages you to use the appropriate take-back systems. These systems will reuse or recycle most of the materials from your end-of-life equipment in an environmentally friendly and health conscious manner.

The crossed-out wheeled bin symbol invites you to use these systems.



If you need more information on the collection, reuse, and recycling systems, please contact your local or regional waste administration.

You can also contact Ross Video for more information on the environmental performances of our products.

Company Address

Ross Video Limited	Ross Video Incorporated
8 John Street Iroquois, Ontario Canada, K0E 1K0	P.O. Box 880 Ogdensburg, New York USA 13669-0880

General Business Office:	(+1) 613-228-0688
Toll Free:	(+1) 844-652-0645
Fax:	(+1) 613-652-4425
Toll Free Technical Support:	1-833-859-0499 (North America) +800 3540 3545 (International)
Alternately, you can contact:	
Technical Support:	(+1) 613-686-1557
Australia/Sydney Local Support:	1300 007 677*
India	+91-22-5016-6177
E-mail for Technical Support:	techsupport@rossvideo.com
E-mail for General Information:	solutions@rossvideo.com
Website:	http://www.rossvideo.com

*If the local support specialist is not available, your call will be transferred automatically to our North America center.

Contents

Introduction 1

About This Guide 1

Getting Help 2

Overview 3

CII over TCP/IP 3

Success and Error Replies 3

Checksum (optional) 3

Supported CII Protocol Commands 4

Heartbeat 5

Load Project 5

Write Command (Create Take Item) 5

Update Command 5

User Commands 6

Page Recall 7

Continue 7

Clear Channel 7

Set Take Item Offline 7

Extended CII Commands 8

Page Recall (Read) 9

Take Offline 9

Take Layer Offline 9

Resume (by Channel) 9

Resume (by TakeID) 9

Cue 9

Swap All / Channel 10

Clear Channel / Layer 10

Read Next 10

Set "Up Next" Item (Generate Preview) 10

Update Template Data 11

Delete Sequencer Item 11

Delete Sequencer Group 11

Move Sequencer Up/Down 11

Trigger Events in XPression .NET API Applications 12

Trigger a GPI Action 12

External Data Updates (X\ and R\) 13

Recalling Graphics from a MOS Workflow 14

Introduction

Thank you for choosing a Ross Video XPression CII Gateway system.

Ross Video designed the XPression CII Gateway with the needs of live production in mind.

We appreciate your business and sincerely hope that you have a great experience with your new XPression CII Gateway system. As always, if there is anything we at Ross Video can do to assist you, please do not hesitate to contact us.

About This Guide

This guide covers the use of the XPression CII Gateway system.

If, at any time, you have questions pertaining to the operation of XPression CII Gateway, please contact us at the numbers listed in the section Getting Help 2. Our technical staff is always available for consultation, training, or service.

Documentation Conventions

Special text formats are used in this guide to identify parts of the user interface, text that a user must enter, or a sequence of menus and sub-menus that must be followed to reach a particular command.

Bold text	Bold text identifies a user interface element such as a dialog box, menu item, or button. For example: In the **Slug** column, type a slug name for the story.
Italic text	Italic text is used to identify the titles of referenced guides, manuals, or documents. For example: For more information, refer to the *DashBoard User Guide.*
`Courier text`	Courier text identifies text that a user must type. For example: In the **Username** box, type `postgres`.
Menu Sequences	Menu arrows are used in procedures to identify a sequence of menu items that you must follow. For example: If a step reads **Server > Save As**, you would select the **Server** menu and then select **Save As**.
Hypertext	Identifies a hyperlink to a related topic.

Getting Help

XPression CII Gateway documentation is available online at Product Documentation and is also accessible on the product USB key and by selecting the **Help** icon in the user interface.

Contacting Technical Support

At Ross Video, we take pride in the quality of our products, but if problems occur, help is as close as the nearest telephone.

Our 24-hour Hot Line service ensures you have access to technical expertise around the clock. After-sales service and technical support is provided directly by Ross Video personnel. During business hours (Eastern Time), technical support personnel are available by telephone. After hours and on weekends, a direct emergency technical support phone line is available. If the technical support person who is on call does not answer this line immediately, a voice message can be left and the call will be returned shortly. This team of highly trained staff is available to react to any problem and to do whatever is necessary to ensure customer satisfaction.

Technical Support:

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- 1-833-859-0499 (Toll free within North America)
- +800 3540 3545 (Toll free International)
- +91-22-5016-6177 (India)
- 1300 007 677 (Australia/Sydney)*
- E-mail: techsupport@rossvideo.com
- Website: http://www.rossvideo.com

*If the local support specialist is not available, your call will be transferred automatically to our North America center.

Overview

The XPression CII Gateway provides a subset of the CII protocol for basic control of the XPression character generator. Each command string must be terminated by two backslashes, followed by a carriage return linefeed sequence (0x0D 0x0A). String data used in this CII implementation uses UTF8 encoding.

CII over TCP/IP

The CII gateway allows connections over TCP/IP. The default port listening for incoming connections is 9090.

To ensure made connections are still alive, the TCP server will send a "noop\\" reply when no commands have been sent or received for more than 30 seconds.

Success and Error Replies

Whenever a command is sucessfully executed the CII gateway will send an acknowledgment in the form "*" followed by a CRLF. If a command fails with an error, the CII gateway will send and error reply in the form "E\<error description>\\".

Checksum (optional)

To provide a means of error detection, each CII message transmitted to XPression may include a checksum value. The checksum value is optional and does not need to be included.

The checksum is computed by adding the ASCII value of each character in the message beginning with the first character, up to and including the final \\ terminator. The values are added using mod 256 to obtain a single byte checksum.

The checksum is added to the message as an ASCII hex string.

Example: Y \ 1 0 [248] \ \

59 5C 31 30 F8 5C 5C = 2C6 mod 256 = C6

The command including checksum would be transmitted as Y\10[248]\\C6 followed by CRLF.

If XPression detects an invalid checksum it will return an error in the form:

"E\Incorrect checksum received.\\"

Supported CII Protocol Commands

The following topics describe the supported CII protocol commands:

Heartbeat 5

Load Project 5

Write Command (Create Take Item) 5

Update Command 5

User Commands 6

Extended CII Commands 8

Heartbeat

The Gateway regards a command in the form "y\" as a heartbeat instruction and will reply with a success reply in the form of "*" followed by a CRLF. Sending a heartbeat is not mandatory.

Load Project

This command is used to load a specific project into the XPression engine. The filename provided requires forward slashes to be used instead of backslashes i.e., "c:/project.xpf" instead of "c:\project.xpf".

Use "m" and "M", to target a specific machine in a multi unit system.

Example 1: "m\<machineid>\<filename>\\".

Example 2: "M\<filename>\\".

Write Command (Create Take Item)

This command is used to create take items in XPression's sequencer by requesting a template and providing it with template data. The **targetid** will be the ID used to store the take item in the sequencer which can then be used in a sub-sequential "page recall" command to output the template on-air.

The data provided in the data fields are interpreted as UTF8 encoded strings and the order in which they appear should be the same order as the published fields in the designated XPression template.

Use "w" and "W", to target a specific machine in a multi unit system.

Example 1: "w\<machineid>\<targetid>\<templateid>\[data[1]]\[data[n+1]]\\".

Example 2: "W\<targetid>\<templateid>\[data[1]]\[data[n+1]]\\".

The **Write** command can also be used without supplying user data, in which case a take item will be created containing all of the template's original data.

Published materials can be set by sending the file path to the image. Forward slashes should be used instead of backslashes.

For **Visibility** and other True/False type data, "0" will be treated as false (Not Visible), all other values will be treated as true (Visible).

Update Command

★supported in version 3.60 and above).

Use "u" and "U", to target a specific machine in a multi-unit system.

Example 1: "u\<machineid>\<targetid>\<fieldid>\data\\".

Example 2: "U\<targetid>\<fieldid>\data\\".

This command is used to update a field of data in a take item in XPression's **Sequencer**.

The **targetid** will be the ID of the take item to be updated.

The **fieldid** parameter is the index of the field to be updated (field numbers start at 1).

The data provided in the data field is interpreted as a UTF8 encoded string.

User Commands

Use “Y” and “Z”, where Y dictates the command to be executed for channel one and Z dictates the command to be executed for channel two.

Example: “Y\<byte[1]><byte[n+1]>\\” (issues an action for output one).

The user command or “keyboard emulation” command is used for several instructions; the actual command executed by the gateway depends on the payload of the command given.

The following commands and their payload structures are supported:

Page Recall 7

Continue 7

Clear Channel 7

Set Take Item Offline 7

Page Recall

This command is used to display a previously created take item on an output channel designated by either the "Y" (channel one) or the "Z" (channel two) command.

The command's payload is composed of two segments:

- the ID of the take item being recalled and
- the actual read instruction which takes the take item to the output.

The ID is transmitted as ASCII digits. The read instruction is encoded as a byte with the decimal value of 248.

Example: For displaying a take item with ID 1030 on output two of an XPression machine you would issue the following command string: "Z\1030[248]\\" .

★Do not send the ASCII characters "[248]". Send the ASCII byte with a decimal value of 248.

Optional

The ID can also be constructed using bytes representing the characters which make up the ID. The (decimal) byte values used are 192 for "0" up to 201 for "9". If you were to encode the take item ID 1030, this would translate into a byte sequence of: (decimal values) [193][192][195][192].

For displaying a take item with ID 1030 on output two of an XPression machine you would issue the following command string: "Z\[193][192][195][192][248]\\"

Instead of using the decimal value of 248 for the page read, you can also use the decimal value of 246 to issue a "read next" instruction. The result on the XPression machine will be the same.

Continue

To continue the animation or play state of an online take item, re-issue a **Page Recall** command using the ID of the online take item.

★This action is configurable in the CII gateway settings; instead of a continue it could be used to recue the page to the beginning of the animation.

Clear Channel

Use the decimal value 202 anywhere in a user command's payload to clear the designated output.

★You can have the gateway ignore clear instructions in the gateway's configuration.

Set Take Item Offline

A take item that has been taken online using a **Page Recall** instruction can be taken offline by specifying the **TakeID** followed by a **Clear** (decimal value 202) instruction.

Example: To take the take item with **TakeID** 1030 offline, issue the following command string: "Y\1030[202]\\"

Extended CII Commands

Beginning in XPression version 3.10 software, XPression supports a simplified CII syntax which also provides access to extended functionality not available in the standard CII protocol. Standard CII protocol commands do not have the ability to access individual layers within an output channel. This extended command set provides that capability. These extended commands also provide access to more than two output channels.

All of these commands will use the X\ syntax to designate an XPression specific command which deviates from the standard CII protocol.

All channel numbers in the following commands begin counting at 1, i.e., Channel 1 is represented as 1, Channel 2 is 2, etc.

Layer numbers can be any number, positive or negative. Some editions of XPression may have limited layers available.

As with the regular CII commands, the response to these commands will be *<CR><LF> or an E\ error message.

Page Recall (Read) 9

Take Offline 9

Take Layer Offline 9

Resume (by Channel) 9

Resume (by TakeID) 9

Cue 9

Swap All / Channel 10

Clear Channel / Layer 10

Read Next 10

Set "Up Next" Item (Generate Preview) 10

Update Template Data 11

Delete Sequencer Item 11

Delete Sequencer Group 11

Move Sequencer Up/Down 11

Trigger Events in XPression .NET API Applicatio 12ns

Trigger a GPI Action 12

Page Recall (Read)

X\READ\takeid\channel\layer\\

This command will place a take item on air on the specified channel and layer. Both the channel and layer values are optional.

If either the channel or layer are invalid or not provided, then the take item will use the channel/layer specified in the XPression sequencer.

Example: "X\READ\1030\2\-3\\" will read take item 1030 to channel 2 on layer -3.

Take Offline

X\TAKEOFFLINE\takeid\\

This command will remove a take item from its output channel, if it is currently active on an output channel.

Example: "X\TAKEOFFLINE\1030\\" will remove take item 1030 from whatever channel/layer it is currently on.

Take Layer Offline

X\LAYEROFF\channel\layer\\

This command will remove the current online take item from a given channel and layer.

The out transition (if one exists) will be used for the item.

Example: "X\LAYEROFF\0\1\" will remove the take item from channel 0, layer 1.

Resume (by Channel)

X\RESUME\channel\layer\\

This command will resume a paused take item on the specified channel and layer.

Example: "X\RESUME\2\-3\\" will resume the take item currently on channel 2, layer -3.

Resume (by TakeID)

X\RESUMEID\takeid\\

This command will resume the paused take item specified by its **Take ID**. If the specified take item is not currently online then no action will occur.

Cue

X\CUE\takeid\\

This command will cue the take item specified by its **Take ID**. If the specified take item is not currently online then no action will occur. If the take item is already cued or online, nothing will occur.

Swap All / Channel

X\SWAP\channel\\

This command will swap the cued take item on the specified channel or on all channels. If a channel is not specified, all channels will be swapped.

Example: ”X\SWAP\2\\” will swap channel 2.

Example: ”X\SWAP\\” will swap all channels.

Clear Channel / Layer

X\CLEAR\channel\layer\\

This command will clear an entire channel, or a single layer on a channel. If the layer is invalid or not included in the message, then the entire channel will be cleared.

Example: ”X\CLEAR\2\\” will clear channel 2.

Example: “X\CLEAR\1\3\\” will clear channel 1 on layer 3.

Read Next

X\NEXT\\

This command will read the currently focused sequencer item to air, then advance the sequence to the next item in the rundown.

This can be used to linearly step through a sequence that already exists on the XPression engine.

This command may require the operator to manually set the sequencer focus to the desired item.

Set "Up Next" Item (Generate Preview)

X\UPNEXT\takeid\\

This command will generate a preview in XPression of the specified take item. The preview will appear in the local preview window of XPression’s sequencer.

If XPression is connected to an XPression Desktop Preview Server, then the preview will also be sent to the **Up Next** channel as configured in the Desktop Preview Server application. XPression will also recalculate what the next upcoming item is for each channel as determined by sequence order, and it will send previews of those items to the “per-channel” previews.

Update Template Data

X\TEMPLATEDATA\takeid\Object.Property\Value\Object.Property#2\Value#2\....\\

This command will update the template data fields of take items in the sequencer (and on-air if the item is already online).

Multiple template data fields can be updated simultaneously by adding additional "Object.Property" and Value pairs to the command.

The "Object.Property" field takes the format of the Object Name and the published property to modify, e.g. Text1.Text or Quad1.Visibility.

The value field is the value that should be set to the property. For string types this is simply the string value. For Visibility fields it should be a 1 or 0, and for Vector types like Position, Rotation, Scale, etc., it should be in the format "x,y,z" where x,y,z are floating point values.

If only one element of a vector type needs to be set you can also add .X,.Y, or .Z to the property name (see the example below).

Valid property names include Text, Position, Rotation, Scale, Visibility, Pivot, Material, Texture Position, and Texture Scale.

Examples:

X\TEMPLATEDATA\1001\Text1.Text\Some New Text\\

X\TEMPLATEDATA\1001\Quad1.Scale.X\1.0\Quad1.Position\960,540,350.4\\

X\TEMPLATEDATA\1001\Cube1.Material.Right\C:/TestImage.jpg\\

Delete Sequencer Item

X\DELETE\takeid\\

This command will delete the take item with the specified take id from the sequencer.

Delete Sequencer Group

X\DELETEGROUP\groupid\\

X\DELETEGROUPNAME\group name\\

This command will delete the sequencer group with the supplied group name or group id. All items within the group will be deleted as well.

Move Sequencer Up/Down

X\UP\\

X\DOWN\\

These commands will move the selection of the focused item in the XPression Sequencer up or down.

It can be used in conjunction with the X\NEXT\\ command to move around in a prebuilt sequence and recall items. It will mostly be used in situations where an operator wants to trigger sequencer items from an external device but can still see the XPression sequencer at the same time (for example through Macro buttons from a production switcher).

Trigger Events in XPression .NET API Applications

X\TRIGGER\stringdata\\

This command allows a CII command to trigger an event in an application which is connected to XPression using the .NET/COM API.

[stringdata] can be any textual data that needs to be passed to that application. It is recommended that [stringdata] not be extremely large amounts of data, but rather is a short command string.

There are many reasons this functionality might be desired; for example if you have an API application which parses data and builds charts/graphs inside XPression, and you want to be able to trigger this to occur from a third party automation system which connects to XPression over a CII protocol.

Refer to the XPression SDK help file for more information on connecting a .NET application to the CII trigger command.

Trigger a GPI Action

X\GPI\board\gpi number\\

This command will trigger a GPI action that has been configured in XPression.

Example: ”X\GPI\1\12\\” will execute the action assigned to GPI #12 on the first GPI Board (Board #1).

External Data Updates (X\ and R\)

Starting in version 5.9, XPression supports the ability to send an X\ command to an external CII device and wait for a R\ response.

The X\ command is used to request updated template data when a page is cued or taken online. XPression will wait until an R\ response is received. The R\ command contains the new data values in a pre-determined order.

The X\ command will be transmitted as follows:

X\machineid\template#\template#\Field#FieldName\Field#FieldName\Field#FieldName\....\\[CR][LF]

A variable number of fields will be transmitted, determined by how many fields in the template can be updated externally. Each field will be transmitted with a two byte field number between 00 and 99, followed by an ASCII field name. The field number and field name are both configurable inside the XPression templates.

The proper response to the X\ command is an R\ command in the following format:

R\machineid\Data\Data\Data\...\\[CR][LF]

★When using X\ and R\ commands, a single XPression engine should be connected to a single CII gateway. The CII gateway should only be connected to a single CII device. Having multiple machines connected simultaneously can lead to situations where it is unclear for which device the data is intended.

★X\ and R\ are not supported for rolls or crawls.

Recalling Graphics from a MOS Workflow

When graphics have been added to the sequence via a MOS workflow, it is not possible to recall them via the normal X\ or Y\ commands because that implies that prior knowledge of the take item number is known. MOS items have auto-generated take item numbers that cannot be known by the remote device. Therefore another method of recalling MOS graphics can be used. It requires the remote device to have knowledge of the **StoryID**, **Item ID**, and **ObjID** for the desired graphic. This information is present in the XPression MOS Objects that will be available to all MOS devices and automation systems listening for MOS data (via roStorySend messages).

To recall a MOS CG Item, use the following command:

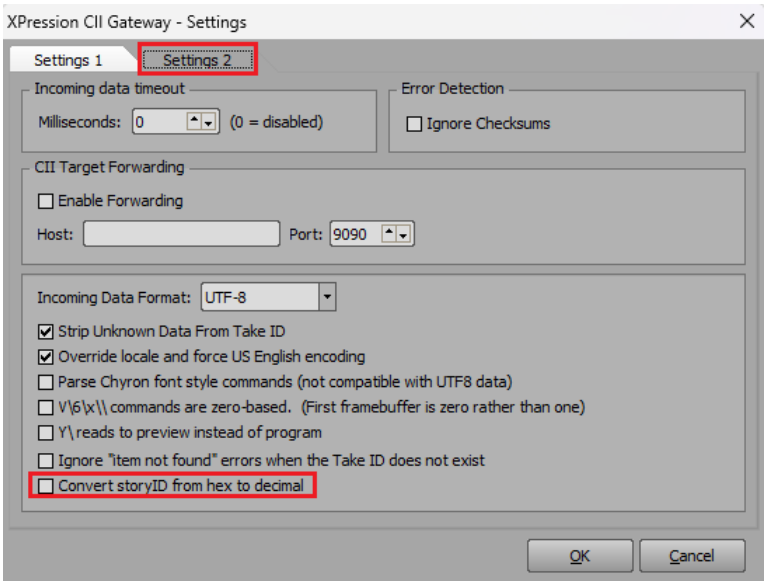
X\READ\storyid-itemid-objid\\

Example: X\READ\ENPSA-RD;P_XPN/W/F_HOLD XPN DEV/R_C510129E-1CD6-4101-8D1120597E3389FC;98B7B5CD-71FD-4D87-8E13B3CD4E0EB28F-2-{66178887-0A2D-448F-AB43-6D675B923432}\\

If the **StoryID** contains backslashes then those should be replaced with forward slashes so as to not interfere with the delimiters in the CII protocol.

The RESUME, CUE, UPNEXT, and TAKEOFFLINE commands all support the storyid-itemid-objid parameter as well.

For cases where the storyID is retrieved in its original hexadecimal format, there is an option in the **CII Gateway Settings 2** tab to convert the storyID from hexadecimal to decimal.



CII Gateway Settings 2

- With this option disabled, the CII gateway interprets the **StoryID** as normal (decimal) and it is directly applied as StoryID in the given MOS command.
- With this option enabled, the CII gateway converts the hex **StoryID** to it's decimal equivalent and it is replaced in the outgoing command.

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Technical Support	**Telephone:**	+1 613-686-1557 +1 833-859-0499 (Toll free within North America) +800 3540 3545 (Toll free International) +91-22-5016-6177 (India) 1300 007 677 (Australia/Sydney)* *If the local support specialist is not available, your call will be transferred automatically to our North America center.
	Email:	techsupport@rossvideo.com

General Information	**Telephone:**	+1 613-228-0688 +1 844-652-0645
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