Kaleido
Remote Control Protocol
(Gateway)
User's Guide

**Miranda
Technologies Inc**.
3499 Douglas-B.-Floreani
St-Laurent, Québec, Canada H4S 1Y6

Tel. 514-333-1772
Fax. 514-333-9828
www.miranda.com

USER'S GUIDE

How to contact us:

For technical assistance, please contact the Miranda Technical support centre nearest you:

Americas	**Asia**	**Europe, Middle East, Africa, UK**	**France (only)**
Telephone:	*Telephone:*	*Telephone:*	*Telephone:*
+1-800-224-7882	+81-3-5730-2987	+44 (0) 1491 820222	+33 (0) 1 55 86 87 88
e-mail:	*e-mail:*	*e-mail:*	*e-mail:*
techsupp@miranda.com	asiatech@miranda.com	eurotech@miranda.com	eurotech@miranda.com

Visit our web site at www.miranda.com

Kaleido Remote Control Protocol (Gateway)

Table of Contents

Kaleido-K2 / Kaleido-Alto / Kaleido-Quad / Kaleido-X Remote Control Protocol (Gateway)

1   Introduction

Kaleido-K2, Kaleido Alto/Quad and Kaleido-X can execute commands received via a Gateway, allowing third-party developers and individual users remote access to some Kaleido functions. This document describes the Gateway functionality, and defines the commands that are available.

In this document, the term "Kaleido" is used to describe features common to the Kaleido-K2, Kaleido-Alto/Quad and Kaleido-X. Features exclusive to any one of these products will be described using the full product name, e.g. Kaleido-K2, Kaleido-Alto/Quad or Kaleido-X.

1.1   Software Versions

This information in this document applies to software released up to the date of publication, beginning with the versions given here for each Kaleido product:

Kaleido-K2:   5.30 and up

Alto/Quad: 3.01 build63 and up

Kaleido-X: 2.00 Build 3606 and up

1.2   Gateway Options for Kaleido-K2

Two Gateways are available for use with Kaleido-K2:

- The Internal gateway is implemented within the Kaleido-K2 software

- The MT-Gateway runs as a Windows service on the Kaleido-K2's operating system

NOTE: The Internal Gateway is the preferred gateway, and Miranda strongly recommends that it be used instead of the MT-Gateway, as it is more robust. The MT-Gateway might be used for legacy applications (the Internal gateway was not available in early versions of the software) or in specific situations based on design considerations, but its use is deprecated.

It is important to note that **only one gateway can be operating at a time**, and the user must manage the gateway resources to ensure that this is the case.

1.2.1   Internal Gateway

The internal gateway is implemented in the Kaleido-K2 software itself, and is therefore internal to and exclusively functional with a specific Kaleido-K2.

The internal gateway is configured through the Kaleido Properties File, and is turned on or off by editing that file. Here is how to do it:

- From your Kaleido-K2's desktop, double click on the icon "My Computer".

- Navigate to "C:\iControl\Startup\" and open the file "Kaleido.properties" using the Notepad (right click on the "Kaleido.properties" file and select "Notepad" from the "Open With" menu).

- Search the file for either of the following lines:

  activateInternalGateway=TRUE

  activateInternalGateway=FALSE

- If activateInternalGateway is TRUE, the internal gateway is ON by default at startup. Disable the internal gateway at startup by replacing TRUE with FALSE in this line.

- If activateInternalGateway is FALSE, the internal gateway is OFF by default at startup. Enable the internal gateway at startup by replacing FALSE with TRUE in this line.

- Save your changes using the Save item in the File menu.

- Close the Notepad editor.

- Restart the Kaleido-K2.

The internal gateway supports all Kaleido/Gateway commands when connected via port 13000, and supports only the <listnodes/> command when connected via port 10001.

- The <listnodes/> command is not available on the Kaleido-Alto/Quad nor the Kaleido-X

1.2.2   MT-Gateway

The MT-Gateway is shipped with current versions of the Kaleido-K2 in support of legacy applications, but its use is not recommended.

As the MT-Gateway must not be running when you are using the internal gateway, verify that it is turned off as follows:

- On the Kaleido-K2 machine, display the desktop (use the desktop icon on the menu bar).

- Double click on the "Services" icon. A dialog containing the services will appear. You can see if the MT-Gateway service is running, and whether it is configured to start automatically when the Kaleido-K2 is booted.

- Right-click on MT_Gateway and choose Properties

- Choose Manual as the Startup type, and click on OK.

- Click the "Stop Service" icon on the toolbar to turn the gateway off
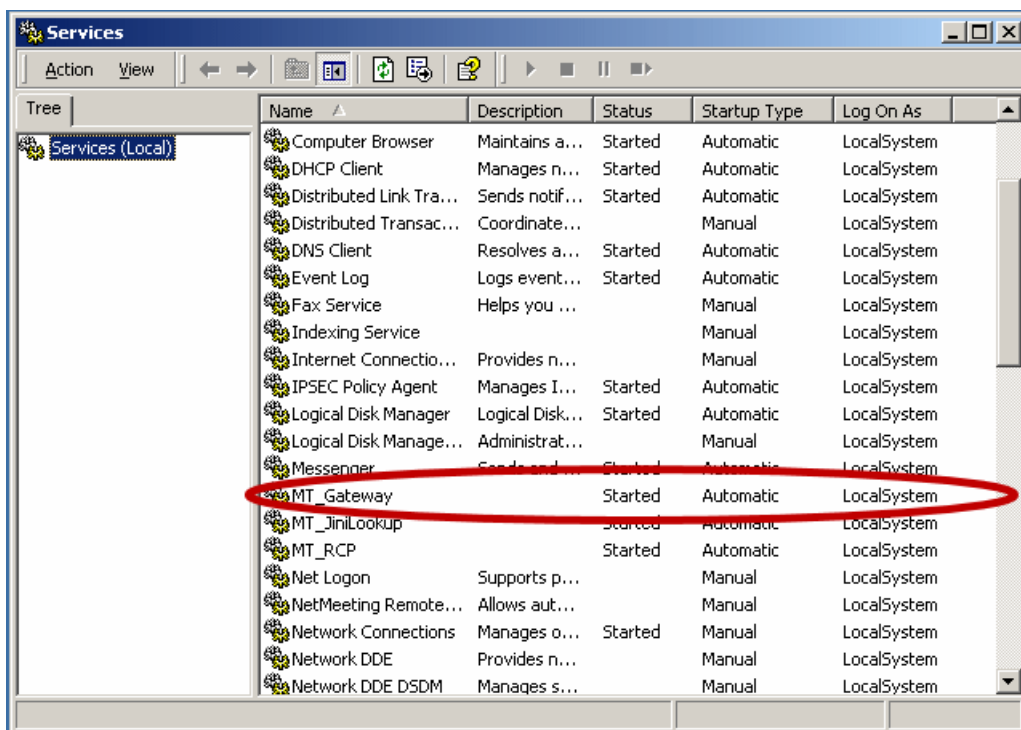
1.3   Remote Operation of the Kaleido-K2 via the Gateway

Kaleido-K2 can execute XML commands received via the either the internal gateway (preferred) or the MT-gateway (deprecated). In an environment containing many Kaleido-K2s, there is a Gateway running on each Kaleido-K2. Remember that in such an environment you should configure your system to have at the most two lookups running (please refer to the "How to configure the Kaleido-K2 in systems including more than two units and application servers?" section of the Kaleido-K2 documentation).

Commands are sent to the Gateway via TCP/IP (Transmission Control Protocol/Internet Protocol), so you can use a Terminal Emulation (telnet) program or create your own application using the language of your choice (C++, Visual Basic, Java, …). In section 3 below, the use of "HyperTerminal" software will be described. HyperTerminal is a Windows application that is typically installed on every Windows computer, you will find it under the "Program" - "Accessories" - "Communications" menu. This program will communicate with the machine on which the Gateway is running using communications port 13000.

1.4   Remote Operation of the Kaleido-Alto/Quad or Kaleido-X

For remote operation, the ethernet port of the Kaleido-Alto/Quad and Kaleido-X is continuously available to communicate with a remote computer. The functionality is similar to the Internal Gateway on the Kaleido-K2, but the Kaleido-Alto/Quad or Kaleido-X port is always "ON" and no configuration is required.

Kaleido Alto/Quad or Kaleido-X can execute XML commands received via TCP/IP (Transmission Control Protocol/Internet Protocol). To send commands, you can use a Terminal Emulation (telnet) program or create your own application using the language of your choice (C++, Visual Basic, Java, …). In Section 3 below, the use of "Hyper Terminal" software will be described. Hyper Terminal is a Windows application that is typically installed on every Windows computer, you will find it under the *Program - Accessories - Communications* menu. This program will communicate with the Kaleido-Alto/Quad or Kaleido-X using communication port 13000.

2 Gateway commands

Kaleido supports the following commands through the Gateway access. Most of these apply to all Kaleidos, but some only apply to one platform, as indicated in the list. Furthermore, there may be differences in the use or syntax of some commands depending on the platform being used. All of these points are clarified in the list below, and in the detailed description of each command that follows.

2.1 Index of Gateway Commands

Command	Applies to			Description	page
openID	KX	K2	AQ	Opens a session with the specified Kaleido	5
closeID	KX	K2	AQ	Closes a previously opened session.	7
getKCurrentLayout	KX	K2	AQ	Gets the name of the current layout	7
setKCurrentLayout	KX	K2	AQ	Loads a specific Layout.	8
getKLayoutList	KX	K2	AQ	Gets the list of available Layouts.	8
setKStatusMessage	KX	K2	AQ	Sets a Gateway Alarm to the specified state.	9
setKChannel	KX	K2	AQ	Associates a Channel to the specified Monitor.	9
setKDynamicText	KX	K2	AQ	Configures the text to display for a Dynamic Text.	10
getKMetaData		K2		Gets Metadata from a Multidata component	10
setKTimer		K2	AQ	Configures the specified Count Down Timer.	11
setKTimer2		K2		Configures the specified Timer.	12
setKTimerTrigger		K2	AQ	Starts, stops or resets a Count Down Timer.	13
setKFireAction		K2	AQ	Fires the specified Action.	13
setKEnableAlarmGroup		K2		Enables the Alarm Group.	13
setKDisableAlarmGroup		K2		Disables the Alarm Group.	14
setKSaveLayout		K2	AQ	Saves the current layout	14
getKAudioOut	KX	K2	AQ	Gets the identity of the current audio output	14
setKAudioOut	KX	K2	AQ	Selects the audio to be monitored	15
getKAudioOutVolume		K2	AQ	Get the current audio monitoring output volume	17
setKAudioOutVolume		K2	AQ	Set the volume of the audio monitoring output	17

getKAudioOutMode	K2	AQ	Get the current audio monitoring output mode	17
setKAudioOutMode	K2	AQ	Set the audio monitoring output mode	18
setKVerticalOffset		AQ	Offset the graphic from display	18
setKIcontrolMode		AQ	Enable/Disable mouse color keying over video	18
setKMouseColorA		AQ	Mouse color to be keyed over video	18
setKMouseColorB		AQ	Mouse color to be keyed over video	19
setKMouseColorC		AQ	Mouse color to be keyed over video	19

2.2   Document Conventions

Each command in this document is presented in the following format:

"The Command name"	**Kaleido types it applies to.**

> Command description.
>
> The proper command syntax with variables.
>
> Gateway Response – a list of possible answers:
>
>> a) For a successful execution of the command
>>
>> b) For an unsuccessful execution of the command
>
> Special notes for the command or specific platform.

2.3   Gateway Command descriptions

Please note that the syntax must be exactly replicated when sending a command.

openID	**KX K2 AQ**

> This command opens a session with the specified Kaleido .
>
> *Please note that it is not necessary to open a session every time you want to send a command to the Gateway. Since opening a session takes a few seconds, it is recommended that you keep a session open as long as commands need to be sent.*
>
> <openID>*IP_ADDRESS*_0_4_0_0</openID>
>
> On the Kaleido-X:
>
> To open a session without room context:

OR to open a session with a room context:

<openID>*ROOM_NAME*</openID>

OR to open a session with user privilege validation with MD5 password hash:

<openID>mirandagateway://*USERNAME:PASSWORD_MD5_HASH*@*SYSTEM_NAME/ROOM_NAME*</openID>

OR to open a session with user privilege validation without MD5 password hash:

<openID>mirandagateway://*USERNAME:CLEAR_PASSWORD*@*SYSTEM_NAME/ROOM_NAME*</openID>

Where:

- *IP_ADDRESS* is the IP address of your destination Kaleido-K2 or Kaleido-Alto/Quad.

- *ROOM_NAME* is the room context for the session (see getKCurrentLayout, setKCurrentLayout and getKLayoutList).

- *USERNAME*: The username that will be used to validate permissions.

- *PASSWORD_MD5_HASH:* The md5 hash of the user password, encoded in base 64.
  - ➢ For information on md5 see http://www.ietf.org/rfc/rfc1321.txt.
  - ➢ For information on base 64 see RFC 3548

- *CLEAR_PASSWORD:* The user password.

- *SYSTEM_NAME:* The system name as specified in XAdmin

Gateway response:

- <nack/>:

  - o the Gateway was not able to recognize the command OR

  - o the room name was invalid OR

  - o the username does not match the provided password OR

  - o the system name was invalid.

  - o The IP_ADDRESS parameter is wrong.

- <ack/>: the command was recognized by the Gateway.

closeID KX K2 AQ

This command closes a session with the specified Kaleido

On the Kaleido-K2 or Kaleido-Alto/Quad

<closeID>*IP_ADDRESS*_0_4_0_0</closeID>

On the Kaleido-X :

Where:

- *IP_ADDRESS* is the IP address of the Kaleido-K2 or Kaleido-Alto/Quad.

Gateway response:

- : the Gateway was not able to recognize the command.

- : the command was recognized by the Gateway.

Note that this command closes the current connection to the client via port 13000, so this connection must be re-established before another session can be opened. If you are using Hyperterminal, it will automatically re-establish the previous connection if you begin typing new commands, but other clients may require you to manually reconnect.

getKCurrentLayout KX K2 AQ

This command retrieves the name of the current layout.

Gateway response:

For Alto/Quad:

- <kCurrentLayout>*Currentlayout.xml*</kCurrentLayout>

For the Kaleido-K2 and Kaleido-X:

- <kCurrentLayout>name="*CurrentLayout.kg2"*</kCurrentLayout>

- : the Gateway was not able to recognize the command.

Where: *CurrentLayout.kg2* is the name of the Layout currently in use by the Kaleido-K2 or the Kaleido-X. For Kaleido-Alto/Quad, the layout suffix is .xml instead of .kg2

NOTE: On the Kaleido-X, the session must have a room context for the command to be used. If the session was opened using the command the gateway will return .

setKCurrentLayout   KX K2 AQ

This command loads the specified layout.

<setKCurrentLayout>set *LayoutToLoad*.kg2</setKCurrentLayout>

Where:

- *LayoutToLoad* is the name of the Layout to load. This Layout must have been exported to the Kaleido prior to executing this command. Note that you can use the getKLayoutList command to retrieve the available layouts before sending this command. For Kaleido-Alto/Quad, the layout suffix is .xml instead of .kg2

Note for Kaleido-X:

If the session does not have a room context, the layout name must be prefixed with the room name and a "/".

- Ex: <setKCurrentLayout>set Room1/Layout1.kg2</setKCurrentLayout>

Gateway response:

- <nack/>: the Gateway was not able to recognize the command or the layout could not be found.

- <ack/>: the command was recognized by the Gateway and the layout has been fully loaded.

getKLayoutList   KX K2 AQ

This command returns the list of Layouts that can be used on the Kaleido.

Gateway response:

- : the Gateway was not able to recognize the command.

- <kLayoutList> *Layout1*.kg2 *Layout2*.kg2 … *AnAvailableLayout*.kg2</kLayoutList>

Note for Kaleido-X:

If the session does not have a room context, the layout names will be prefixed with the room name and a "/". If the session has a room context, only layouts for that room will be returned and the layout names won't be prefixed with the room name (see K2/AQ style response).

- Ex: <kLayoutList>Room1/MAIN.kg2 Room1/BACKUP1.kg2 Room2/MAIN.kg2</kLayoutList>

Where:

- *Layout1*, *Layout2* and *AnAvailableLayout* are the name of the Layouts that are available on the Kaleido-K2. For Kaleido-Alto/Quad, the layout suffix is .xml instead of .kg2

setKStatusMessage   **KX K2 AQ**

This command associates an Alarm state with an id. The Kaleido can be configured to listen to this id using an Alarm Monitor, and thus report the state. This is a convenient way of reporting Alarms to the Kaleido.

<setKStatusMessage>set id="*AnId*" status="*STATUS*" message="*TheMessage*"</setKStatusMessage>

Where:

- *AnId* is the identifier that will receive the new state.

- **Note:** Kaleido-Alto/Quad will only accept numeric values for this parameter, in the range 0 to 1024. The Kaleido-X does not have this limitation.

- *Status* is any of the available statuses (OK, DISABLE, WARNING or ERROR).

- *TheMessage* is reserved for future use, and will be ignored.

Gateway response:

- <nack/>: the Gateway was not able to recognize the command.

- <ack/>: the command was recognized by the Gateway.

setKChannel   **KX K2 AQ**

This command is used to assign a Channel to the specified Monitor in the current Layout.

<setKChannel>set channelname="*ChannelName*" monitor="*MonitorNumber*" </setKChannel>

Where:

- *ChannelName* is the name of the Channel to assign to the specified Monitor. On the Kaleido-X this is the full path to the channel. Ex.: /Input A/Channel 1.

- *MonitorNumber* is the identifier of the Monitor to which the Channel must be assigned. On the Kaleido-X the monitor number must be prefixed with the room name and a "/" if the session does not have a room context. Ex.: /Room1/composite42. The monitor name is available in the XEdit Layout. (Properties:Assignments:Name)

K2 Note: to get the identifier of Monitors of your current Layout press the TAB key of the Kaleido-K2's keyboard or the SELECT key of the RCP.

Gateway response:

- <nack/>: the Gateway was not able to recognize the command.

- <ack/>: the command was recognized by the Gateway.

setKDynamicText	KX K2 AQ

This command is used to set the text of a UMD or Text Label Component that is configured to use Dynamic Text. Note that the Service ID for this component must be set to "Gateway" when the layout is created in KEdit/XEdit in order for this command to work.

<setKDynamicText>set address="*Address*" text="*NewText*" </setKDynamicText>

Where:

- *Address* is the configured Text Address of the UMD or Text Label Component.

- **Note:** Kaleido-Alto/Quad requires a numeric value in the range 0-1024. The Kaleido-X does not have this limitation.

- *NewText* is the text to display.

Gateway response:

- <nack/>: the Gateway was not able to recognize the command.

- <ack/>: the command was recognized by the Gateway.

getKMetaData	K2

This command is used to get metadata that is assigned to a Multidata component assigned to a text label in the Kaleido-K2. The Kaleido-K2 will return XDS, Dolby-E and video format data in response to this command.

<getKMetaData>get dataname="*MultiDataName"* </getKMetaData >

Where:

- *MultiDataName* is the name of the multidata source, as defined in the MultiData Configuration panel.

Gateway response:

- <nack/>\r\n: there is a syntax error in the xml command.

- <kMetaData><error>*MultiDataName* not found</error></kMetaData>: the MultiData entity does not exist in the Kaleido-K2.

- <kMetaData>**<input id="1" stationID="1234" channelNumber="12"/> <input id="2" stationID="RDS" channelNumber="25"/>**</kMetaData>

Where the returned information (shown in **bold** type here) is the data contents of the MultiData element. This example shows a typical return of data; the actual data returned will depend upon the configuration and definition of the MultiData component on the Kaleido-2.

- o The response will be grouped by input, and the inputs sorted in ascending order (from input 1 to 32).

- o For each input, all the data will be presented as attributes.

o The data legends will be mapped to valid XML attribute names, all of which are listed here:

inputFormat
WSS
scansys
AFD
AFD3Bits
AFDANC
SID
programConfig
dialogLevel
networkName
stationID
channelNumber
TSID
programName
programType
vChipRating
programDescription
programLength
elapsedTime
programID
timeOfDay
timeZone

- The value field is escaped as defined in the XML protocol for an attribute value.

  For instance, ABC"DEF\GHI<JKL>MNO/PQR&STU;VWX'YZ
  becomes ABC"DEF\GHI<JKL>MNO/PQR&STU;VWX'YZ

- The attributes order **is not** guaranteed and may change for two consecutives calls to the same command.

NOTE: If the MultiData component is not assigned to a text component, no values will be included in the information returned to the user from the gateway. MAKE SURE TO ASSIGN THE MULTIDATA COMPONENT TO A TEXT LABEL COMPONENT.

setKTimer   K2 AQ

This command is used to configure the specified Count Down Timer Component.

<setKTimer>set id="*TimerID*" preset="*HH:MM:SS*" direction="*Direction*" loop="*Loop"* </setKTimer>

Where:

- *TimerID* is the id of the Count Down Timer Component to modify.

- *HH:MM:SS* is the preset to associate to the Count Down Timer Component.

- *Direction* is the direction to count, this value can be **UP** or **DOWN**.

- *Loop* indicates if the counter must count continuously. This value can be either **ON** or **OFF**.

Gateway response:

- <nack/>: the Gateway was not able to recognize the command.

- <ack/>: the command was recognized by the Gateway.

setKTimer2   **K2**

This command is used to configure a Timer in the Kaleido-K2 system

<setKTimer2>set TimerName="NAME" StartTime="HH:MM:SS:FF" PresetTime="HH:MM:SS:FF" TimerMode="UP" EndMode="STOP" </setKTimer2>

Where:

- *NAME* is the name assigned to the Timer in the Timer Configuration panel accessed from the Timer Browser.

- *StartTime* may be one of the following:

  - HH:MM:SS:FF – time in hours:minutes:seconds:frames at which this Timer will start its count, depending on its configuration and presence of triggers. Note that if the HOURS is 00, the start time is deemed to be the previous midnight, whereas if HOURS is 24, it is considered to be the next midnight. This allows the timer to decide whether it should be counting or waiting to start when it compares the start time to the current time. (Note: the present implementation allows the user to send "Frames" information, but it is not used by the timer, which will start on the exact second)

  - NOW – the Timer will start counting immediately upon receiving the command

  - WAIT – the Timer will not start until it receives a setKTimerTrigger gateway command with the argument START

- *PresetTime* may be one of the following:

  - Count duration (hours:minutes:seconds:frames) for *Count Up* and *Count Down* modes,

  - End time (hours:minutes:seconds:frames) for the *Remaining Time* mode.

  - Note: the present implementation allows the user to send "Frames" information, but it is not used by the timer, which will use count durations or end times based on seconds.

- *Time Mode* is the operating mode of the timer. Possible values are: UP, DOWN, REMAINING

- *EndMode* defines what is to happen when the Timer reaches the end of its count. Possible vales are: LOOP, STOP, OVERRUN

Gateway response:

- <nack/>: the Gateway was not able to recognize the command.

- <ack/>: the command was recognized by the Gateway.

setKTimerTrigger   **K2 AQ**

This command is used to control the specified Count Down Timer Component. The Count Down Timer can be started, stopped or reset.

<setKTimerTrigger>set id="*TimerID*" trigger="*Trigger*"</setKTimerTrigger>

Where:

- *TimerID* is the id of the Count Down Timer Component to control.

- *Trigger* is the action that the Count Down Timer must do. This value can either be **START**, **STOP** or **RESET**.

Gateway response:

- <nack/>: the Gateway was not able to recognize the command.

- <ack/>: the command was recognized by the Gateway.

setKFireAction   **K2 AQ**

This command is used to fire the specified Action.

<setKFireAction>set name="*NameOfTheActionToFire*"</setKFireAction>

Where:

- *NameOfTheActionToFire* is the name of the Action to be executed. The Action must have been exported to the Kaleido-K2 in order to be executed.

Gateway response:

- <nack/>: the Gateway was not able to recognize the command.

- <ack/>: the command was recognized by the Gateway.

setKEnableAlarmGroup   **K2**

This command enables the specified Alarm Group.

<setKEnableAlarmGroup>set name="*NameOfTheGroupToEnable*"</setKEnableAlarmGroup>

Where:

- *NameOfTheGroupToEnable* is the name of the Alarm Group to enable.

Gateway response:

- <nack/>: the Gateway was not able to recognize the command.

- <ack/>: the command was recognized by the Gateway.

setKDisableAlarmGroup   **K2**

This command is used to disable the specified Alarm Group.

<setKDisableAlarmGroup>set name="*NameOfTheGroupToDisable*"</setKDisableAlarmGroup>

Where:

- *NameOfTheGroupToDisable* is the name of the Alarm Group to disable.

Gateway response:

- <nack/>: the Gateway was not able to recognize the command.

- <ack/>: the command was recognized by the Gateway.

-

setKSaveLayout   **K2 AQ**

This command allows the user to save the currently displayed layout to a file.

- <setKSaveLayout>set name="*FileName*"</setKSaveLayout>

Where:

- *FileName*   is the name of the file that will contain the Layout.

NOTE: do not specify an extension to the file name, as the file extension "kg2" is hardcoded for the Kaleido-K2 Layouts.

Gateway response:

- <ack/>   The command was correctly interpreted and executed.

- <nack/>   The command was not executed, due to bad spelling or invalid parameter.

getKAudioOut   **KX K2 AQ**

This command allows the user to get the selected Audio Monitoring Output

Note: *A session with user privileges must first be opened for this command to work on the Kaleido-X*

Returned value can be any of:

-        The command was not executed, due to bad spelling or invalid parameter.

- <kAudioOut>DETAILS</kAudioOut> The command was executed

DETAILS will vary depending on the type of audio output detected.

When no audio output is currently being monitored:

- <kAudioOut>Type="NONE"</kAudioOut>.

When the format is STREAMING, the returned value indicates the IP address and the Feed ID of the source using the following syntax:

- <kAudioOut>Type="STREAMING" IP="*999.999.999.999*" FeedID="*XX*"</kAudioOut>

Where:

999.999.999.999   is the IP of the machine from where the stream occurs.

XX   is the identifier of the feed to use.

When the format is an AUDIO CARD, the returned value indicates which audio card input is being monitored:

- <kAudioOut> Type="AUDIOCARD" Input="*999*"</kAudioOut>

Where:

999   indicates the input from the card.

When the format is EMBEDDED, the returned value will contain the video input, the group and the AES used. The syntax will be:

- <kAudioOut>Type="EMBEDDED" Input="*AAA*" Group="*BB*" AES="*X*"</kAudioOut>

Where:

AAA   indicates the video input.

BB   indicates the group. Valid values range from 1 to 4.

X   indicates the AES. Valid value can be either 1 or 2.

setKAudioOut	KX K2 AQ

The user can select the audio to be monitored by using this Gateway command. The syntax of the command will differ if the user indicates to monitor audio coming from a stream (*Note – streaming sources are not supported by Kaleido Alto/Quad*), from an audio card, from an embedded source or no audio at all. In general, you can select any audio source to be monitored, even if this source is not represented in an audiometer on the current layout.

Note: *A session with user privileges must first be opened for this command to work on the Kaleido-X*

<setKAudioOut>DETAILS</setKAudioOut>

DETAILS will differ depending on the type of audio source being selected for monitoring, as shown below.

Gateway response:

- <ack/>   The command was correctly interpreted.

- <nack/>   The command was not executed, due to bad spelling or invalid parameter.

DETAILS:

To select a STREAMING source (Kaleido-K2 only), format the command as follows:

- <setKAudioOut>set Type="STREAMING" IP="*999.999.999.999*" FeedID="*XX*"</setKAudioOut>

Where:

999.999.999.999   is the IP of the machine from where the stream occurs.

XX   is the identifier of the feed to use.

To select an AUDIO CARD source, format the command as follows:

- <setKAudioOut>set Type="AUDIOCARD" Input="999"</setKAudioOut>

Where:

999   indicates the input from the card.

To select an EMBEDDED source, format the command as follows:

- <setKAudioOut>set Type="EMBEDDED" Input="*AAA*" Group="*BB*" AES="*X*"</setKAudioOut>

Where:

AAA   indicates the video input.

BB   indicates the group. Valid values range from 1 to 4.

X   indicates the AES. Valid value can be either 1 or 2.

To STOP audio monitoring and MUTE the audio output:

- <setKAudioOut>set Type="NONE"</setKAudioOut>

You may select any audio for monitoring, independent of whether it is being metered in the current Layout, with the exception that STREAMING sources must be part of the current layout.

- If the source is included in the layout, the meter assigned to it will be highlighted.

- If the source is not included in the layout, the sound will be routed to the audio monitors, but there will be no indication in the layout of the source.

getKAudioOutVolume   **K2 AQ**

This command retrieves the Audio Monitoring Volume currently used:

•

The returned value will have the form:

• <kAudioOutVolume>volume="*XX*" </kAudioOutVolume>

Where:

XX   The value, expressed in dB, at which the Audio Monitoring volume is set. This value ranges between –90dB and 0.

• The command was not executed, due to bad spelling or invalid parameter.

setKAudioOutVolume   **K2 AQ**

This command sets the Audio Monitoring Volume:

• <setKAudioOutVolume>set volume="*XX*"</setKAudioOutVolume>

Where:

XX   Value expressed in dB at which the volume will be set.

           Valid values range from –90dB to 0dB.

Returned value will be one of:

• <ack/>   The command was correctly interpreted. Volume was set to its new value.

• <nack/>   The command was not executed, due to bad spelling or invalid parameter. The volume remains unchanged.

Note that if the audio is muted, then it shall be un-muted after this command.

getKAudioOutMode   **K2 AQ**

This command retrieves the Audio Monitoring Mode currently used:

•

Returned value will have the form:

• <kAudioOutMode>mode="*XXXXX*"</kAudioOutMode>

           Where: *XXXXX* is the mode, which can be any of NORMAL, MUTE or –20dB.

•   The command was not executed, due to bad spelling or invalid parameter. In this case the Audio Monitoring Mode remains unchanged.

setKAudioOutMode — K2 AQ

To set the Audio Monitoring Mode the following command will be used:

- <setKAudioOutMode>set mode="*XXXXX*"</setKAudioOutMode>

Where:

XXXXX is the value at which the mode must be set. Valid values are NORMAL, MUTE and – 20dB.

Returned value will be any of:

- <ack/>   The command was correctly interpreted. The Audio Monitoring Mode was set to the specified value.

- <nack/>   The command was not executed, due to bad spelling or invalid parameter. The Audio Monitoring Mode remains unchanged.

setKVerticalOffset — AQ

This command is used to offset the graphic vertically on the display

- <setKVerticalOffset>set offset="88"</setKVerticalOffset>

Where offset is the number of lines to offset, 0 to 175.

setKIcontrolMode — AQ

This command is used to enable the Alto/Quad to key the detected mouse colors on video.

- <setKIcontrolMode>set mode="*0*"</setKIcontrolMode>

Where:

Mode = 0, Color not keyed, Mode = 1, color key enabled.

setKMouseColorA — AQ

This command is used to set a color to key.

- <setKMouseColorA>set mouseColorA= FF00FF00"</setKMouseColorA>

mouseColorA is defined as FFBBGGRR

   BB: the blue component.

   GG: the green component.

   RR: the red component.

setKMouseColorB   **AQ**

This command is used to set a color to key.

- <setKMouseColorB>set mouseColorB= FF00FF00"</setKMouseColorB>

mouseColorB is defined as FFBBGGRR

BB: the blue component.

GG: the green component.

RR: the red component.

setKMouseColorC   **AQ**

This command is used to set a color to key.

- <setKMouseColorC>set mouseColorC= FF00FF00"</setKMouseColorC>

mouseColorC is defined as FFBBGGRR

BB: the blue component.

GG: the green component.

RR: the red component.

3   A typical session

Here is a description of how to open and close a typical session during which you will use these commands to operate a Kaleido. You can open sessions with multiple Kaleidos simultaneously; each session will have its own window on your desktop.

- If you are using a Kaleido-K2, make sure the internal gateway is turned ON, and the MT-gateway is turned OFF (see section 1.2)

- If your environment includes a Miranda iControl Application Server, see the Application Server's manual for a discussion of appropriate network configurations.

Open the HyperTerminal software on another computer.

- From the "Program" menu choose "Accessories", "Communications" and "HyperTerminal".

A dialog will appear, asking you to enter a name for the connection and to select an icon.
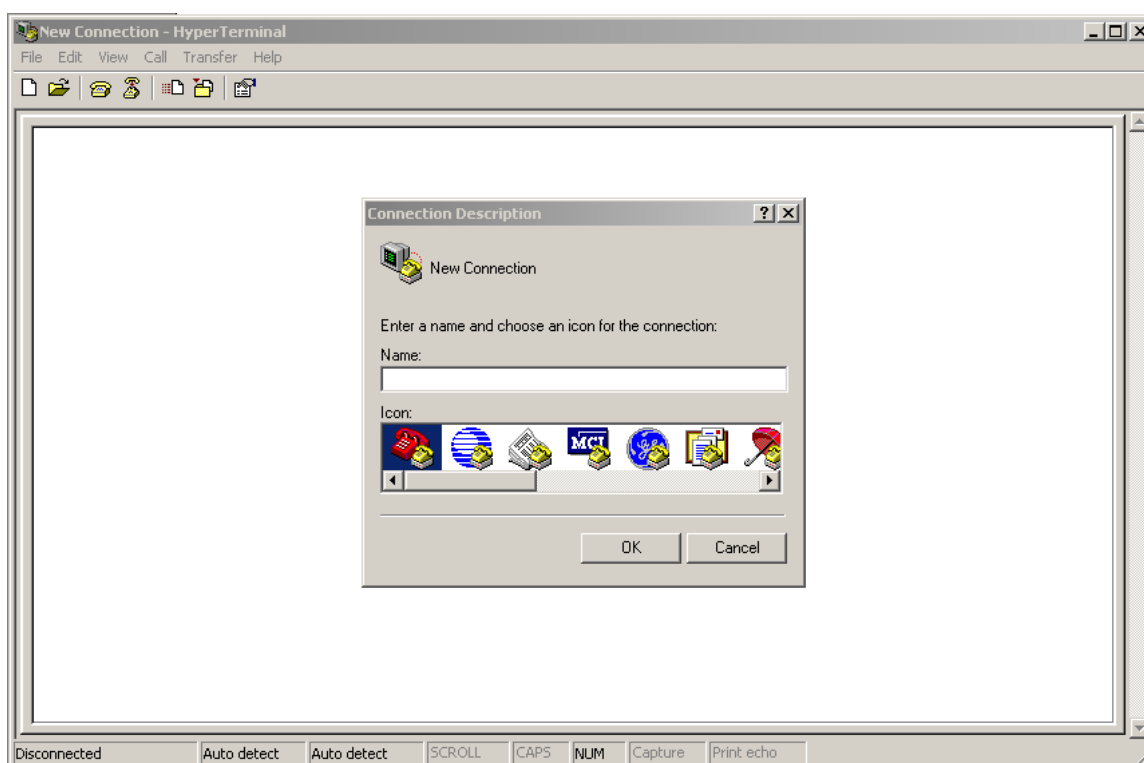
A second dialog, "Connect To", will appear.

- In the "Connect using" dropdown field choose "TCP/IP (Winsock)".

Two new fields will appear.

- In the "Host address" field enter the IP address of your Kaleido

- In the "Port number" field enter "13000". This indicates that connection to the Kaleido will be established via the port 13000.

- Click on the "OK" button.
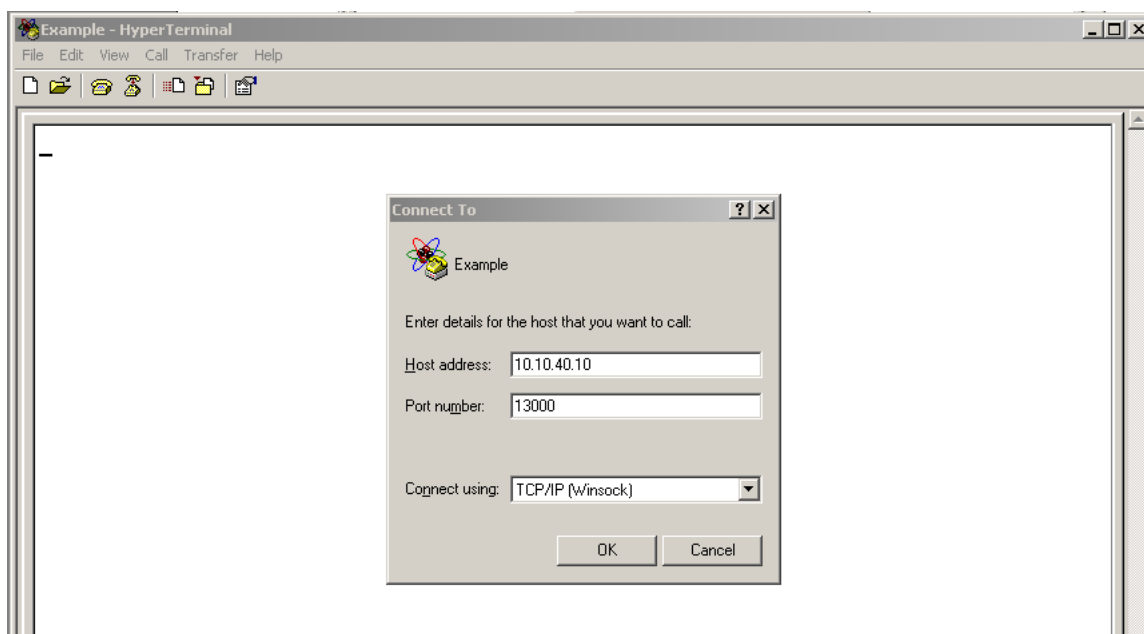
To be able to see the typed characters:

- Select "Properties" from the "File" menu, the "Properties" dialog box appears.

- Go to the "Settings" tab, click on the "ASCII Setup…" button located at the bottom of the dialog.

- Select "Echo typed characters locally".
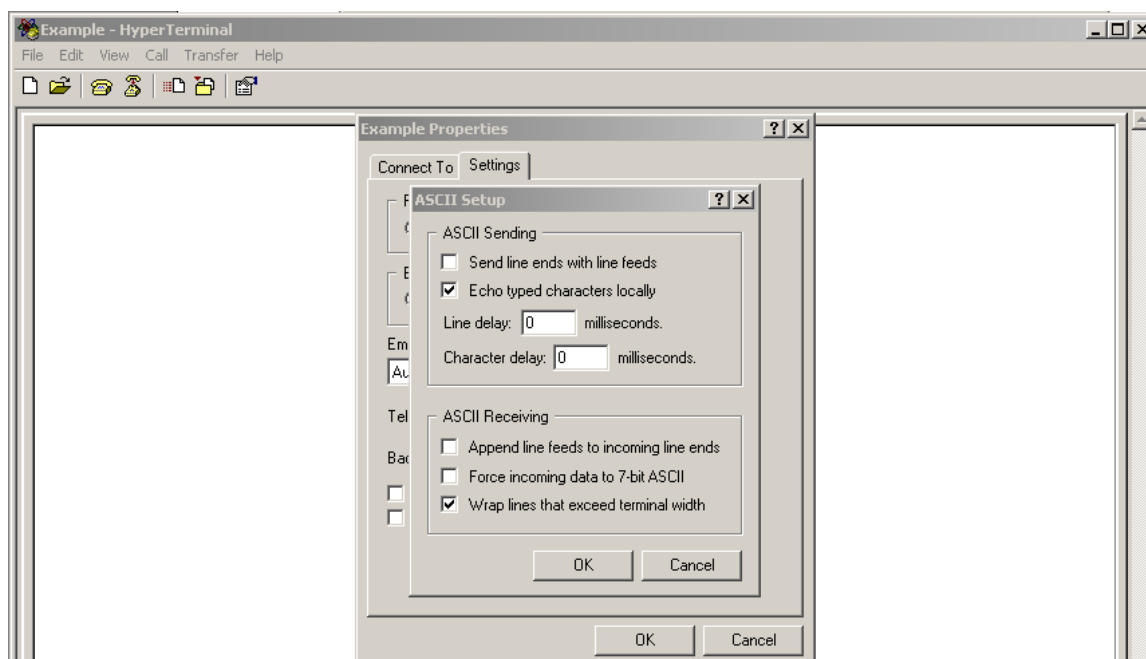
- Click on the "OK" button and click again on the "OK" button from the "Properties" dialog.

The typed characters will appear in the console.

Commands can be sent to the Gateway while a session is open. There is no maximum number of commands that can be sent in a session, and it is recommended to keep a session open as long as there are commands to send, since opening a session takes a few seconds. Here is a simplified example of a session:
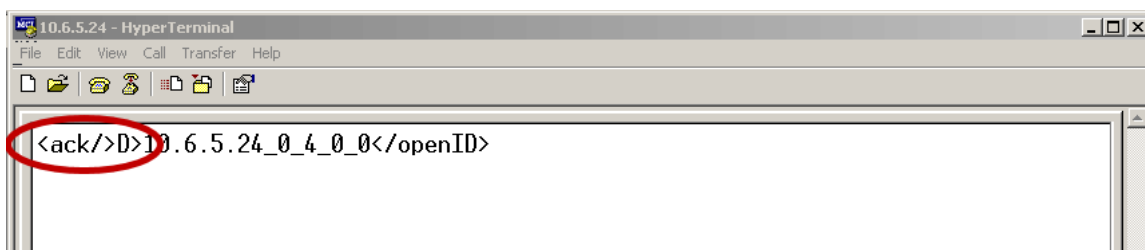
Open a session

> send command
> send command
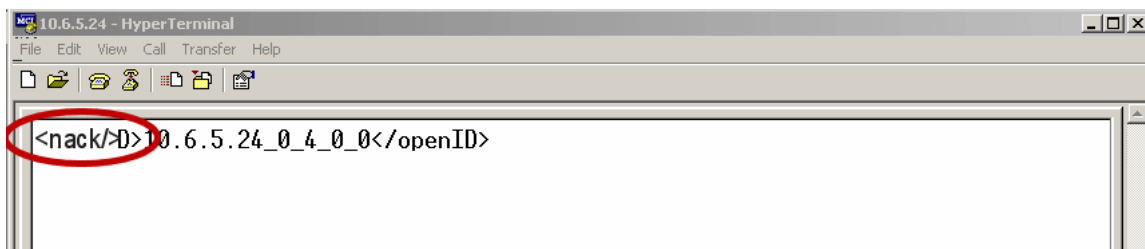> …
> send command

Close the session.

To open a session enter the openID command using the IP address of the Kaleido with which the connection has to be established.
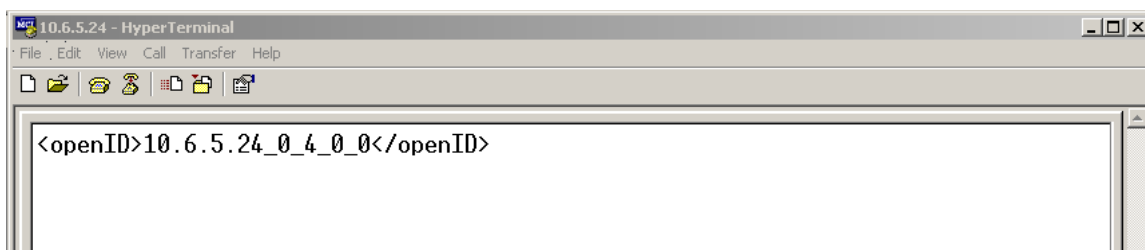
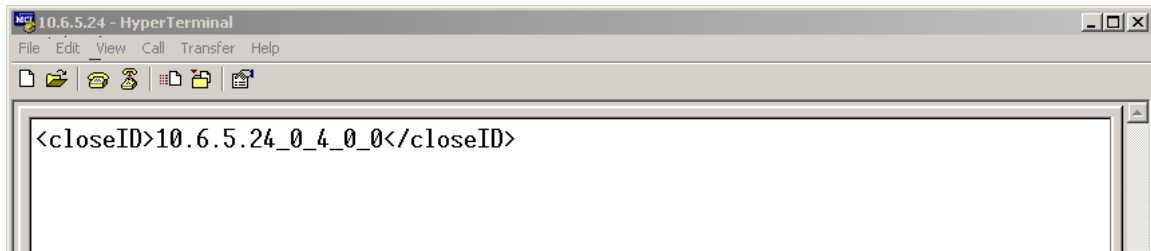If the Gateway receives the command and recognizes it, it will respond with the following:

If the command cannot be recognized the following message will appear:

The Kaleido is now ready to receive commands.

When no more commands need to be sent to the Kaleido , close the link to the Kaleido using the closeID command.

To end the communication session, select the "Disconnect" icon from the toolbar.