Multimedia and Control Networking Technology

INIC Explorer / INIC Remote Viewer V1.6.x User Manual

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MOST®
Media **O**riented **S**ystems **T**ransport

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INIC Explorer/ INIC Remote Viewer

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Document History

Version	Date	Section	Comment on changes
1.6.x-1	2009-12-15	All	History entries removed for version 1.3.x-1 and prior.
		1.2	Booklet INICExplorer/INICRemoteViewer Start-up Guide V1.6.X added in “Further Reading“.
		1.3	New terms added and old terms updated.
		2	Chapter Introduction removed as it is now part of the booklet INICExplorer/RemoteViewer Start-up Guide.
		3	Chapter Overview removed as it is now part of the booklet INICExplorer/RemoteViewer Start-up Guide.
		4	Chapter Installation of INIC Explorer removed as it is now part of the booklet INICExplorer/RemoteViewer Start-up Guide.
		2.1.1.3	Description revised. View menu has new item: Info Window
		2.1.2	New section added: Information Area
		2.1.5.6	Description improved, links added, description of toolbar for ROM/OTP-based INICs added.
		3.1	Description and Figure 3-2 adapted and improved (Note added.).

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1 Preface

1.1 Intended Use

INIC Explorer and INIC Remote Viewer are intended to be used for developing, testing, or analyzing MOST based multimedia products and systems by persons with experience in developing multimedia devices.

The operation of SMSC products is only admitted with original SMSC devices, e.g., provided power supply. Do not interfere in the product's original state, otherwise user safety, faultless operation and electromagnetic compatibility is not guaranteed.

An open device that is connected to the INIC Explorer Interface Box (e.g., an INIC Demo Board OS81xxx) may exceed the limits of electromagnetic interference. Do not operate mobile phones, wireless keyboards or similar devices that transmit electromagnetic waves in a vicinity of about 50 cm.

1.2 Further Reading

Refer to the respective current version of the document. Contact support-ais-de@smsc.com for getting the recent documents.

- Booklet INICExplorer/RemoteViewer Start-up Guide V1.6.X (Introducing the INIC Explorer / INIC Remote Viewer, description of the hardware, and the installation)
- OS81xxx Data Sheet (description of technical details)
- INIC API User Manual (description of functions)
- INIC Evaluation Platform OS81xxx User Manual (description of how to operate with the INIC Evaluation Platform OS81xxx including some examples)
- INIC Flash Guide (description of how to flash the INIC Configuration String)
- OS81xxx Programming Guide (description of how to program the OTP INIC Configuration String)

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1.3 Definition of Terms

This section provides explanation to special terms, used in the description of the INIC Explorer.

Term	Description
Context Area	The unit of the INIC Explorer Software that displays detail information.
Configuration String	The Configuration String covers values that influence the behavior of the OS81xxx.
Current values	Current values are presented in the Configuration String page after the Read button has been pressed.
Debug Header	The interface between the INIC target board (e.g., INIC Demo Board OS81050 or customer hardware) and the INIC Explorer Interface Box. This interface must match a dedicated pin assignment for a proper functionality with the INIC Explorer.
DUT	'Device under Test'. It represents the customer hardware that contains an OS81xxx INIC for evaluating purposes.
Dump	Content of memory or register.
EHC	External Host Controller
Factory default values	The property values in the initial state of the OS81xxx INIC.
Host PC	The PC that is connected to the INIC Explorer Interface Box.
INIC	Intelligent Network Interface Controller
INIC Explorer Interface Box	This is the hardware part or the INIC Explorer.
OTP	One Time Programmable memory
Patch Memory	Memory that becomes initialized when starting the INIC.
RAM	Random Access Memory
RAM Memory	Memory section that holds the Configuration String the OS81xxx is working with.
ROM	Read Only Memory

Table 1-1: Definition of Terms

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2 INIC Explorer Software Functionality

Note: All figures displaying a graphical user interface are presenting an arbitrary snapshot. The contents of the snapshots depend on the OS81xxx to be analyzed or evaluated. This means even the Application Toolbar, the Navigation Tree and the Context Area may differ from chip to chip. For example the OS81050 contains specific resource pages as e.g., the page INIC Processor whereas the INIC OS81110 INIC does have a more general resource page.

2.1 User Interface

When starting the INIC Explorer Software, the application reads all necessary information on startup and presents them in the user interface of the INIC Explorer Software as depicted in Figure 2-1. A software map allows easy navigating to the interesting software part by just clicking on it. The properties and values are shown on request. Then a snapshot of the OS81xxx is displayed. In order to show the complete functionality of the INIC Explorer Software the Navigation Tree is opened.

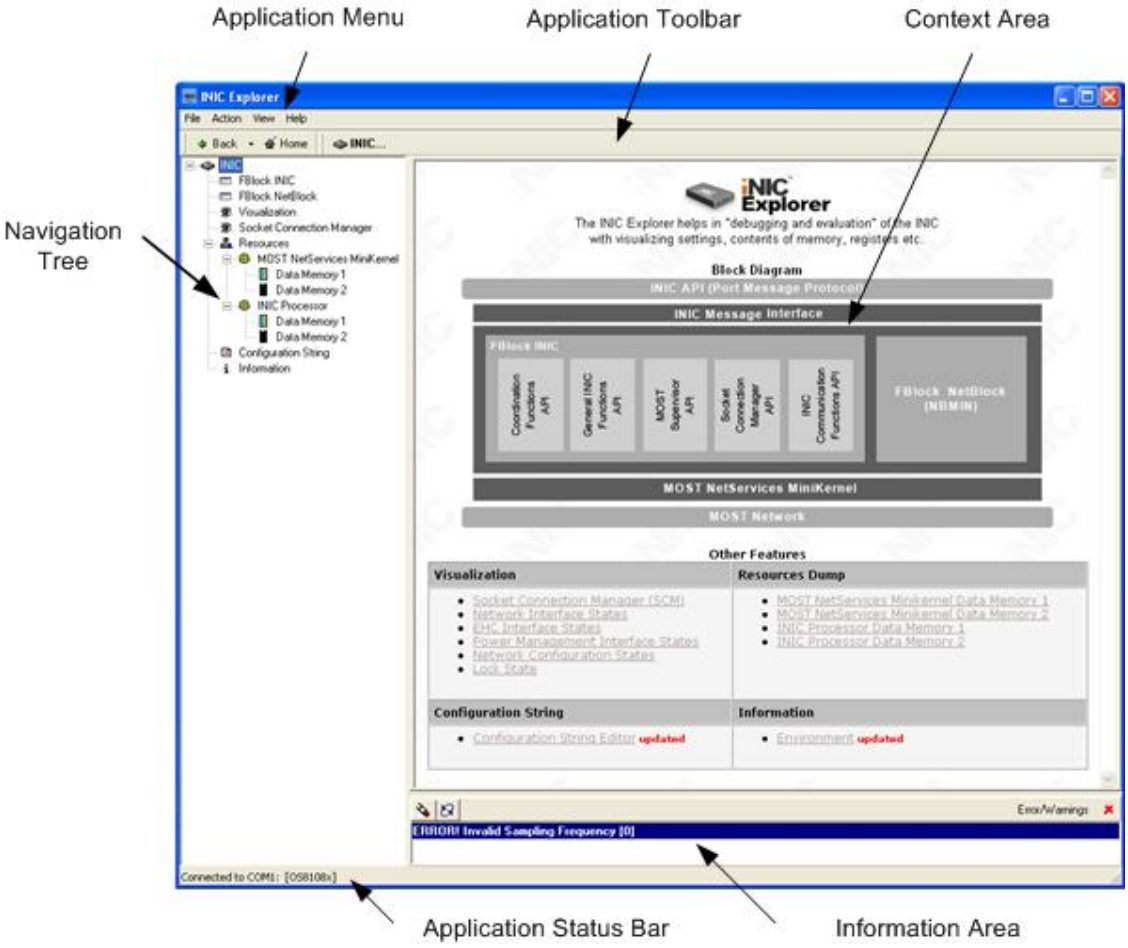

Figure 2-1: INIC Explorer User Interface

Drag the divider bar between Navigation Tree and Context Area to enlarge or shorten the respective area.

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The user interface of the INIC Explorer Software consists of several parts.

- Application Menu: For details refer to page 9.
- Application Toolbar: For details refer to page 15.
- Application Status Bar: For details refer to page 15.
- Navigation Tree: For details refer to page 16.
- Context Area: For details refer to page 40.

2.1.1 Application Menu[1]

The **Application Menu** provides paths to all main functions of the application.

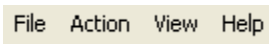

Figure 2-2: Application Menu

2.1.1.1 File Menu

Right now the **File Menu** provides an application exit.

Figure 2-3: File Menu of the INIC Explorer Software

2.1.1.2 Action Menu

The **Action Menu** allows creating a dump. In addition, the connection can be modified.

Figure 2-4: Action Menu of the INIC Explorer Software

Dump All Resources
When selecting this item the application jumps to a page where a dump of all resources of the OS81xxx can be created. This item is useful in case support is needed. An exemplary description of the procedure 'Make a Dump' can be found in section 2.2.3 on page 45 and in chapter 5 on page 50.

[1] The Application Menu is not applicable for INIC Remote Viewer.

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Options
Selecting this item opens an additional window with two tabs (default selection: Serial RS-232):

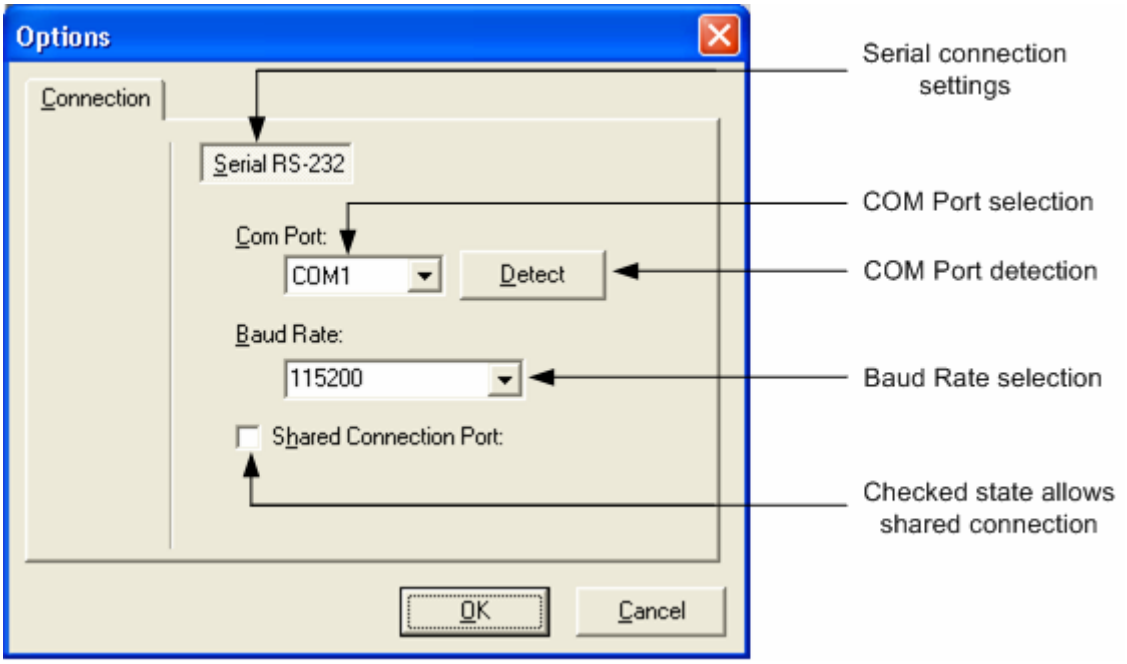

Figure 2-5: Serial Settings

In this window the connection to the INIC Explorer Interface Box can be specified.

It is possible:

- to connect the PC and the INIC Explorer Interface Box (e.g., selecting the COM port)
- to detect existing COM port connections
- to share the connection

The Information page presents an according connection diagram.

2.1.1.2.1 COM Port Selection

The **COM port** selection during the start-up is described in principle in the booklet INICExplorer / RemoteViewer Start-up Guide. The COM port can also be changed during runtime to connect to another INIC Explorer.

- Click the drop down editor of the COM port and select the port that is connected (see Figure 2-5 on page 10). All detected COM ports of the connected PC are listed. After modifying the serial settings the INIC Explorer Software reconnects according the selected COM port.

Note: Do not modify the Baud Rate that is set to 115200.

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2.1.1.2.2 Detecting Existing COM Port Connections

By pressing the Detect button, a dialog for COM port detection is opened. The window is also opened if the INIC Explorer cannot find the default COM port (COM1) or the last one used.

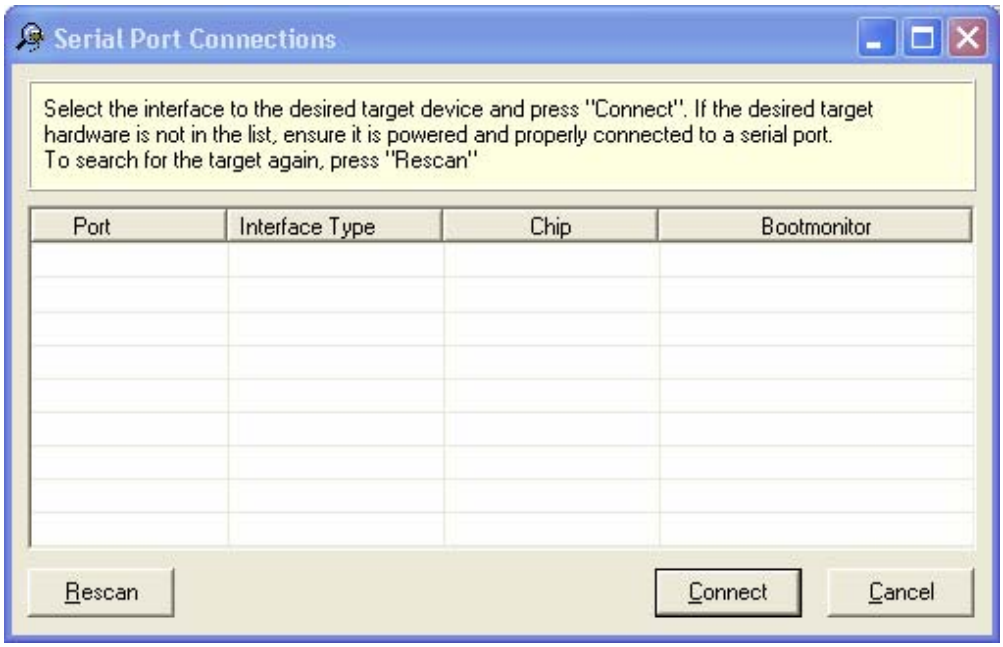

Figure 2-6: Connection Window – No Target Device Detected

If you set your environment, press Rescan to start the search process. If INIC Explorer can connect to a COM port, the following window is shown.

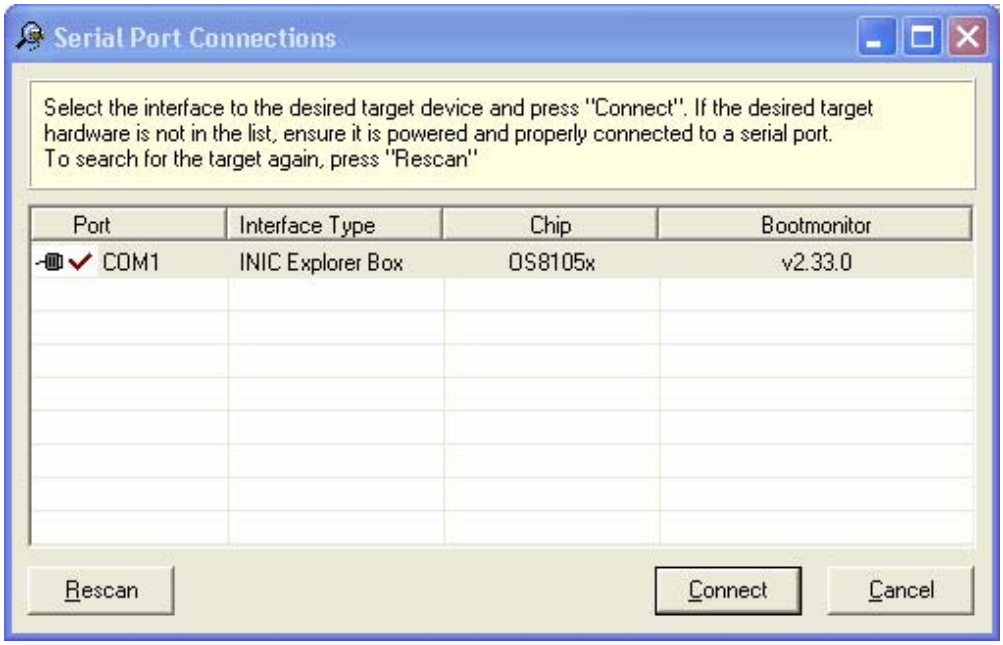

Figure 2-7: Connection Window – Target Device Detected (e.g.)

Information on the port, the target, the chip and the boot-monitor are displayed. Select the COM port you desire and press Connect.

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2.1.1.2.3 Sharing the Connection

In addition, the INIC Explorer Software allows **sharing the connection port**. Without having an own DUT other users will be able to connect to the host PC and to view the connected OS81xxx via the INIC Explorer Interface Box.

- Check the checkbox for sharing the connection as depicted in Figure 2-8.

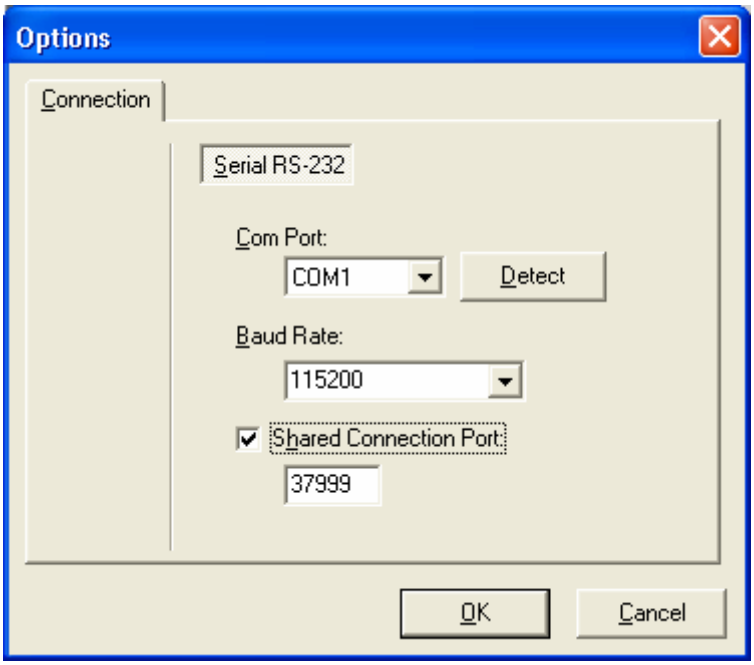

Figure 2-8: Sharing the Connection

- Press OK. The INIC Explorer Software reconnects automatically with the modified settings.

By default the port is set to 37999. It can be modified but it must be public for other users (e.g., if a firewall is used).

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2.1.1.3 View Menu

The View Menu influences the appearance of the INIC Explorer Software user interface.

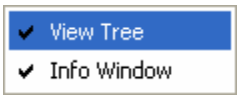

Figure 2-9: View Menu of the INIC Explorer Software

Item	State	Description
View Tree	Checked	The INIC Explorer Software user interface displays the Navigation Tree.
	Unchecked	The Navigation Tree is hidden.
Info Window	Checked	The INIC Explorer Software user interface displays the Information Area (see section 2.1.2 on page 14).
	Unchecked	The Information Area is hidden.

Table 2-1: View Menu

The respective setting is stored and valid if the INIC Explorer Software is restarted.

2.1.1.4 Help Menu

The Help Menu contains useful information regarding the application.

Figure 2-10: Help Menu of the INIC Explorer Software

Selecting the ‘About’ item brings the About Box on the screen. It presents the logo of the product, its version and the connection of the INIC Explorer Software. Click inside the window to close it.

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2.1.2 Information Area

During the start-up the INIC Explorer reads the values of the INIC. For some properties of the INIC the INIC Explorer checks the values whether they are reasonable or not. For example, if the configuration files do not match the attached INIC an error may occur. Errors are shown in an information area located above the status bar. Besides errors, the Information Area can also show warnings or additional information. A warning is presented for example if a value is not available because a calculation or a test lasts for some time as it can happen for the BIST value.

Note: If an error is shown SMSC recommends checking the correct configuration files are used. Refer to section 2.1.5.7 on page 39 to see where the configuration files are stored. If errors are still shown after fixing the configuration files, contact SMSC's technical support (http://www.smsc-ais.com/contact).

The Information Area is located above the status bar.

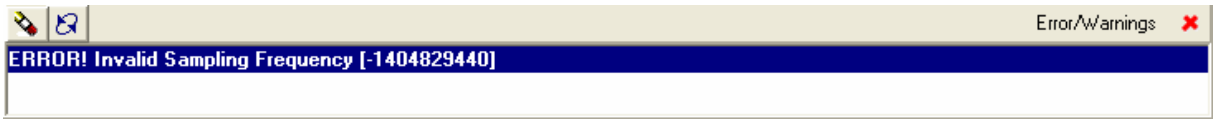

Figure 2-11: Information Area

Button	Description
	Click to clear the view.
	Click to read the values again. Normally the values are read during the start-up of the INIC Explorer. Via clicking this button the INIC Explorer checks some INIC properties for correctness.
	Click to close the Information Area. It can be opened again. In the application menu click 'View' and then 'Info Window' (see section 2.1.1.3 on page 13).

Table 2-2: Buttons of the Information Area

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2.1.3 Application Toolbar

The Application Toolbar provides buttons to display the important pages of the application.

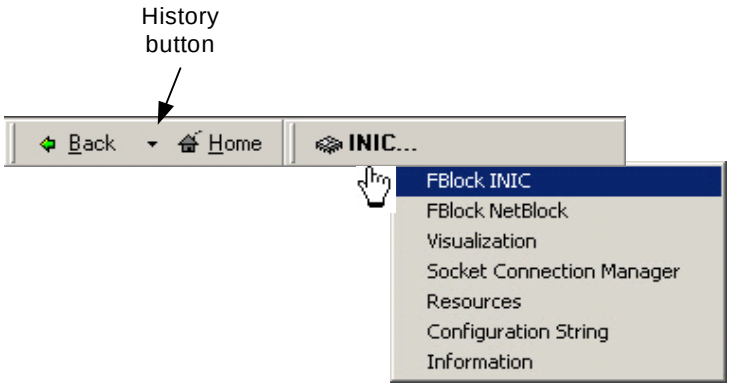

Figure 2-12: Toolbar after Restart

When starting the INIC Explorer Software the toolbar displays four buttons that are grouped in two sections. The **left section** provides the Back button, the History button and the Home button.

- Click the Back button to return to the last page that has been viewed.
- Click onto the History button to select the desired page from the history list that will be presented.
- Click the Home button to revert to the start page of the INIC Explorer Software.

The respective page is shown in the Context Area of the INIC Explorer Software. The **right section** provides access to specific features of the INIC Explorer Software[2].

- Click the INIC button. Its submenu is presented. The submenu's items depend on the explored OS81xxx.
- Select the desired item. This extends the toolbar with the selected item.

Figure 2-13: Extended Toolbar (e.g.)

The following submenus present items that reflect step by step the structure in the Navigation Tree.

An example of the first submenu is depicted in Figure 2-12 on page 15. The single items are explained in connection with the Navigation Tree in section 2.1.5 on page 16. In addition, an example of an extended toolbar is presented in Figure 2-13.

2.1.4 Application Status Bar

The Application Status Bar informs about the status of the INIC Explorer Software e.g., presents information about the serial settings and the connected chip.

[2] The page 'Resources' is not applicable by INIC Remote Viewer.

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2.1.5 Navigation Tree

The Navigation Tree shows the hierarchy and the different pages (HTML) of the OS81xxx. The pages depend on the explored OS81xxx.

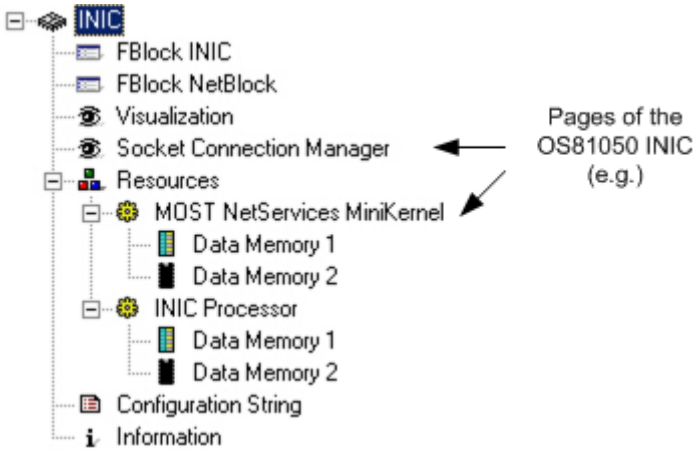

Figure 2-14: Navigation Tree

- Click onto a desired page in the Navigation Tree to quickly display its content in the corresponding Context Area.
- Click onto the plus or minus sign (in front of the items) in order to expand or to collapse the Navigation Tree.

The Navigation Tree provides access to the following available pages:

- FBlock INIC
- FBlock NetBlock
- Visualization
- Socket Connection Manager
- Resources[3]
- Configuration String
- Information

[3] Resources is not applicable for INIC Remote Viewer.

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2.1.5.1 FBlock INIC

On the FBlock INIC page different API groups can be viewed. The API groups access the different services of the MOST NetServices MiniKernel. They are organized in sections. Each of them consists of several properties of the OS81xxx. All sections can be expanded or collapsed. Expanding a section makes the properties and their values visible. If the section is collapsed only the section settings are visible. They influence the appearance of the value properties. At the bottom of the FBlock INIC page a 'Home' button allows to jump to the start page of the INIC Explorer Software.

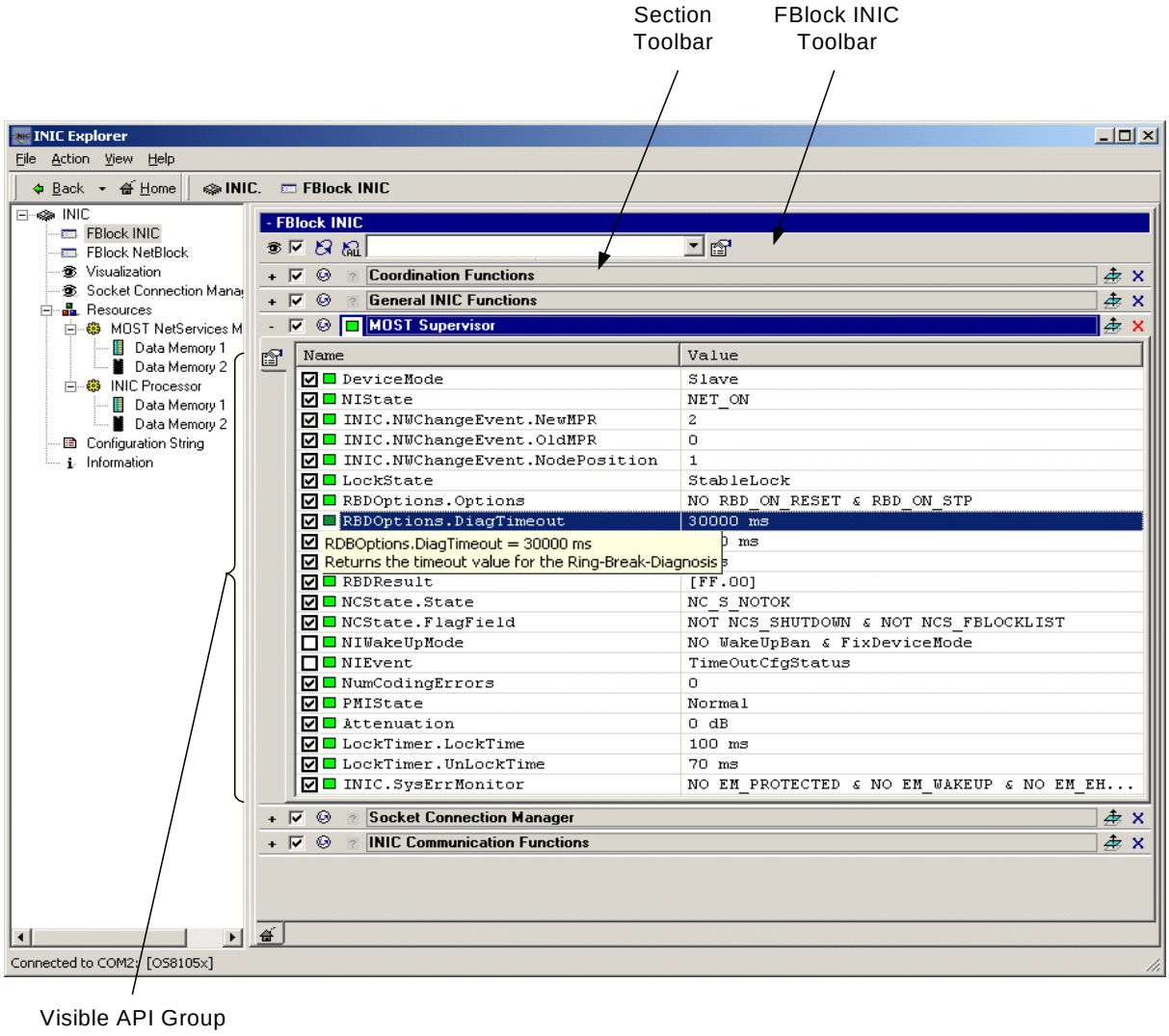

Figure 2-15: FBlock INIC Page (e.g.)

Figure 2-15 displays an example of an FBlock INIC page where the MOST Supervisor API group is expanded. Click onto a property to see its quick info. Each property inside a section comprises a checkbox and a LED icon. Use the checkbox to reduce the properties that are updated when pressing the or button on this page. A green LED shows that the property has changed its value during the last update and also influences the LED of the respective section.

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FBlock INIC Toolbar:

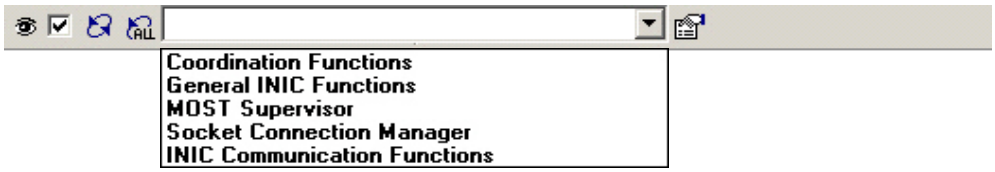

Figure 2-16: FBlock INIC Toolbar and Selection List

Let the mouse cursor hover over the buttons for a moment and a hint is displayed. In addition, the buttons are described in Table 2-3.

Button	Description
	This button toggles between two states: Click to show all sections below that are not hidden (e.g., MOST Supervisor in Figure 2-15). The properties in the sections will not be updated. Click a second time to collapse the sections. ('Hidden' means a section is closed by pressing its ✕ button.)
	Checking this checkbox means to check all sections below that are not hidden for updating.
	Press this button to update all visible sections that are checked.
[4]	Press this button to update all state values. Note: During the updating procedure the INIC application will be stopped and the target chip will be reset.
Drop-Down List Editor	Click the drop-down arrow to see all items of the page even if they are hidden. Select the desired item from the list. Use this functionality if some sections are hidden.
	Press this button to view the section that is displayed in the selection list. Pressing this button presents even sections that are hidden.

Table 2-3: Visualization Toolbar Buttons

Section Toolbar:
The name of the API group characterizes the respective section.

Figure 2-17: Section Toolbar

Let the mouse cursor hover over the buttons for a moment and a hint is displayed. In addition, the buttons are described in Table 2-4. (It slightly differs from a section toolbar of the Visualization page.)

[4] This feature is not applicable for INIC Remote Viewer.

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Button	Description
+, -	Press + to expand the respective section so that details are presented. Expanding always means to update the section. Press - to collapse the respective section.
☑	Checking this checkbox means the section is marked for updating via the FBlock INIC toolbar. The state of this checkbox has no influence for the update button of the respective section.
	Press this button to only update the respective section. Only those properties are updated that are checked. Pressing F5 also updates the section as depicted in Figure 2-18.
/	Gray: nothing changed from the previous update. Green: at least one property changed from the previous update. If the gray icon is presented with a question mark the section has not been updated until now.
	Press this button to undock the respective section. Sometimes it is useful to undock a section before switching to another page. Then interactions of properties can be observed on both pages. See Figure 2-20 on page 21. To dock a section again, drag the window beneath its original location in the context area.
	Press this button to hide the respective section. Then it is removed from this page. If the section should be displayed again select the respective entry in the drop-down list editor of the visualization toolbar.

Table 2-4: Section Toolbar on Page FBlock INIC

Right click inside a visible section shows the corresponding context menu.

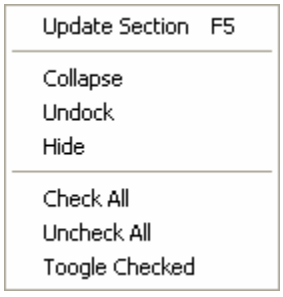

Figure 2-18: Context Menu of the FBlock INIC

The context menu provides the same functionality like Table 2-4 plus the item ‘Toggle Checked’. Select this functionality to invert the state of the checkboxes inside a section.

2.1.5.2 FBlock NetBlock

On the page FBlock NetBlock NBMIN all functions are viewed that affect a whole MOST device.

Operating on this page corresponds exactly operating on page FBlock INIC page. For getting the description of the buttons and features refer to section 2.1.5.1 on page 17.

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2.1.5.3 Visualization

The page Visualization presents the state of some properties of the OS81xxx. The property states are organized in sections that can be expanded or collapsed. Expanding a section makes the state and the state history visible. If the section is collapsed only the section settings are visible. The section settings influence the appearance of the property states. Some states and the history of the properties are shown as circle other states are shown as a stack (see Figure 2-19). The exact name of a state is displayed in parenthesis. For more information about the states refer to the respective OS81xxx INIC API user manual. At the bottom of the visualization page a Home button allows to jump to the start page of the INIC Explorer Software (see Figure 2-1 on page 8).

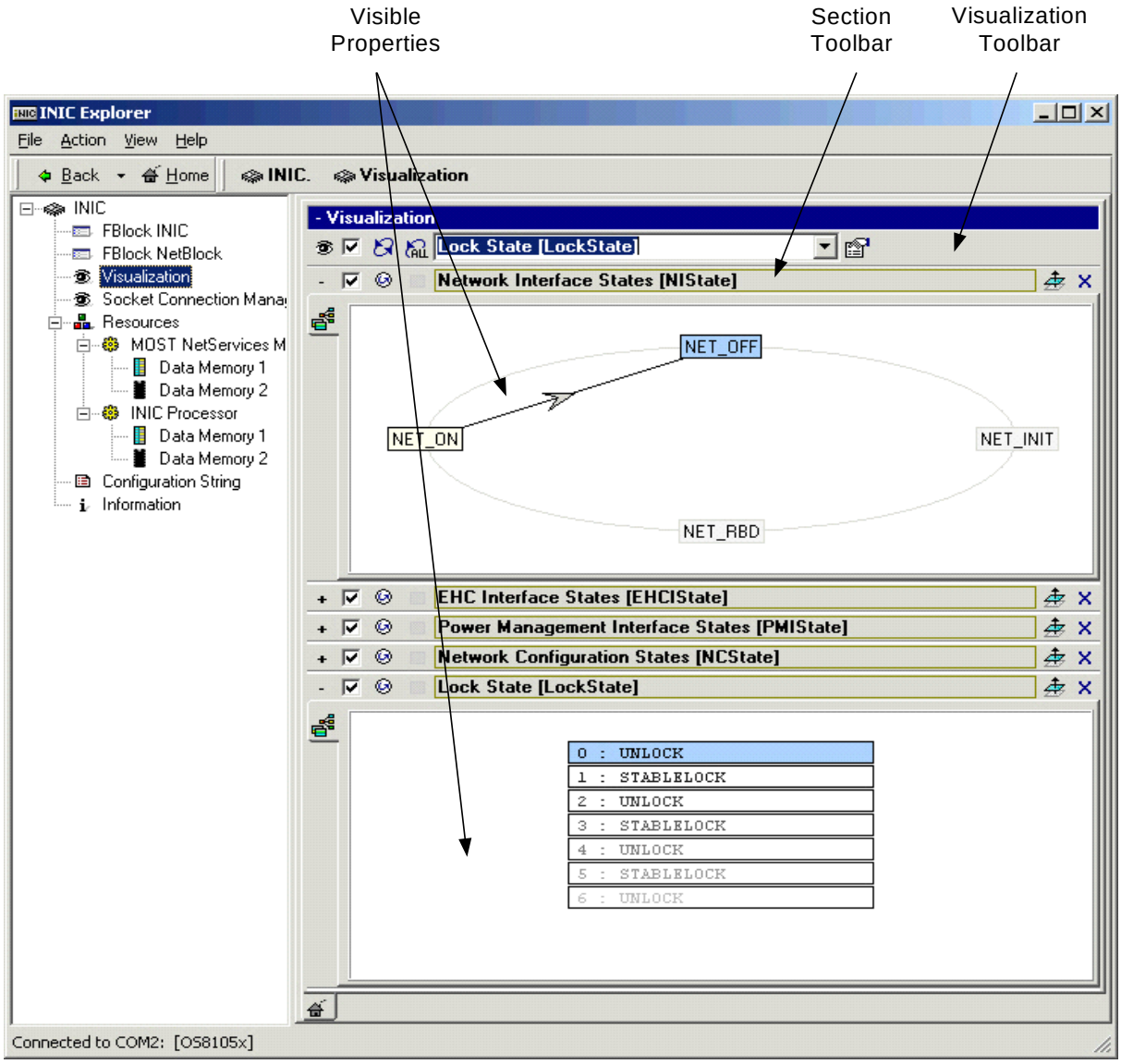

Figure 2-19: Visualization (e.g.)

The **circle sections** are able to show two states. The current value is highlighted in light blue (e.g., NIState in Figure 2-19), the previous value is connected via an arrow if they are different. Otherwise there is no arrow. The arrow points from the old state value to the current one.

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The **stack sections** are able to show eight values. The current value is highlighted in light blue at the top of the stack (e.g., LockState in Figure 2-19). At most seven previous state values can be displayed below.

The Visualization toolbar has the same functionality as the FBlock INIC toolbar that is described in Table 2-3 on page 18. The buttons of the section toolbar are described in Table 2-5. (It slightly differs from the section toolbar of the FBlock INIC page.)

Button	Description
+, -	Press + to expand the respective section so that details are presented. Expanding always means to update the section. Press - to collapse the respective section.
	Checking this checkbox means the section is marked for updating via the visualization toolbar. The state of this checkbox has no influence for the update button of the respective section.
	Press this button to only update the respective section.
/	Not supported on this page.
	Press this button to undock the respective section. Sometimes it is useful to undock a section before switching to another page. Then interactions of properties can be observed on both pages. See Figure 2-20 on page 21. To dock a section again, drag the window beneath its original location in the context area.
	Press this button to hide the respective section. Then it is removed from this page. If the section should be displayed again select the respective entry in the drop-down list editor of the visualization toolbar.

Table 2-5: Section Toolbar

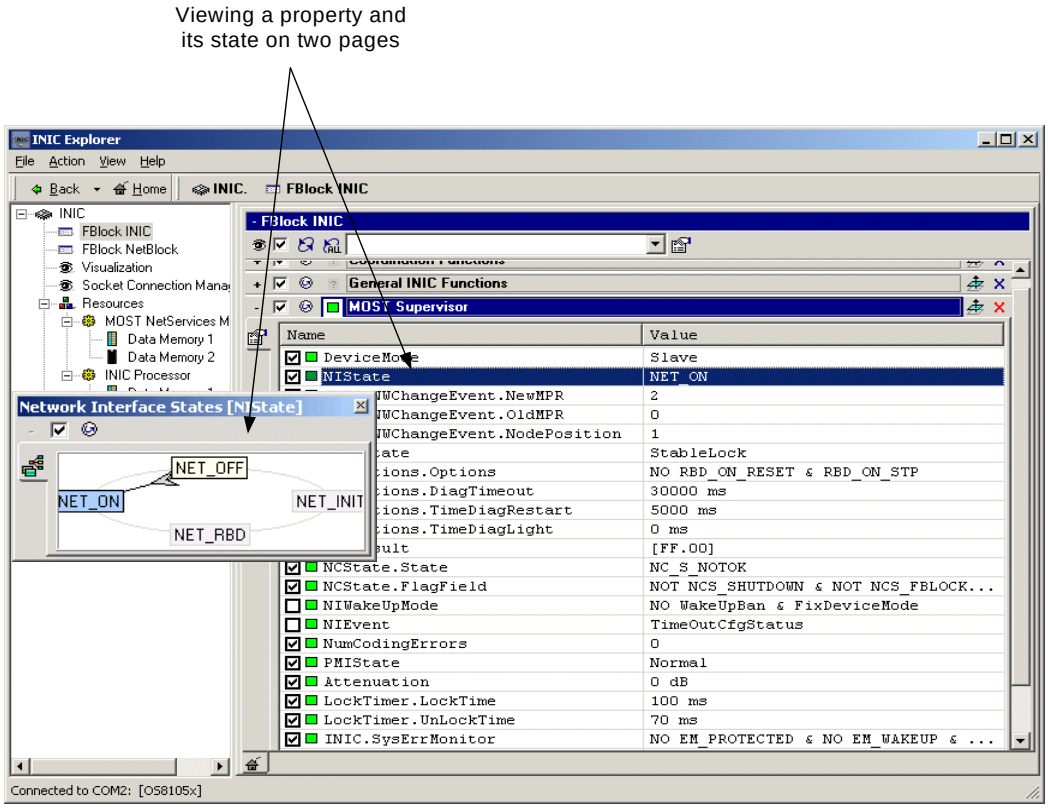

Figure 2-20: Viewing a Property on two Pages (e.g.)

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2.1.5.4 Socket Connection Manager

The Socket Connection Manager page displays the state of ports, sockets and connections. It also presents important detail information as e.g., the handles, the direction of sockets (IN or OUT) and bandwidth information. The details shown on a Socket Connection Manager page are generally depending on specific settings done on the hardware or in the application.

The Socket Connection Manager page (See Figure 2-21 on page 23.) is structured in a toolbar and the following areas:

- Overview (section 2.1.5.4.2)
- MOST network side (section 2.1.5.4.3)
- SCM INIC Connections (section 2.1.5.4.5)
- EHC (External Host Controller) side (section 2.1.5.4.6)
- Connection Colors

Click the  Home button at the bottom of the page to revert to the start page of the INIC Explorer Software.

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Figure 2-21 below depicts a simple snapshot of a Socket Connection Manager page (MOST Network Port and Control Port are opened) to focus on the interesting areas. More extensive examples are shown in the description of the areas. Opened ports are highlighted in a specific color. Closed ports are presented in gray.

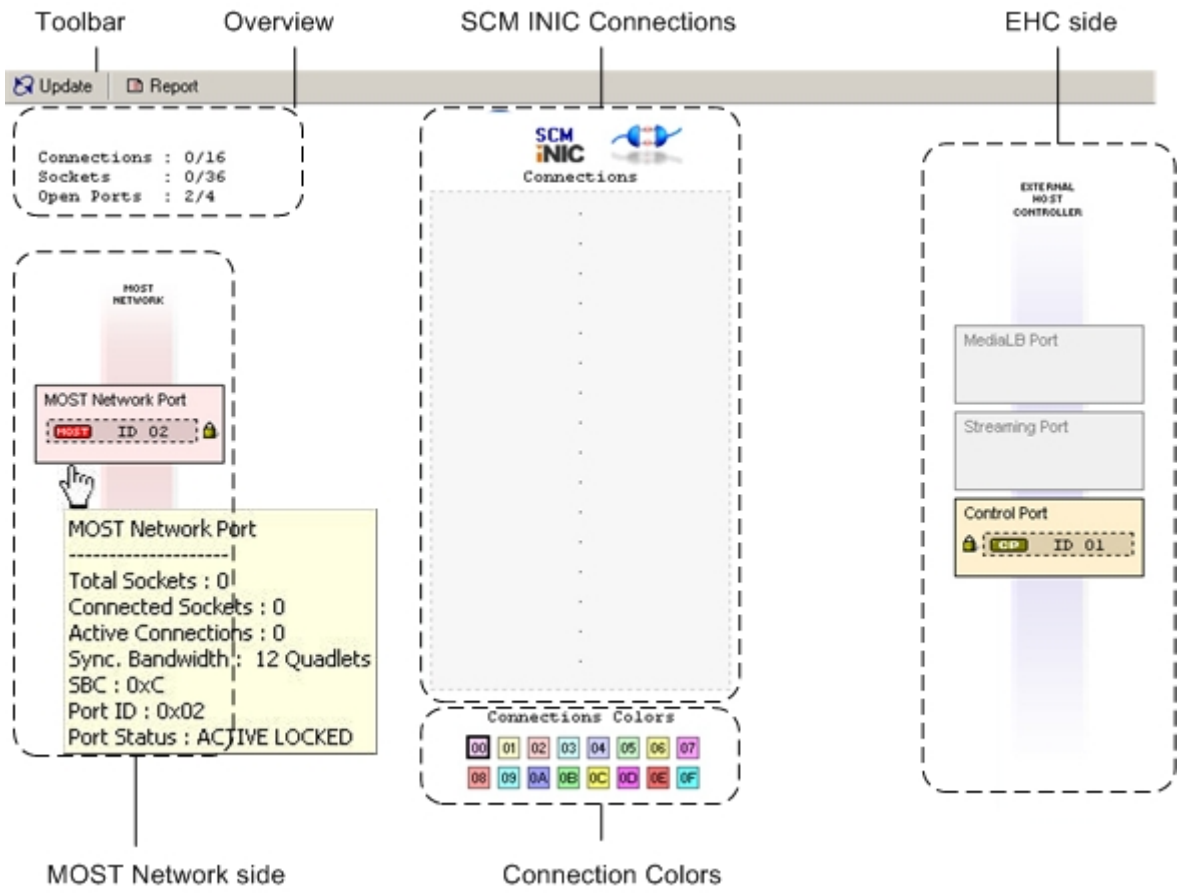

Figure 2-21: Socket Connection Manager Page (e.g.)

Let the mouse cursor hover over the areas or icons for a moment and a hint is displayed as shown to the left in Figure 2-21.

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2.1.5.4.1 Toolbar and Context Menu

The **toolbar** of the Socket Connection Manager page displays two buttons.

- Update button: Click this button to update the Socket Connection Manager page.
- Report button: Click this button to collect the status information of the Socket Connection Manager page, usually presented in the hints. The information will be displayed in a separate window also for further processing (Print and Copy to Clipboard).

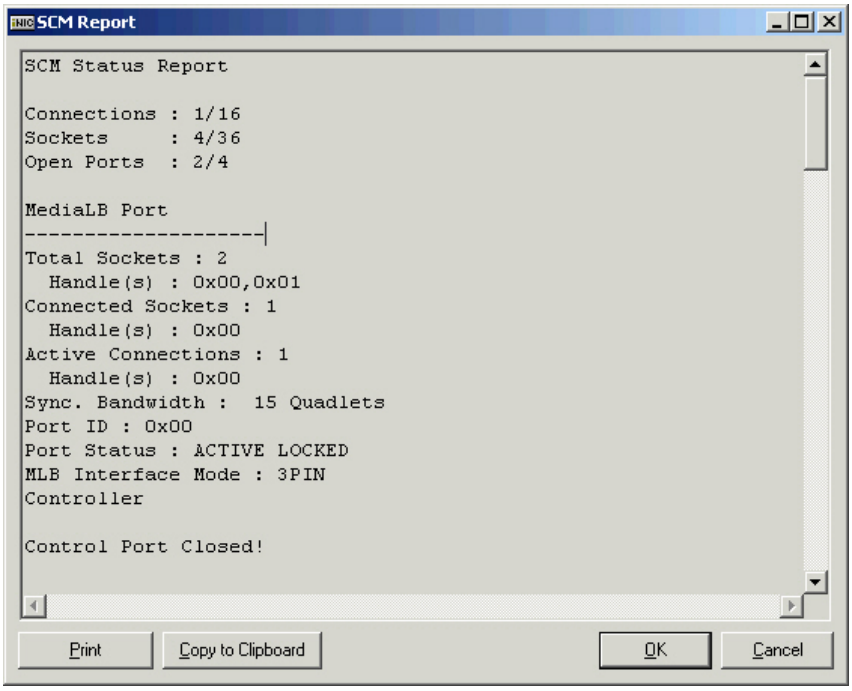

Figure 2-22: Socket Connection Manager Report

Right click inside the Socket Connection Manager page to get the **context menu**.

Figure 2-23: Socket Connection Manager Context Menu

The items correspond to the toolbar buttons (see above).

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2.1.5.4.2 Overview

The overview is located top left on the Socket Connection Manager page. As depicted in Figure 2-24 the overview shows first the created connections, created sockets or currently active number of opened ports of the INIC. The maximum possible number of created connections, created sockets or open ports is displayed behind the slash. The maximum number depends on the OS81xxx. Figure 2-24 depicts an example for an OS81050 INIC.

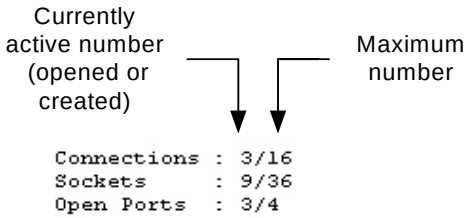

Figure 2-24: Overview

2.1.5.4.3 MOST Network Side

The MOST Network Port provides an interface to the MOST network. The corresponding MOST network side is located left hand on the Socket Connection Manager page.

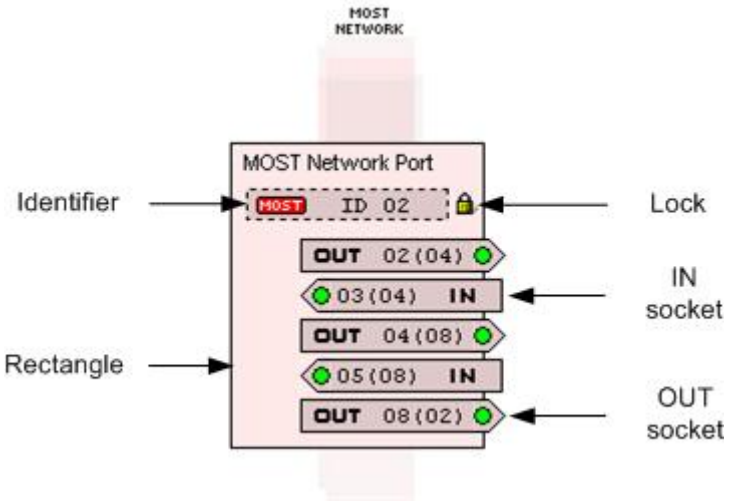

Figure 2-25: MOST Network Port

The MOST Network Port is represented by a rectangle highlighted in a specific color. Inside the rectangle an identifier shows the specific ID (02) and the identifying symbol MOST of the MOST Network Port. To the right of the identifier a lock is positioned. It symbolizes that the state of the port cannot be modified. If sockets have been created for the MOST Network Port they are displayed below the identifier. Figure 2-25 depicts a MOST Network Port with five sockets; Figure 2-21 depicts a MOST Network Port without sockets. The rectangle automatically enlarges or shortens according to the number of sockets. There are two kinds of sockets: IN sockets and OUT sockets. The display of sockets is described in section 2.1.5.4.4 on page 26.

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2.1.5.4.4 Socket Display

Note: Regarding an INIC (esp. the SCM INIC Connection) an IN socket always points into the INIC; an OUT socket always points out of the INIC. If a socket is displayed on the MOST network side or on the EHC side the parameter IN or OUT inside the socket symbol specifies the direction of the socket independent from the direction the socket symbol is pointing.

Figure 2-26 depicts the symbol of an OUT socket highlighted in the specific color of the MediaLB Port.

Figure 2-26: Not Connected OUT Socket

The first number inside a socket symbol represents the socket handle. The number in parenthesis shows the bandwidth of the socket. If a socket is not yet connected, the socket kind (IN or OUT) is also shown inside the socket symbol (e.g., on the MOST network side and on the EHC side). If a socket is connected to another socket (displayed in the SCM INIC Connection) an identifier shows to which port the socket belongs. In addition a colored circle informs about the data type that will be transported:

Data Type	Color
Synchronous	Green
Control	Blue
Packet	Golden
Isochronous	Brown

Table 2-6: Relation Data Type—Color

E.g., the green circle in Figure 2-26 shows the OUT socket is prepared to transport streaming data. Figure 2-27 depicts the same OUT socket as shown in Figure 2-26 but connected.

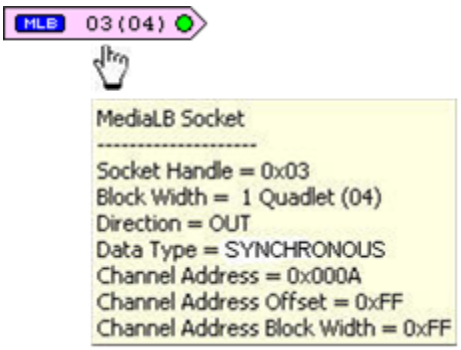

Figure 2-27: Connected OUT Socket with Quick Info

Let the mouse cursor hover over the socket for a moment to display extensive information e.g., the direction.

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2.1.5.4.5 Socket Connection Manager INIC Connections

The central part in the middle of the Socket Connection Manager page depicts the SCM INIC Connections area. It presents the connections between the MOST network and the EHC if present. In Figure 2-28 there are three connections whereas Figure 2-21 depicts the SCM INIC Connections area without connections.

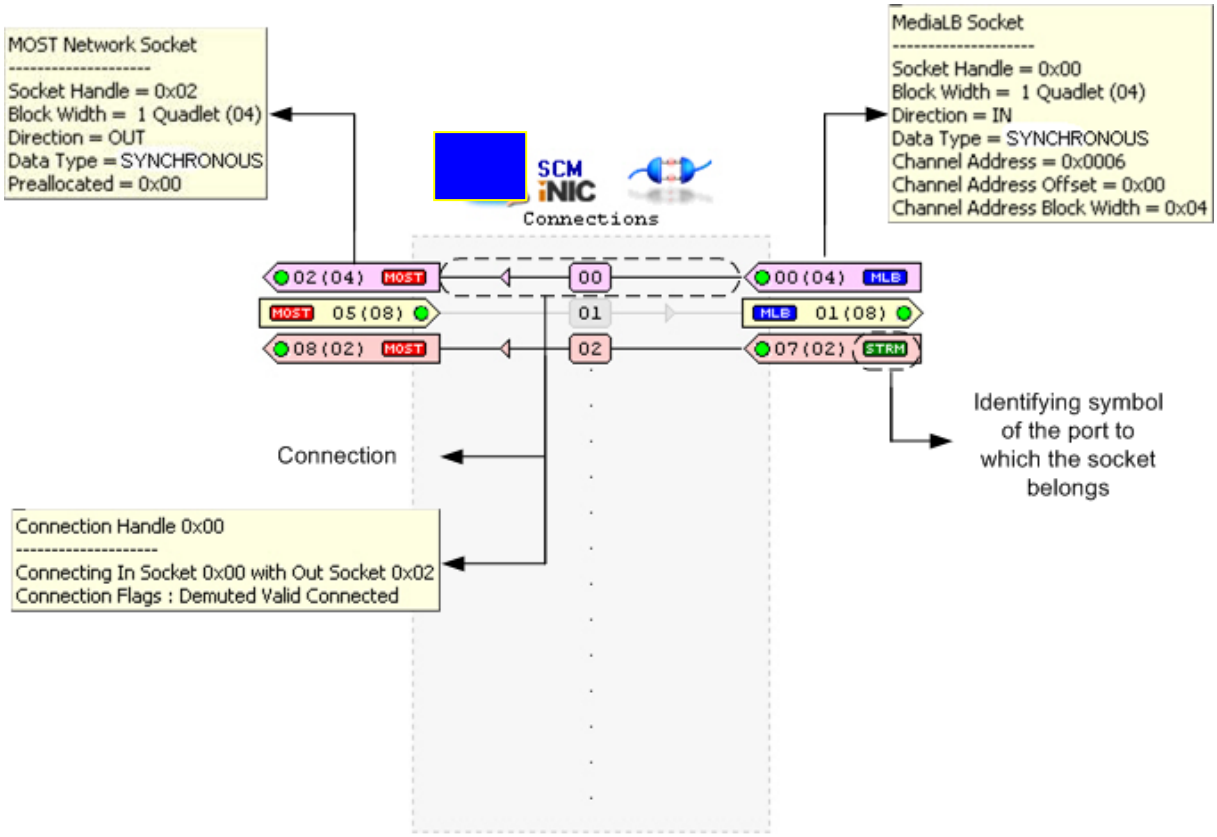

Figure 2-28: SCM INIC Connections

Sockets to the MOST network are presented left hand in the SCM INIC Connections, sockets to the EHC are shown to the right. An identifier inside the socket symbols (e.g., the symbol MOST stands for a MOST Network Port, MLB stands for a MediaLB Port) informs to which port the socket belongs. Connections between sockets from MOST network side to EHC side and vice versa are specified by a connection label. Connected sockets and their identifying connection label are highlighted in the same color. These colors are predefined in the Connection Colors area below the SCM INIC Connections area (See section 2.1.5.4.7 on page 29). Muted connections are gray colored. In addition, a triangle shows the direction of the connection. A dashed line indicates a connection that reports INIC.SCError() to its connection handle, i.e., the connection was rendered invalid but is still existing, see Figure 2-29. Also the MOST socket is dashed, signaling that there is a detected problem with the involved MOST socket.

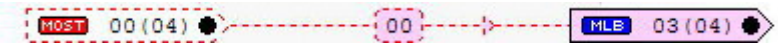

Figure 2-29: Disabled Connection

Let the mouse cursor hover over the areas or icons for a moment to display extensive information.

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2.1.5.4.6 EHC Side

The EHC Port provides a MediaLB Port, a Streaming Port and a Control Port, each represented by a rectangle and highlighted in a specific color. The corresponding EHC side is located right hand on the Socket Connection Manager page.

The OS81xxx can be configured to automatically open the MediaLB Port or the Control Port at power up of the chip. Corresponding to these settings the ports are presented active or inactive. E.g., Figure 2-21 and Figure 2-30 are showing a configuration where the Control Port is disabled and the MediaLB Port is opened automatically. An inactive port is gray colored (e.g., Control Port in Figure 2-30).

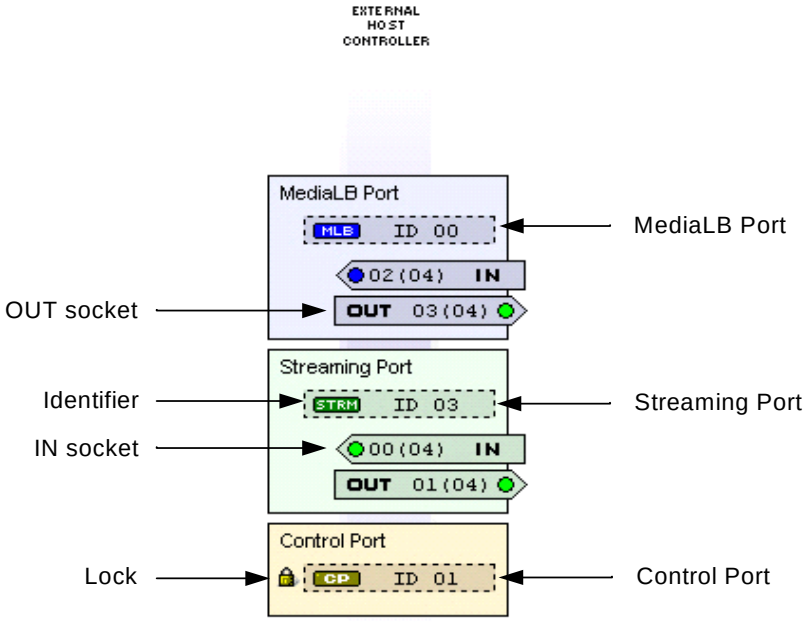

Figure 2-30: EHC Side

Each port has its own identifier showing the specific ID (e.g., ID 00 for MediaLB) and the identifying symbol (e.g., MLB for MediaLB). The Control Port presents a lock to the left of the identifier. The lock symbolizes that the state of the port cannot be modified. If sockets have been created for a port they are displayed below the identifier. Figure 2-30 depicts a MediaLB Port with two sockets and a Streaming Port with two sockets. The rectangles automatically enlarge or shorten according to the number of sockets. There are two kinds of sockets: IN sockets and OUT sockets. The display of sockets is described in section 2.1.5.4.4 on page 26.

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2.1.5.4.7 Connection Colors

The Connection Colors area is positioned below the SCM INIC Connections area. It provides information about the maximum number of possible connections and about the color the connections are displayed in the SCM INIC Connections area. The maximum number of connections depends on the firmware version of the OS81xxx. By default a specific color is predefined for each connection.

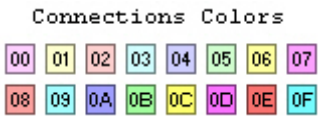

Figure 2-31: Connection Colors

The color a connection is displayed can be modified in the Connection Colors area. Therefore click on the connection number and change the color as desired.

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2.1.5.5 Resources[5]

The page Resources has sub pages. In order to display them expand the Navigation Tree as shown in Figure 2-14 on page 16. The sub pages depend on the explored OS81xxx.

Page	Content in the Content Area and Actions
MOST NetServices MiniKernel	This page presents MOST NetServices MiniKernel related information and hyperlinks to navigate to the sub pages.
MOST NetServices MiniKernel – Data Memory 1	This item presents the first page of the MOST NetServices MiniKernel. The content can be stored into a dump.
MOST NetServices MiniKernel – Data Memory 2	This item presents the second page of the MOST NetServices MiniKernel. The content can be stored into a dump.
INIC Processor	This page presents INIC Processor related information and hyperlinks to navigate to the sub pages.
INIC Processor – Data Memory 1	This item presents the first page of the INIC Processor. The content can be stored into a dump.
INIC Processor – Data Memory 2	This item presents the second page of the INIC Processor. The content can be stored into a dump.

Table 2-7: Resources (e.g.)

As a representative the MOST NetServices MiniKernel Data Memory 2 of an OS81050 INIC is exemplarily depicted in Figure 2-32. The respective content is read and shown (Figure 5-4 on page 51) while making a dump.

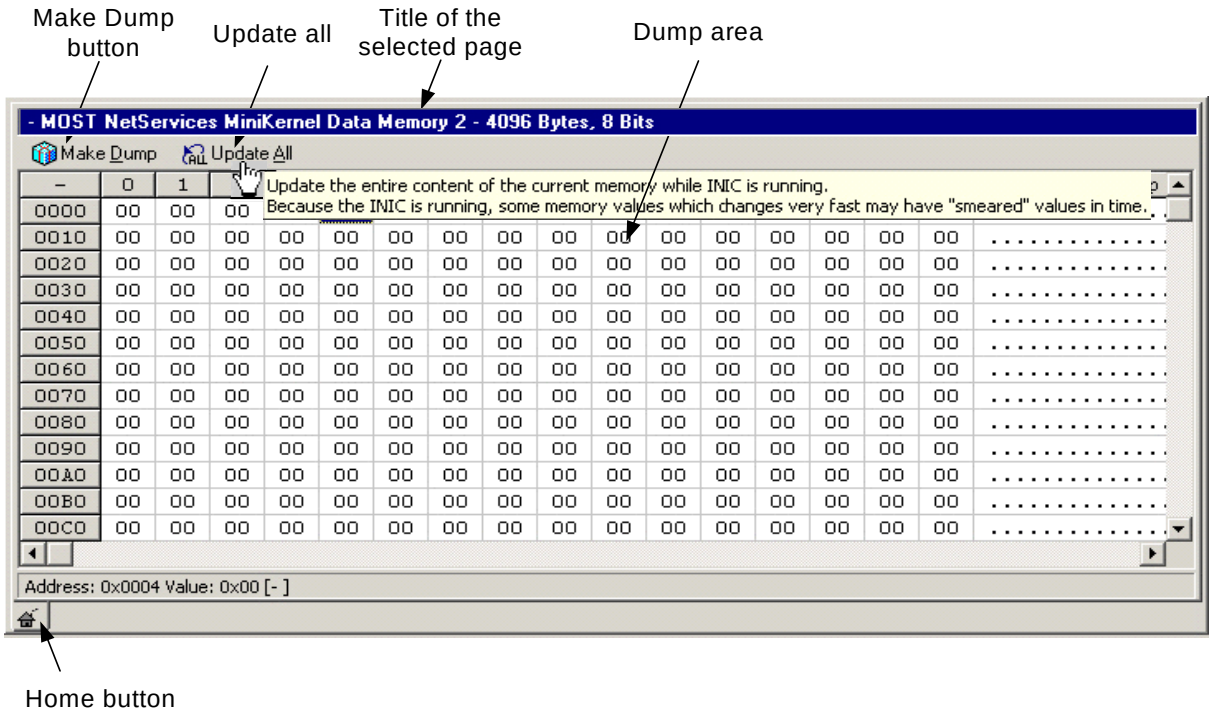

Figure 2-32: MOST NetServices MiniKernel Data Memory 2 (e.g.)

[5] Resources is not applicable for INIC Remote Viewer.

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Each page offers three buttons:

- **'Make Dump' button** 

Press the 'Make Dump'  button in order to create a dump of the currently selected page. The procedure is similar as described in chapter 5 on page 50.

Note: During this operation the OS81xxx will be reset.

- **'Update All' button** 

Press the 'Update All'  button in order to update the current Data Memory page. Because the INIC is running, some memory values, which change very fast, may have 'smeared' values sometimes.

- **Home button** 

Press the Home button  to revert to the start page of the INIC Explorer Software.

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2.1.5.6 Configuration String

The default values of some OS81xxx properties are stored in the Configuration String. These properties can be configured with the INIC Explorer Software[6]. Click onto 'Configuration String' in the Navigation Tree. The current values of the Configuration String properties are displayed. Working with the Configuration String differs for flash-based INICs and ROM/OTP-based INICs identifiable by a different toolbar.

A **flash-based INIC** (e.g., OS81050, OS81082, and OS81110) allows for changing the INIC Configuration String several times. For information on how to program the respective INIC Configuration String, refer to the INIC Flash Guide. The values of the properties can be edited and even modified and written to the flash-based OS81xxx. The corresponding Configuration String Toolbar is described on page 34.

A **ROM/OTP-based INIC** version (e.g., OS81060 and OS81092) holds the INIC Configuration String in OTP. OTP memory is divided into two sections allowing configuration settings to be written twice. Programming the OTP INIC Configuration String is explained in the respective OS81xxx Programming Guide. The corresponding Configuration String Toolbar is described on page 35.

[6] Configuration of INIC Configuration String can be read but not written by INIC Remote Viewer.

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Figure 2-33 depicts an arbitrary snapshot of the Configuration String page. (In addition, the NodeAddress was modified to 123.)

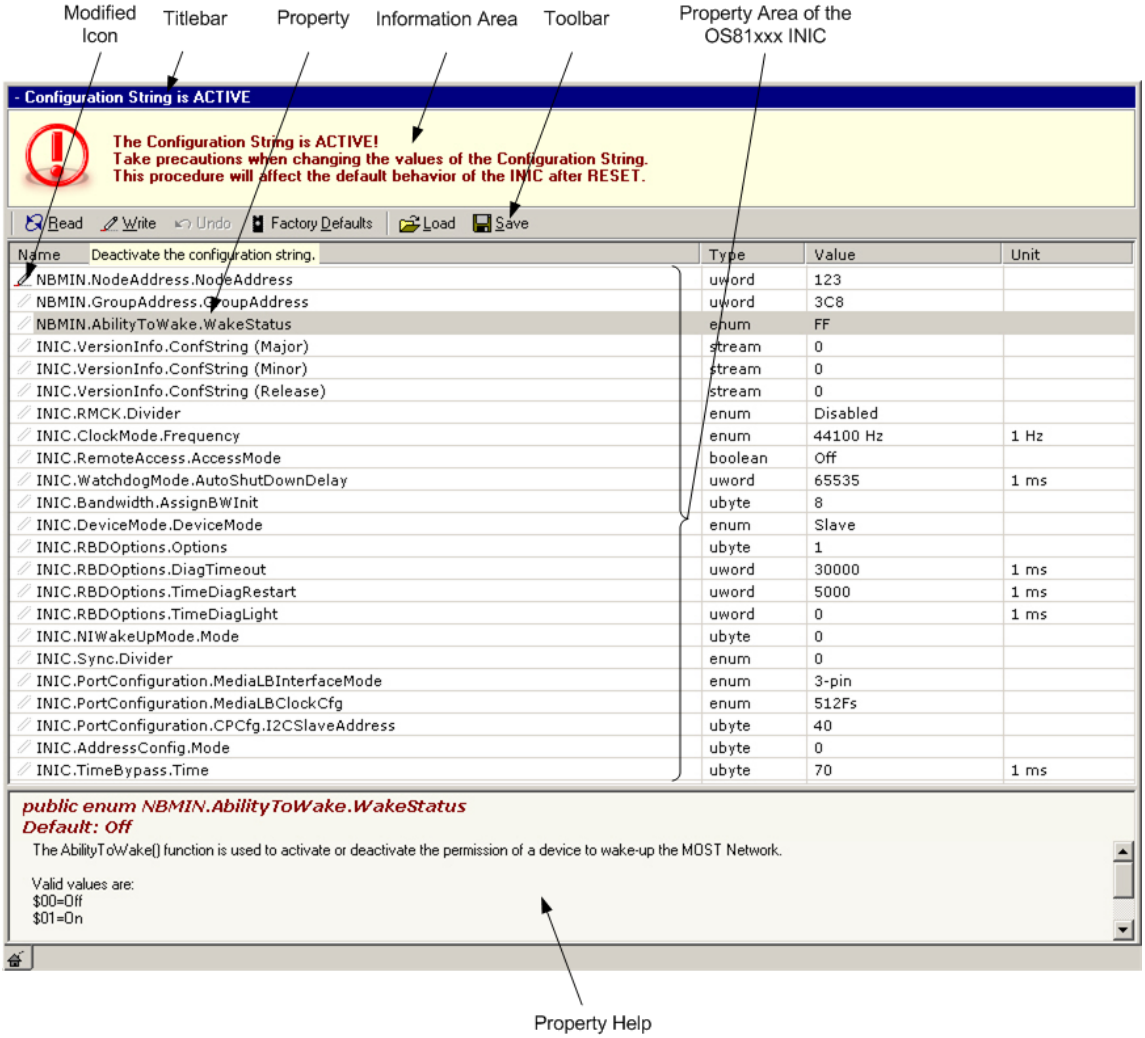

Figure 2-33: Configuration String Page (e.g.)

The Configuration String page comprises

- a Title bar described on page 33,
- a Toolbar for flash-based INIC versions described on page 34, or
  a Toolbar for ROM/OTP-based INIC versions described on page 35,
- a Property Area described on page 37 and
- a Property Help described on page 38.

Configuration String Title bar

The Configuration String Title bar shows the current state of the Configuration String. Below the title bar an information area[7] describes what will happen if the state of the Configuration String changes.

[7] Information area is not visible in the INIC Remote Viewer.

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Configuration String Toolbar for flash-based INIC

The Configuration String Toolbar gives a quick access to key functionality for operating with the Configuration String. The state of the Configuration String (active, inactive or invalid) influences the appearance of the first button in the Toolbar.

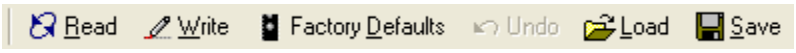

Figure 2-34: Configuration String Toolbar for Flash-based INICs

To find out what a button does, let the mouse cursor hover over the button for a moment and a hint is displayed. The button's keyboard shortcut, if it has one, is displayed as well.

Table 2-8 describes the buttons of the toolbar.

Button	Description
Read[8]	Press this button to read and to display the current values that are stored in the Configuration String of the OS81xxx.
Write	Press this button to write modified values to the OS81xxx. This item is only enabled if a property value is modified. It also updates the display of the Configuration String page after writing.
Factory Defaults*)	Press this button to revert to the original Factory Defaults. Pressing this button means to modify the property values only.
Undo	Press this button to revert to the Configuration String that was read before the last 'write' action. Afterwards this Configuration String is written to the OS81xxx. This item is only enabled if a Configuration String has been written to the OS81xxx.
Load*)	Press this button to load a Configuration File. A window opens. Select the desired file. If necessary adapt the file type. When you are loading a file with a different variant or version of the INIC you have to check all properties in the INIC Explorer afterwards.
Save	Press this button to save the currently displayed property values into a file. A window opens. Specify the path, file type and a friendly name as desired. Adjustable file types: • '.csi': Selected as default, can be viewed in an editor and reloaded in the INIC Explorer. • '.dmp': Select this file type if you need help from support, see details on page 2. The file cannot be reloaded.

*) Values must be written into the INIC by pressing the Write button to affect the INIC.

Table 2-8: Configuration String Toolbar for Flash-based INICs

A typical operation with viewing, modifying and writing a Configuration String is described in section 2.2.1 on page 42.

[8] Only this button is applicable for INIC Remote Viewer.

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Configuration String Toolbar for ROM/OTP-based INIC

The Configuration String Toolbar gives a quick access to key functionality for operating with the Configuration String via the Configuration String editor. The editor allows switching between the Configuration String programmed in the OTP, a Patch Memory and the RAM Memory that holds the Configuration String currently used.

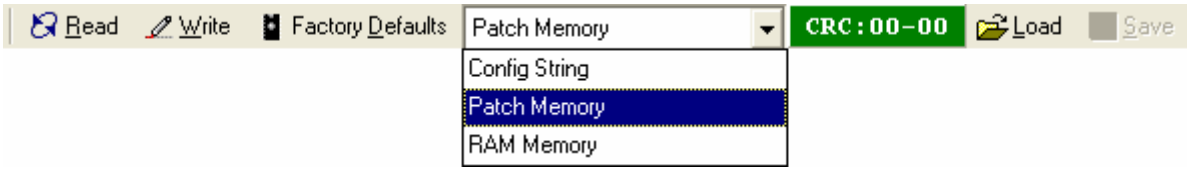

Figure 2-35: Configuration String Toolbar for ROM/OTP-based INICs

To find out what a button does, let the mouse cursor hover over the button for a moment and a hint is displayed. The button's keyboard shortcut, if it has one, is displayed as well.

Table 2-8 on the next page describes the buttons of the toolbar.

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Button	Description
Read[9]	Press this button to read and to display the current values that are stored in the Configuration String of the OS81xxx.
Write	Press this button to write modified values to the OS81xxx. Write is not available if • 'Config String' is selected and the Configuration String has been written twice. In addition, a hint is presented above the toolbar. • 'RAM Memory' is selected. Write is only enabled if a property value is modified. It also updates the display of the Configuration String page after writing.
Factory Defaults*)	Press this button to revert to the original Factory Default values. Pressing this button means to modify the property values only.
Config String**	Shows the current content of the Configuration String located at OTP. If OTP isn't initialized yet, factory default values will be displayed. The information area above this toolbar informs about how often the Configuration String can be written to the OS81xxx. In case the Configuration String is already written twice patching is still possible. Select 'Config String' to program the Configuration String of the OS81xxx. It is possible to read and to write values (depending on how often the Configuration String has been programmed and is written on the OTP).
Patch Memory**	Shows a memory section that becomes initialized when starting the OS81xxx and that can be used at runtime. If a wrong CRC is detected the INIC Explorer automatically applies Factory Default values. It is possible to modify each entry of the Configuration String at runtime even without programming the OTP. The values are valid as long as the OS81xxx is connected to voltage. After disconnecting the OS81xxx from power and subsequently reconnecting to power the values have to be modified again. Select 'Patch Memory' to modify the Configuration String at runtime e.g., during the development process without programming the OTP. It is possible to read and to write values.
RAM Memory** (source)	Shows the Configuration String the OS81xxx is working with. The information which Configuration String is loaded is shown in brackets. Sources can be OTP1, OTP2, Patch or chip default values. It is only possible to read values.
CRC	Shows whether the calculated CRC matches the CRC on OS81xxx. Green: Calculated CRC matches the CRC on OS81xxx. Red: Calculated CRC does not match the CRC on OS81xxx.
Load*)	Press this button to load a Configuration File. A window opens. Select the desired file. If necessary adapt the file type. When you are loading a file with a different variant or version of the INIC you have to check all properties in the INIC Explorer afterwards.
Save	Press this button to save the currently displayed property values into a file. A window opens. Specify the path, file type and a friendly name as desired. Adjustable file types: • '.csi': Selected as default, can be viewed in an editor and reloaded in the INIC Explorer. • '.dmp': Select this file type if you need help from support, for contact information refer to page 2. The file cannot be reloaded.

*) Values must be written into the INIC by pressing the Write button to affect the INIC.

**) If the OS81xxx is connected to voltage it is checked during start-up whether the two sections of the OTP are initialized or not. If both sections are not yet initialized chip default values are taken and copied to the RAM Memory. If both sections are programmed OTP2 is taken, otherwise OTP1 (i.e., it is possible to program OTP once more). If a Patch Memory is programmed the Patch Memory is taken and copied to the RAM Memory i.e., overwrites an OTP Configuration String. The Patch Memory is valid as long as the OS81xxx is connected to voltage i.e., switching back to an OTP section is not possible during runtime.

Table 2-9: Configuration String Toolbar for ROM/OTP-based INICs

[9] Only this button is applicable for INIC Remote Viewer.

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Property Area[10]

The Properties of the Configuration String of the OS81xxx can be configured. Per property the name, its type, the value and if available the unit are displayed.

Double-click a property e.g., the RMCK property. Alternatively use the cursors and press the Enter key. An **Edit Window** opens:

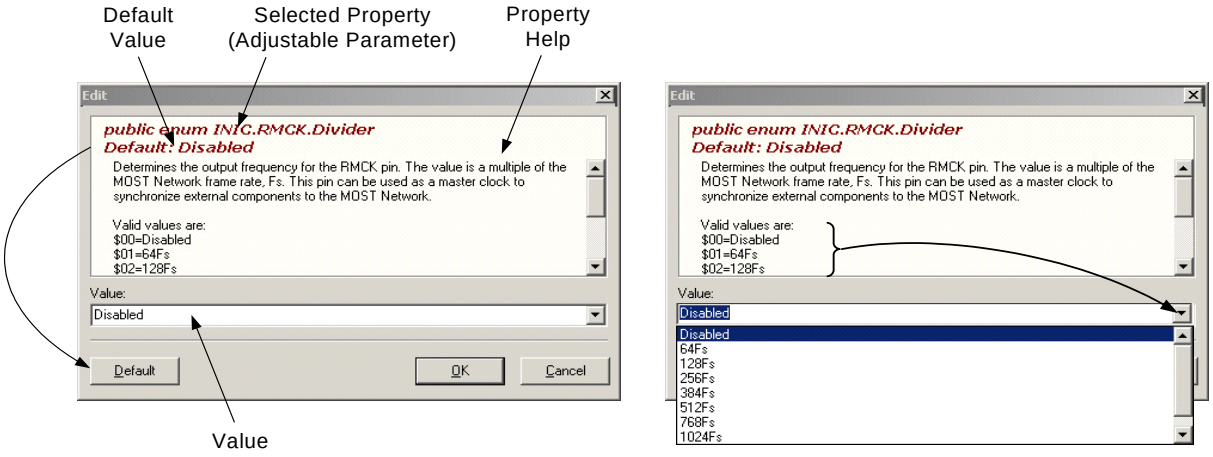

Figure 2-36: Configuration String Edit Window

The Edit Window consists of the Property Help, the input field and buttons. The Property Help presents information like:

- The property
- The factory default value of this property
- A short description of the property
- Valid values or a value range

To select the default value press Default as shown left hand in Figure 2-36. To select a valid value from the Property Help click the drop down button as shown right hand in Figure 2-36 and select the value as desired. If a property is selected that has no predefined values enter a value.

Click OK to accept and close the Edit Window. Click Cancel to abort the modification. If a value is modified and the Edit Window is closed after pressing OK, the color of the Modified Icon is changed in the Configuration String page. Write is enabled in the Toolbar (See Figure 2-37 on page 38.). From now on a Configuration String can be written to the OS81xxx. A complete procedure is described in section 2.2.1 on page 42.

[10] This functionality is not applicable for INIC Remote Viewer.

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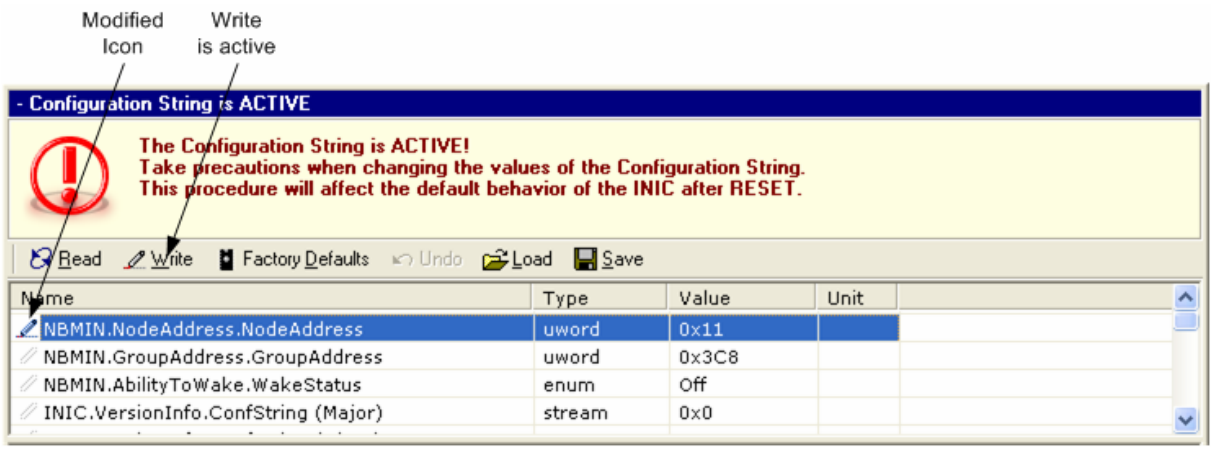

Figure 2-37: Modified Icon

Property Help

At the bottom of the Configuration String page there is a Property Help. The name of the selected property, its default value, a short description of the property and if possible valid values or a value range are presented.

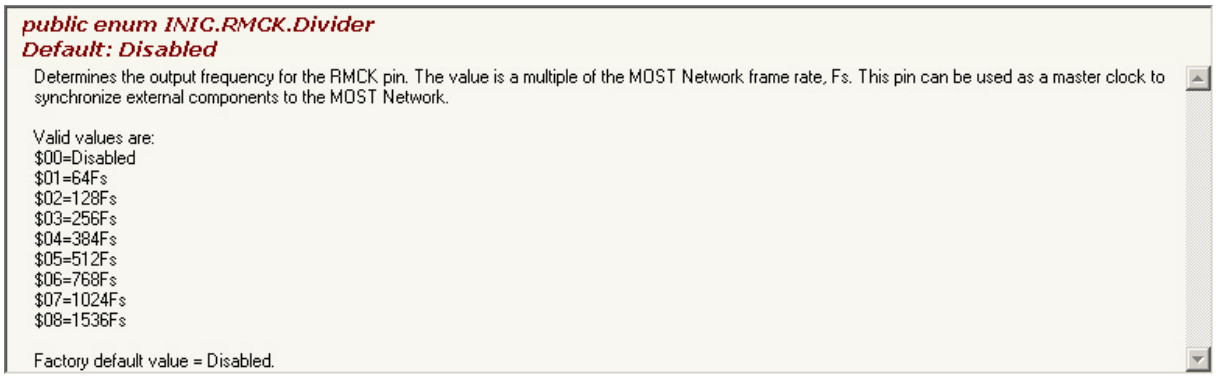

Figure 2-38: Property Help of the RMCK

Context menu

Right click inside the Configuration String page to get the Configuration String context. The state of the Configuration String (active, inactive or invalid, flash-based or ROM/OTP-based INIC version) influences the appearance of the first item in the context menu.

Figure 2-39: Configuration String Context Menu

The menu items are described in Table 2-8 on page 34 for flash-based INICs or in Table 2-9 on page 36 for ROM/OTP-based INICs.

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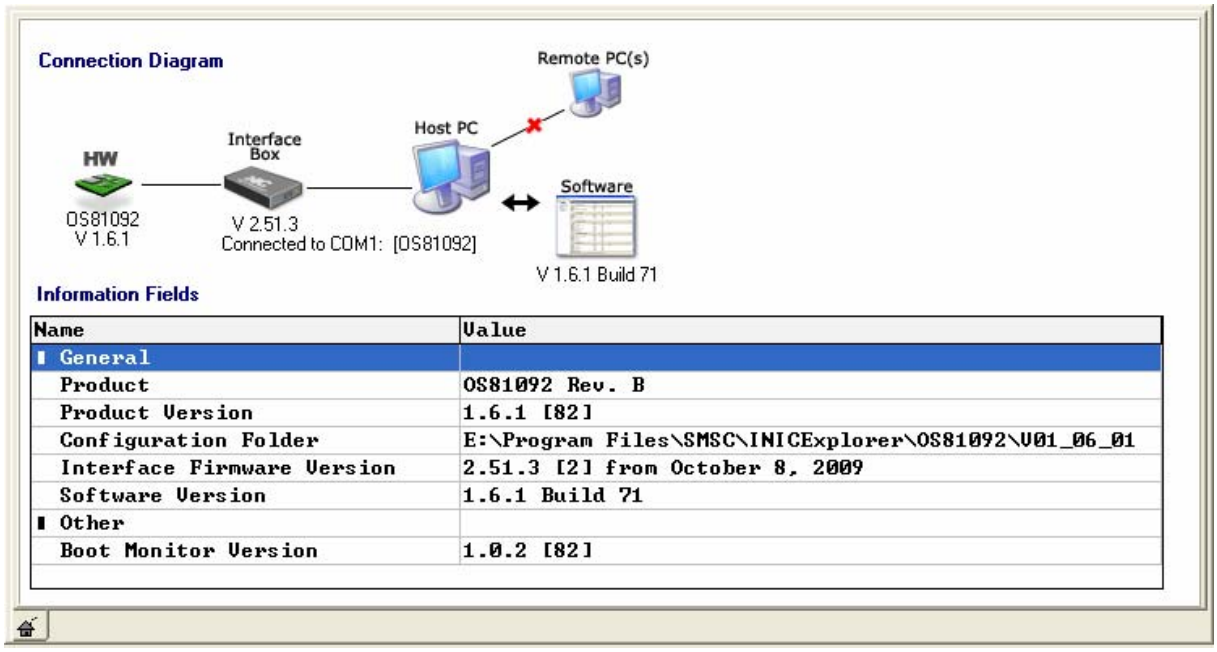
2.1.5.7 Information

This page presents the connection diagram and information fields. about versions and the current state of the connection diagram.



Name	Value
General	
Product	OS81092 Rev. B
Product Version	1.6.1 [82]
Configuration Folder	E:\Program Files\SMSC\INICExplorer\OS81092\V01_06_01
Interface Firmware Version	2.51.3 [2] from October 8, 2009
Software Version	1.6.1 Build 71
Other	
Boot Monitor Version	1.0.2 [82]

Figure 2-40: Connection Diagram (e.g.)

Figure 2-40 depicts an arbitrary snapshot. The example shows the current versions of hardware and software in the connection diagram and the corresponding information fields.

Note: If an error is shown in the Information Area the files that are stored in the configuration folder have to be checked whether the files and the INIC firmware version are matching or not. You can double-click on ‘Configuration Folder’ to open a window and to add the correct configuration files at the right place, i.e., in the Configuration Folder.

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2.1.6 Context Area

The **Context Area** provides access to details of the current selected item. The item can be selected via the Toolbar, the Navigation Tree or partly the Context Area itself.

There are two kinds of pages that are being shown in the Context Area.

- **Navigation pages**[11] like the start page of the INIC Explorer Software or the different Resources pages[12]. These pages present a short description of the page at the top and hyperlinks to navigate to pages with detail information. For example Figure 2-41 depicts the start page of the INIC Explorer Software when an OS81050 INIC is evaluated. In addition, the start page highlights new or updated functionalities of the INIC Explorer Software.

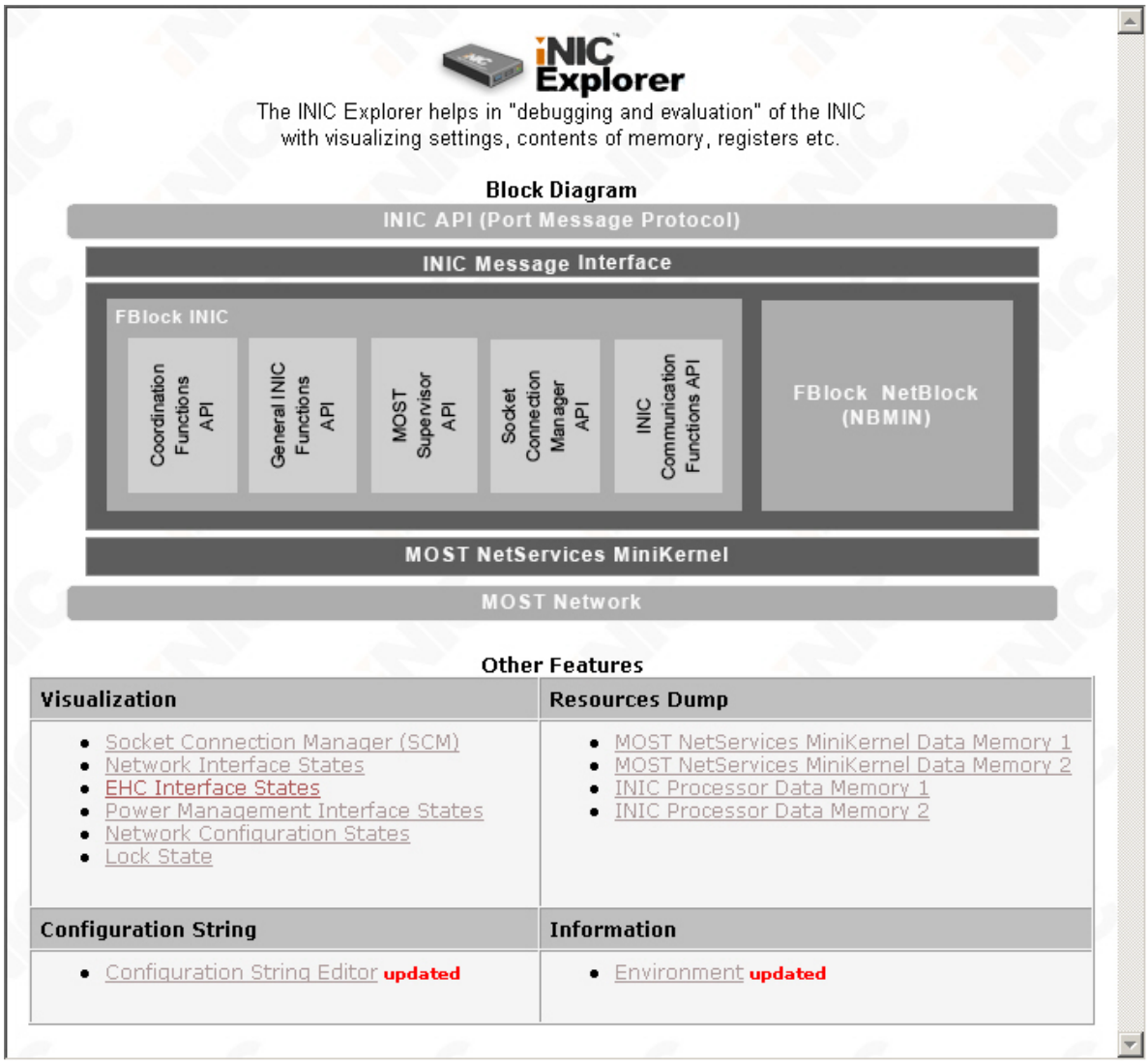

Figure 2-41: Start Page of the INIC Explorer Software (e.g.)

Hover the mouse over the screen to see where hyperlinks are implemented.

[11] The offered pages depend on the chip that is explored.
[12] This feature is not applicable for INIC Remote Viewer.

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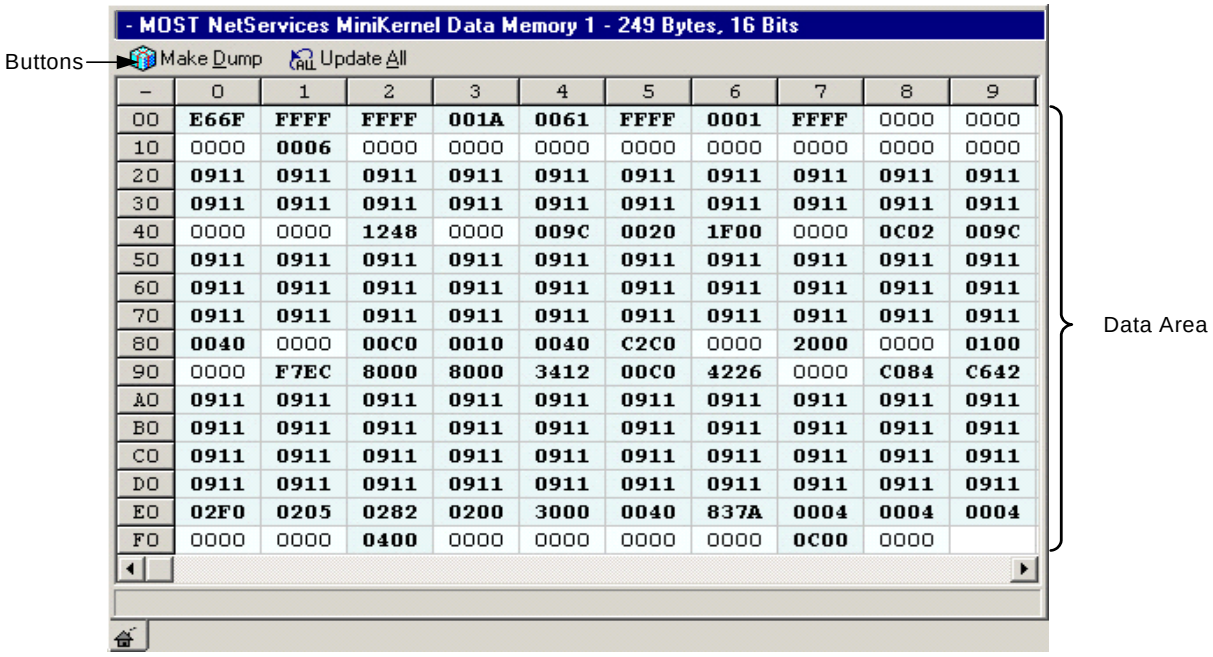
- Detail **information pages**[13] are e.g., the Visualization page, the FBlock INIC page, INIC Processor Data Memory pages, the Socket Connection Manager page, the Configuration String page and the Information page. In all these pages properties of the OS81xxx can be viewed or OS81xxx related actions can be performed e.g., writing a Configuration String or making a dump file. For example Figure 2-42 depicts a page of the MOST NetServices MiniKernel if an OS81050 is evaluated.



–	0	1	2	3	4	5	6	7	8	9
00	E66F	FFFF	FFFF	001A	0061	FFFF	0001	FFFF	0000	0000
10	0000	0006	0000	0000	0000	0000	0000	0000	0000	0000
20	0911	0911	0911	0911	0911	0911	0911	0911	0911	0911
30	0911	0911	0911	0911	0911	0911	0911	0911	0911	0911
40	0000	0000	1248	0000	009C	0020	1F00	0000	0C02	009C
50	0911	0911	0911	0911	0911	0911	0911	0911	0911	0911
60	0911	0911	0911	0911	0911	0911	0911	0911	0911	0911
70	0911	0911	0911	0911	0911	0911	0911	0911	0911	0911
80	0040	0000	00C0	0010	0040	C2C0	0000	2000	0000	0100
90	0000	F7EC	8000	8000	3412	00C0	4226	0000	C084	C642
A0	0911	0911	0911	0911	0911	0911	0911	0911	0911	0911
B0	0911	0911	0911	0911	0911	0911	0911	0911	0911	0911
C0	0911	0911	0911	0911	0911	0911	0911	0911	0911	0911
D0	0911	0911	0911	0911	0911	0911	0911	0911	0911	0911
E0	02F0	0205	0282	0200	3000	0040	837A	0004	0004	0004
F0	0000	0000	0400	0000	0000	0000	0000	0C00	0000	

Figure 2-42: Context Area Low-Level Page: MOST NetServices MiniKernel (e.g.)

Exemplary descriptions of the procedures ‘Write a Configuration String’ or ‘Make a Dump’ can be found in section 2.2.1 on page 42 or in chapter 5 on page 50.

[13] The offered pages depend on the chip that is explored.

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2.2 Operating with the INIC Explorer Software

This section describes typical operations that can be done with the INIC Explorer Software. A proper connection and communication is assumed in the test environment. Otherwise refer to chapter 4 on page 48.

2.2.1 Configure the OS81xxx

The INIC Explorer Software makes it easy to configure the OS81xxx by using a Configuration String. Therefore obey the following procedure

- Start the INIC Explorer Software.

Note: In order to cause the OS81xxx not to take the Factory Defaults but a modified Configuration String it is necessary to modify the desired values and to write it to the OS81xxx. Otherwise the factory default configuration of the firmware is active and the modified Configuration String is ignored.

- Press the hyperlink Configuration String Editor in the Context Area as shown in the Figure 2-43. (Alternatively press INIC and select Configuration String in the Navigation Tree).

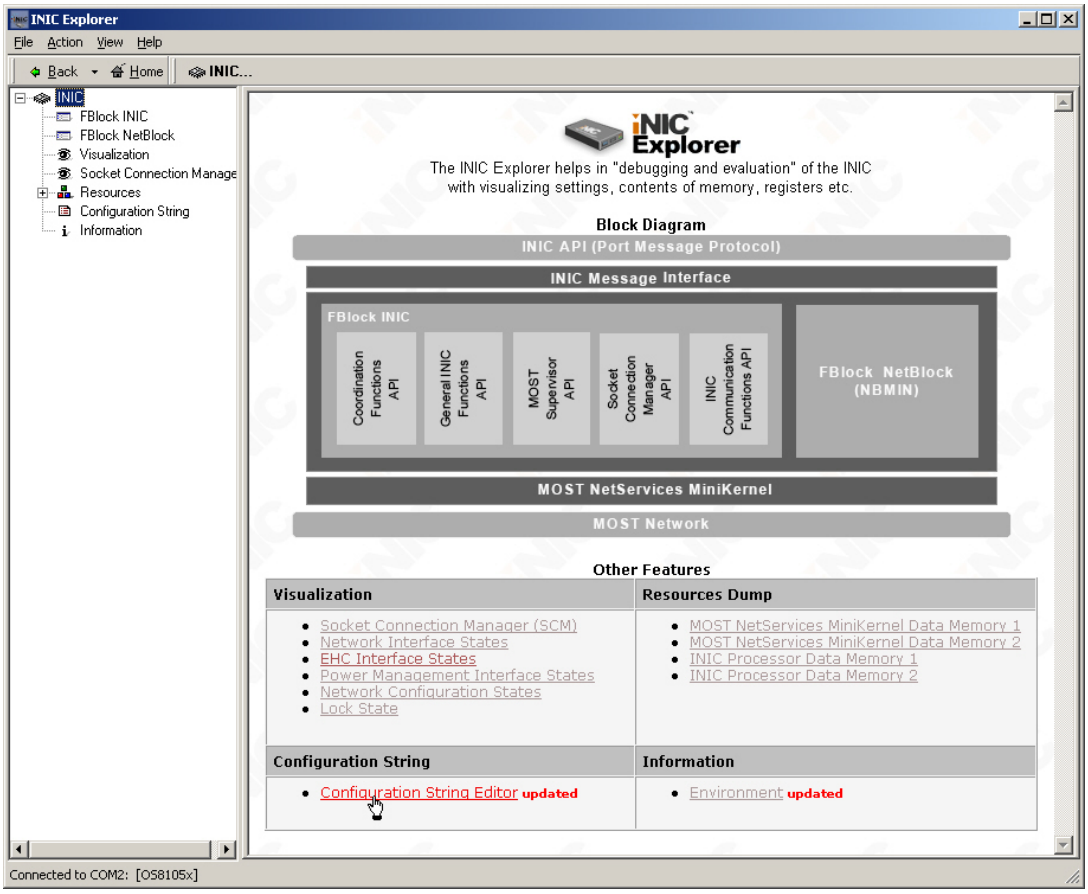

Figure 2-43: Configure the OS81xxx: Select the Configuration String Page

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The Configuration String page is shown. The title bar shows the current state of the Configuration String (invalid, inactive, active).

The current values are automatically read from the OS81xxx and displayed as shown in Figure 2-44.

Name	Type	Value	Unit
NBMIN.NodeAddress.NodeAddress	uword	FFFF	
NBMIN.GroupAddress.GroupAddress	uword	3C8	
NBMIN.AbilityToWake.WakeStatus	enum	Off	
INIC.VersionInfo.ConfString (Major)	stream	0	
INIC.VersionInfo.ConfString (Minor)	stream	0	
INIC.VersionInfo.ConfString (Release)	stream	0	
INIC.RMCK.Divider	enum	Disabled	
INIC.ClockMode.Frequency	enum	44100 Hz	1 Hz
INIC.RemoteAccess.AccessMode	boolean	Off	

Figure 2-44: Configuration String Page: NBMIN.NodeAddress Property Selected

- Double-click the desired property e.g., the NBMIN.NodeAddress. NodeAddress property. An Edit Window opens. Modify the value from ‘FFFF’ to ‘123’.

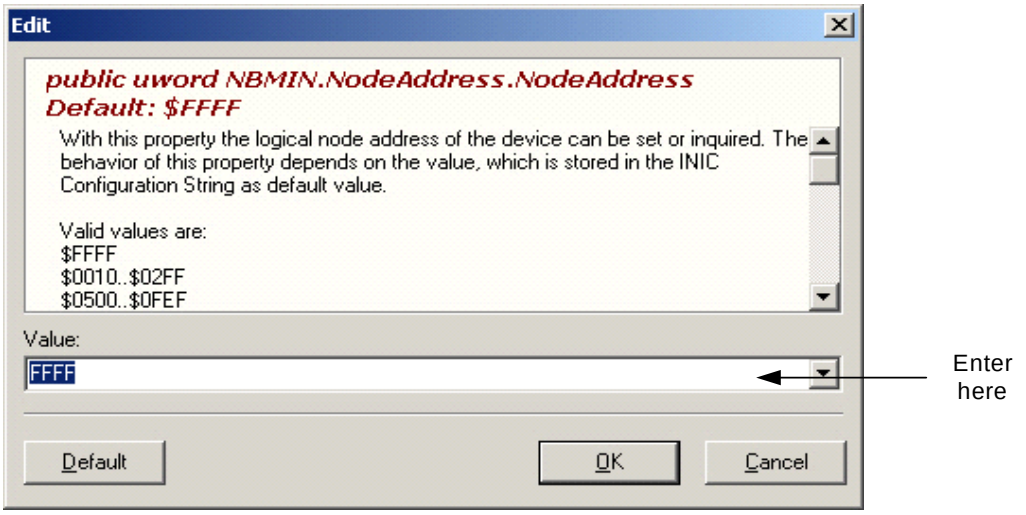

Figure 2-45: Enter (Select) a Value

- If possible select a valid value from the list after clicking the drop down button. Otherwise enter the desired value. Press OK.
- Repeat the last step for all desired properties.
- If the state of the Configuration String is ‘active’ press Write.

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A progress bar appears during the procedure. Afterwards the current values are automatically read from the OS81xxx and displayed in the Configuration String.

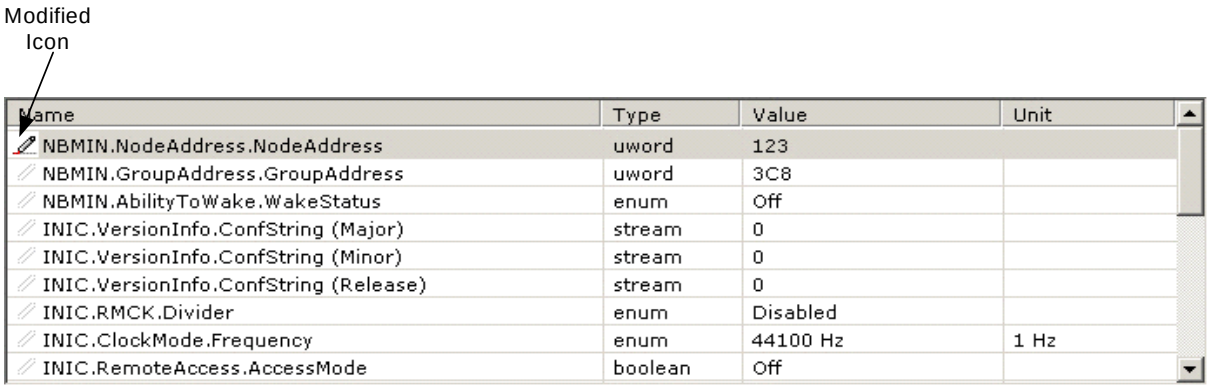

Figure 2-46: Modified Value in the Configuration String

- Check the modified value(s) if desired e.g., for the NodeAddress on the page FBlock NetBlock and update the page.
- If the action fails refer to chapter 4 on page 48. Proceed as described in the paragraph **Recommendation** but skip the first step.

Note: Generally first modify all values as desired. Then write once or activate once.

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2.2.2 Properties Viewing without Updating INIC Explorer Windows

In some cases it might be useful to view the properties without updating them. Then obey this procedure:

- Start the INIC Explorer Software.
- Navigate to one of the pages Visualization, FBlock INIC or FBlock NetBlock.
- Click onto . This will show the properties and their values without updating.

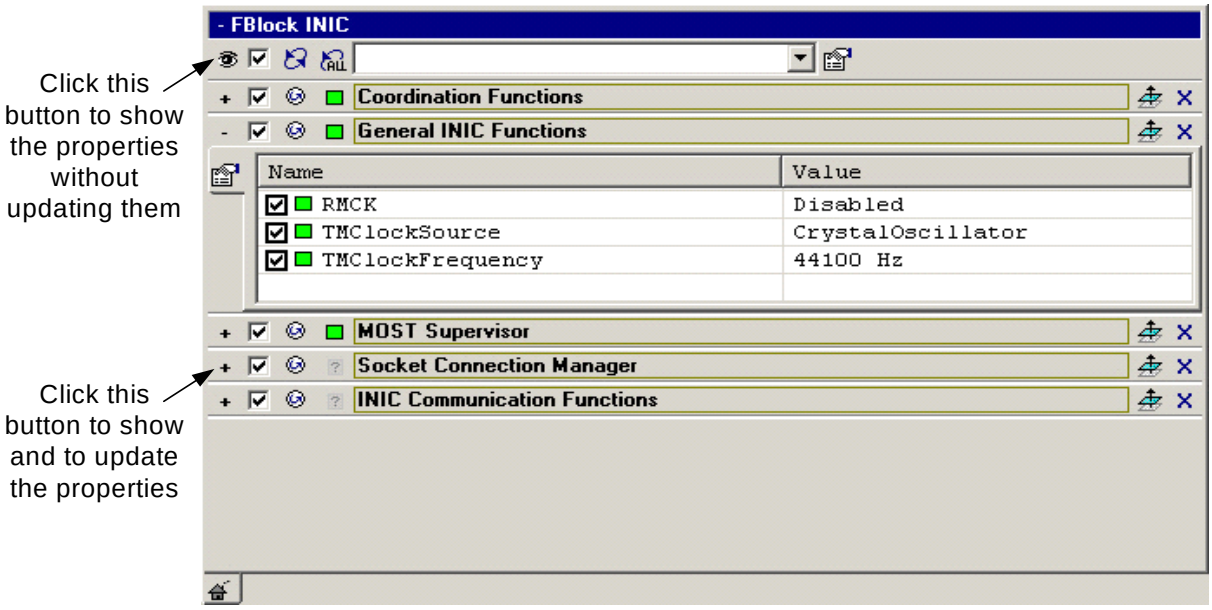

Figure 2-47: Viewing Properties

2.2.3 Create a Complete Dump

To get a complete dump of all resources obey this procedure:

- Start the INIC Explorer Software.
- Click Action > Dump All Resources. A confirm box appears that informs about the following steps that will be performed through the INIC Explorer Software.
- Click Yes. A new window opens.
- Specify path and name of the dump file as desired and press Save.

This operation may take a while.

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3 INIC Remote Viewer Functionality

The INIC Remote Viewer builds a subset of INIC Explorer Software. Apart from a minor limited functionality the INIC Remote Viewer offers full access to FBlock INIC and FBlock NetBlock properties. All data are transmitted remotely via MOST network, i.e., without the need of opening the housing of a MOST device. All features can be managed as to be used to by INIC Explorer, except of Configuration String writing and dump functionality.

3.1 Starting INIC Remote Viewer

Set-up your environment as proposed in the booklet INICExplorer/RemoteViewer Start-up Guide and start your OptoLyzer Suite (for more information on OptoLyzer Suite refer to its online help). After your device was detected, set your device to Node mode (double-click on Bypass and select Master or Slave). Start-up the MOST network by pressing the respective button below the Mode view in case you selected Master as Node mode before.

It is important that the device targeted to run INIC Remote Viewer is set to Node mode and locked. Otherwise, INIC Remote Viewer cannot be started. Respective messages will pop up showing that your configuration parameters are invalid.

If your device is set and locked, select the OptoLyzer OL3xxx you like to use in the OptoLyzer main window, right-click and select INIC Remote Viewer.

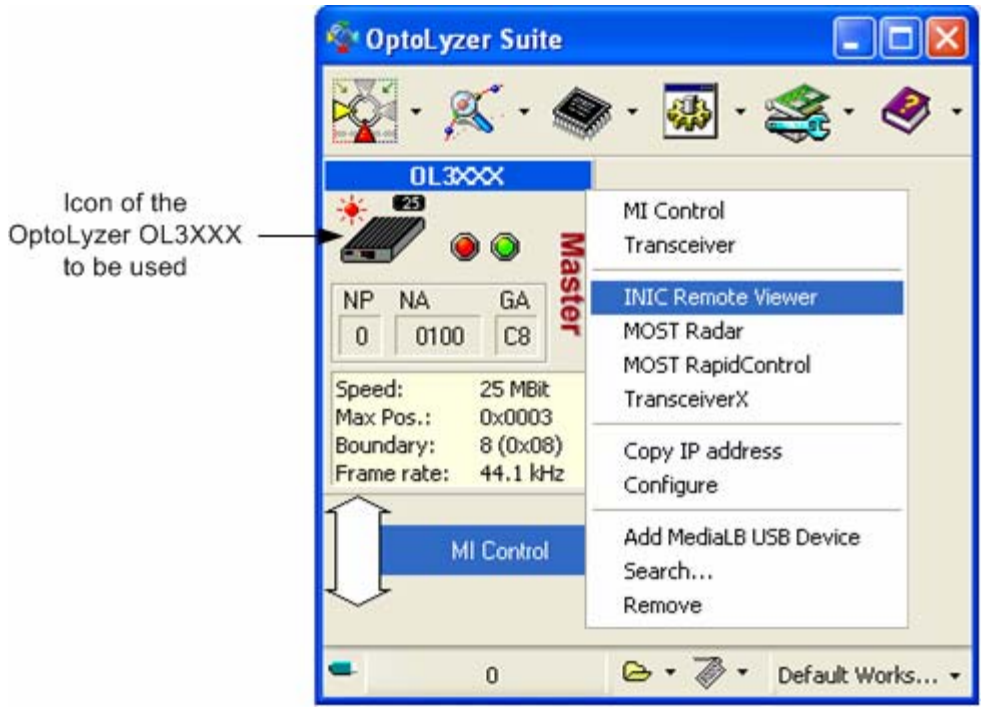

Figure 3-1: OptoLyzer Suite Main Window

A window appears showing all INIC nodes located in your MOST network, stating the Node Address, Chip Family, INIC Product Version and the status, if the node is viewable or not. In case “NO” is indicated, your INIC requires a file to be installed. Press Rescan after the installation process for detecting further nodes.

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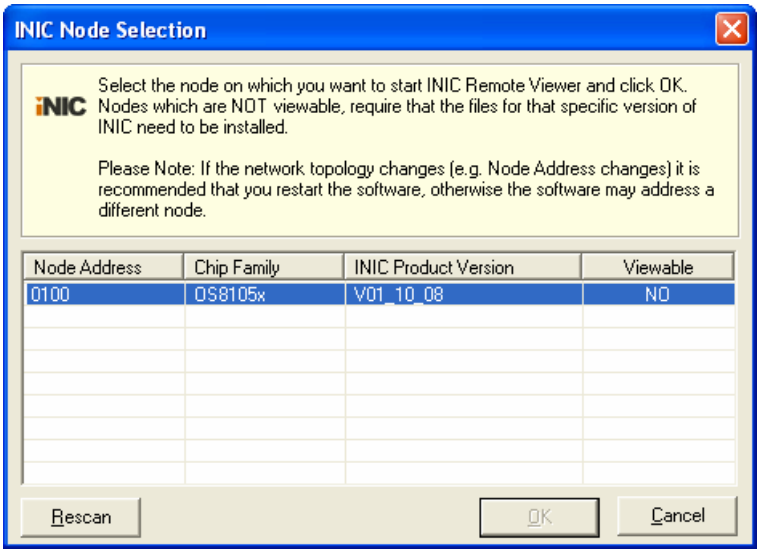

Figure 3-2: INIC Node Selection

Note: The selection of the node address is valid only as long as the topology does not change. If it changes restart the software. Otherwise the software may address a different node.

Select the node you want to view and press OK. INIC Remote Viewer starts.

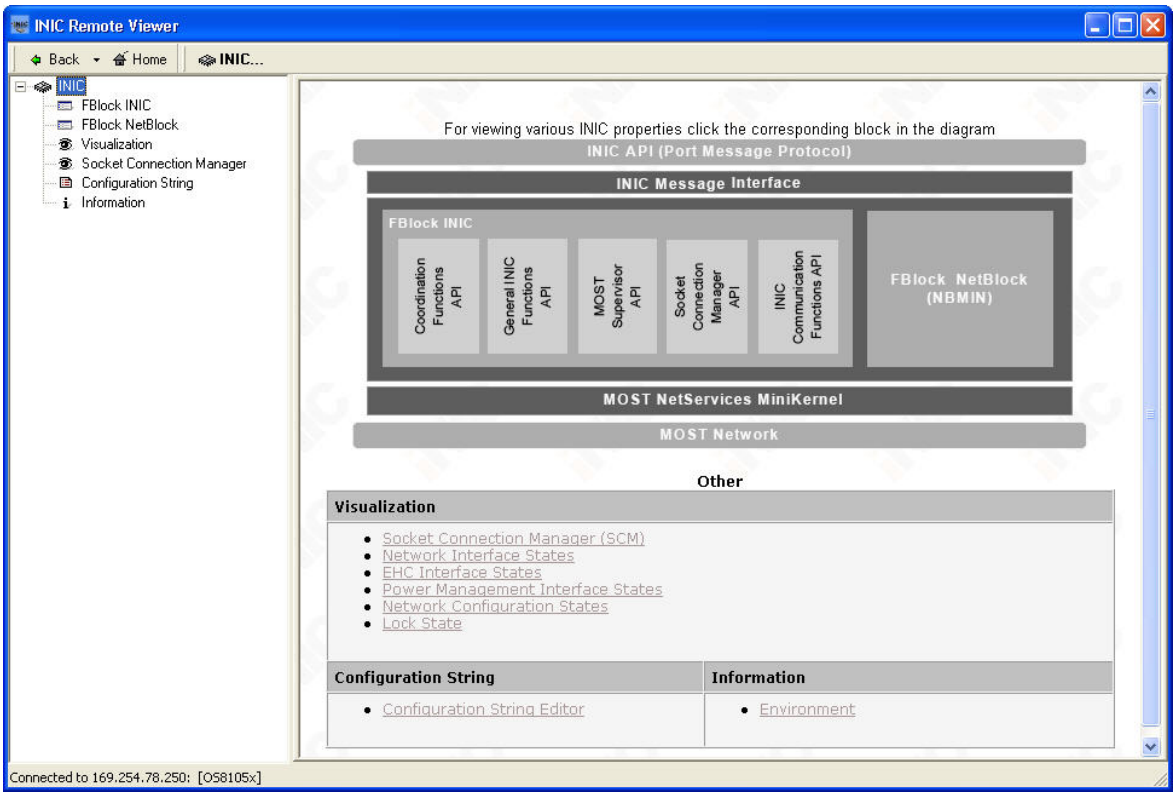

Figure 3-3: INIC Remote Viewer

For functionality of the respective INIC Remote Viewer functions refer to Chapter 2, which describes the whole user interface.

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4 Troubleshooting

This chapter describes the behavior of the INIC Explorer Software when the communication between the INIC Explorer Software running on the PC to the DUT causes problems. In addition, a recommendation is given how to proceed.

4.1 Communication Error

The INIC Explorer Software opens an error window if the hardware is not connected or does not work properly.

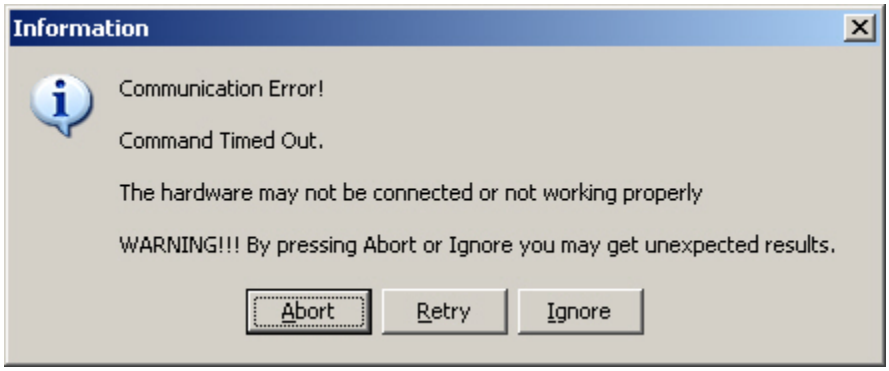

Figure 4-1: Information Box for Communication Error

Press Abort to abort the current operation. Press Retry to repeat the last command. Press Ignore to ignore the current command.

Note: If Abort or Ignore is pressed be aware there may be unexpected results.

Recommendation:
If pressing Retry does not succeed obey the following recommendation:

- Press Abort.
- Close the INIC Explorer Software.
- Check the connections. They are described in the booklet INICExplorer/RemoteViewer Start-up Guide.
- Check and interpret the current LED display on the INIC Explorer Interface Box. For details refer to the booklet INICExplorer/RemoteViewer Start-up Guide.
- Press the Reset knob on the rear panel of the INIC Explorer Interface Box. The knob is described in the booklet INICExplorer/RemoteViewer Start-up Guide.
- If necessary reset the DUT. Refer to the respective user manual.
- Restart the INIC Explorer Software and retry the action.
- If the action fails again contact: support-ais-de@smsc.com.

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4.2 Hardware is not Responding

In some cases the INIC Explorer Software might reply a message similar to the following:

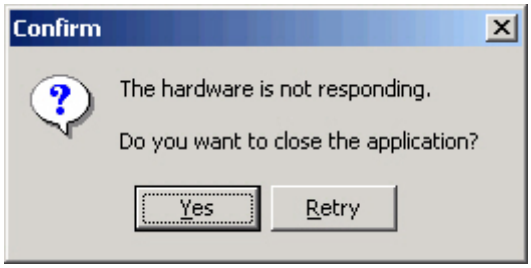

Figure 4-2: Hardware Confirm Window

Generally follow the hints in the message box. In Figure 4-2 press Yes if the INIC Explorer Software should be stopped. If the INIC Explorer Software should be used further on obey the following recommendation:

- Check the connections. They are described in the booklet INICExplorer/RemoteViewer Start-up Guide.
- Check and interpret the current LED display on the INIC Explorer Interface Box. For details refer to the booklet INICExplorer/RemoteViewer Start-up Guide.
- Then press Retry.
- If the action fails again proceed as described in section 4.1 on page 48.

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5 SMSC Support

In case of problems with an OS81xxx INIC, SMSC is at your disposal. Before contacting support-aisde@smsc.com hold ready the following information, displayed on the information page. The procedure described below refers to the steps performed for an OS81050.

Name	Value
▮ General	
Product	OS81050
Product Version	1.8.0 [F]
Interface Box Firmware Version	1.26.0 [30] from 13/07/04
Software Version	1.2.0 Build 4
▮ Other	
Boot Monitor Version	2.21.0 [F]
Configuration String Version	1.0.0 [F]
Production String Version	FF.FF.FF [FF]

Figure 5-1: Information about Versions (e.g.)

For analysis purposes SMSC needs a dump of e.g., the MOST NetServices MiniKernel Data Memory 2. This dump is created as follows:

- Click in the start page of the INIC Explorer Software onto MOST NetServices MiniKernel Data Memory 2 (hyperlink). Then the content of the respective page is displayed in the Context Area.

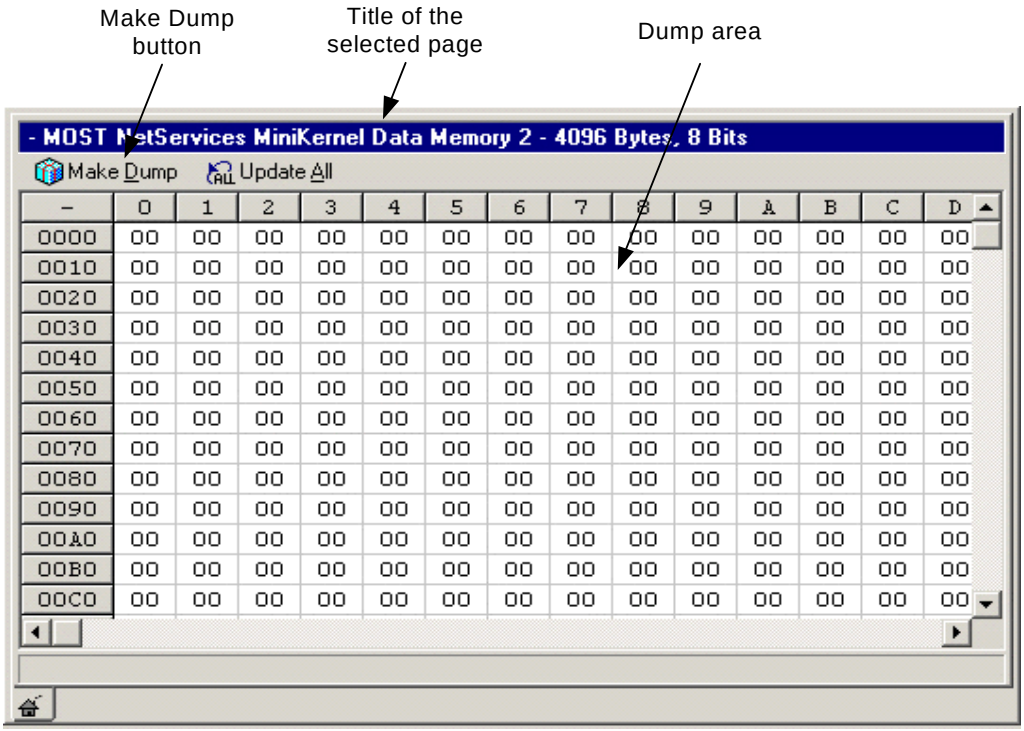

Figure 5-2: MOST NetServices MiniKernel Data Memory 2 Page (e.g.)

The title presents the name of the selected page and information about its size.

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- Click Make Dump.

A warning window appears that informs about the following steps that will be performed through the INIC Explorer Software.

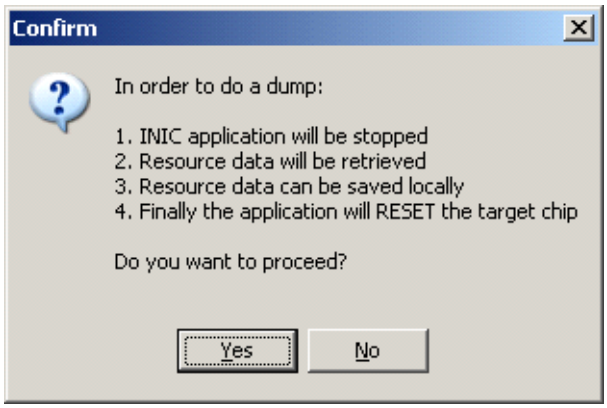
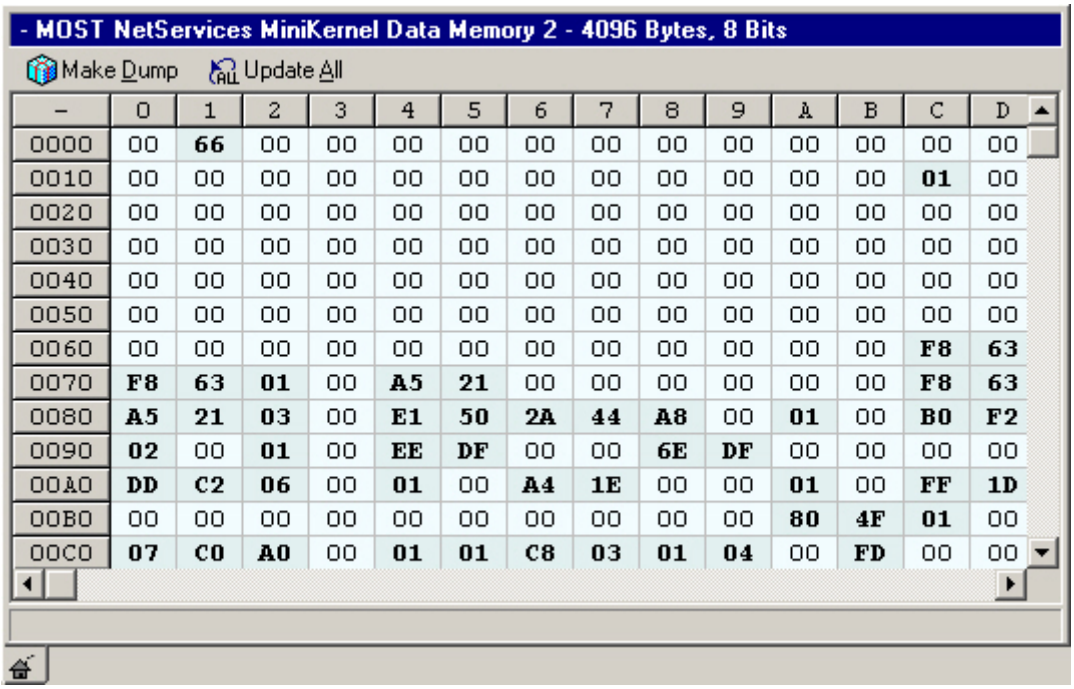


Figure 5-3: Make Dump Warning Box

- Press Yes to proceed i.e., make a dump. Then the INIC application on the DUT is stopped. The memory data is read from the OS81050 INIC. The dump area in the Context Area is updated and the background color changes to light blue. Values different from '00' are displayed in bold letters.



–	0	1	2	3	4	5	6	7	8	9	A	B	C	D
0000	00	**66**	00	00	00	00	00	00	00	00	00	00	00	00
0010	00	00	00	00	00	00	00	00	00	00	00	00	**01**	00
0020	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0030	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0040	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0050	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0060	00	00	00	00	00	00	00	00	00	00	00	00	**F8**	**63**
0070	**F8**	**63**	**01**	00	**A5**	**21**	00	00	00	00	00	00	**F8**	**63**
0080	**A5**	**21**	**03**	00	**E1**	**50**	**2A**	**44**	**A8**	00	**01**	00	**B0**	**F2**
0090	**02**	00	**01**	00	**EE**	**DF**	00	00	**6E**	**DF**	00	00	00	00
00A0	**DD**	**C2**	**06**	00	**01**	00	**A4**	**1E**	00	00	**01**	00	**FF**	**1D**
00B0	00	00	00	00	00	00	00	00	00	00	**80**	**4F**	**01**	00
00C0	**07**	**C0**	**A0**	00	**01**	**01**	**C8**	**03**	**01**	**04**	00	**FD**	00	00

Figure 5-4: MOST NetServices MiniKernel Data Memory Updated Page

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A progress bar informs about the progress while creating the dump file.

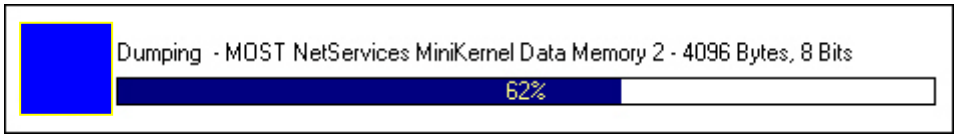

Figure 5-5: Progress Bar during Dumping MOST NetServices MiniKernel Data Memory

A new window opens:

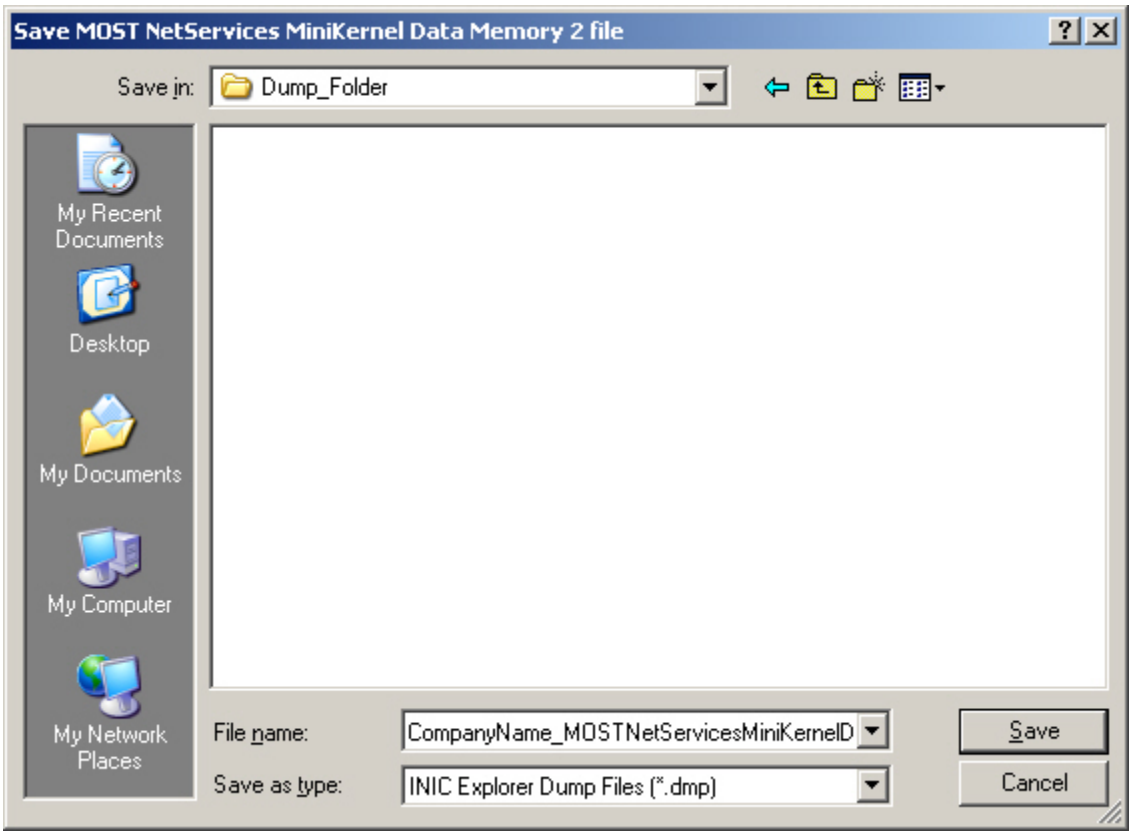

Figure 5-6: Save MOST NetServices MiniKernel RAM Bytes

- Navigate to a path the file should be stored and insert your company name as file name. By default the path is set to the path the application has been started.
- Click Save to create the respective file. The file must have file extension '.DMP'.

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