

RTCUProg

User's Guide

Ver. 7.30

Introduction

This manual contains the user documentation allowing easy installation and use of the RTCUProg application and firmware programming utility.

The RTCUProg program is an easy to use application and firmware programming utility for the complete RTCU product family. The connection to the RTCU unit can be made with direct cable, CSD (datacall) or through the RTCU Gateway allowing easy application and firmware maintenance of RTCU products already in use.

RTCUProg version 6.00 or newer supports encrypted communication using the RTCU Gateway. Starting from version 7.00 there is full support for the RTCU NX32 Execution Architecture.

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Installation

Download the installation file from www.logicio.com. Run "RTCUProg 7.30.msi" and let the installation wizard guide you through the complete installation process.

RTCUProg program

Locate the Logic IO folder in your start->programs menu and run the RTCUProg program.

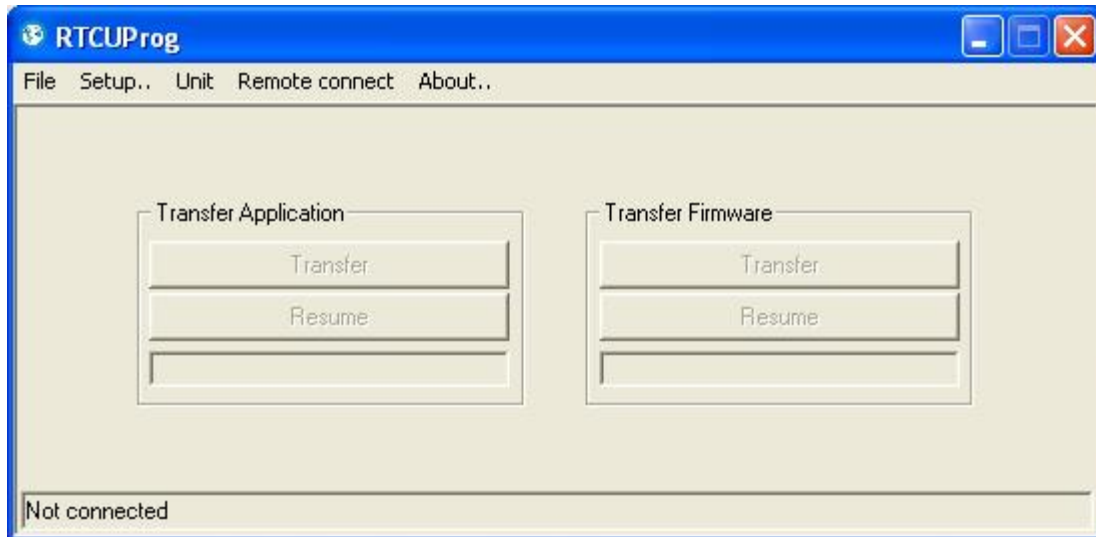


Figure 1, The RTCUProg program

Setup

The setup menu is located in the menu bar. Use this menu to setup the direct cable connection and modem settings. Default settings are USB for direct cable connection and NONE for modem connection. The baud rate is default set to 57600.

The modem initialization settings are default set up for a Zyxel ISDN Modem. Using the drop-down list in the "Modem initialization strings" group, it is possible to select among different modem initialization strings, depending on the type of modem you are using. If the initialization string for your modem is not listed, you can type the string in the entry field just below the drop-down list, and then press the "Add to list" button to insert it into the list for future reference. It is possible to add a descriptive text after the initialization string, by adding a "!" (exclamation mark) just before the comment. If more AT commands are needed for the proper initialization, commands can be separated with the ";" (semicolon) between commands.

Connection to the RTCU unit can be password protected. Type the password in the "Password for RTCU authentication" field. For further information about RTCU password consult the RTCU-IDE online help.

It is also possible to Enable or Disable automatically reception of Debug messages from the unit.

Connection

The connection to the RTCU unit can be made with direct cable connection or remote connection with either a CSD (datacall) through a modem, or through the RTCU Gateway.

Direct cable

Connect the service port on the RTCU unit to the serial or USB port defined in the setup menu. Apply power to the RTCU unit and wait for the connection to be established.

Modem CSD (datacall) remote connection

Choose "Remote connect..." from the menu, and select modem connection, a connection dialog appears. Type the RTCU unit telephone number in the text field or choose one from the drop down list. Click the connect button to establish the connection.

RTCU gateway remote connection

Choose "Remote connect..." from the menu, and select RTCU gateway, a connection dialog appears. Setup the Gateway IP, Port setting and keyword according to your gateway settings. The IP gateway can be typed as a dotted IP address (for example 80.62.53.110) or as a text address (for example rtcu.dk). The port setting is default 5001. And the default keyword is AABBCDD.

Then type the nodeid for the RTCU unit (the serial number) or choose one from the drop down list. Click the connect button to establish the connection.

RTCU unit information

The connected RTCU unit information is displayed in the bottom of the RTCUProg program (figure 2). The available information is connection type, Unit serial number, Firmware version, application name and version, and the RTCU unit type.

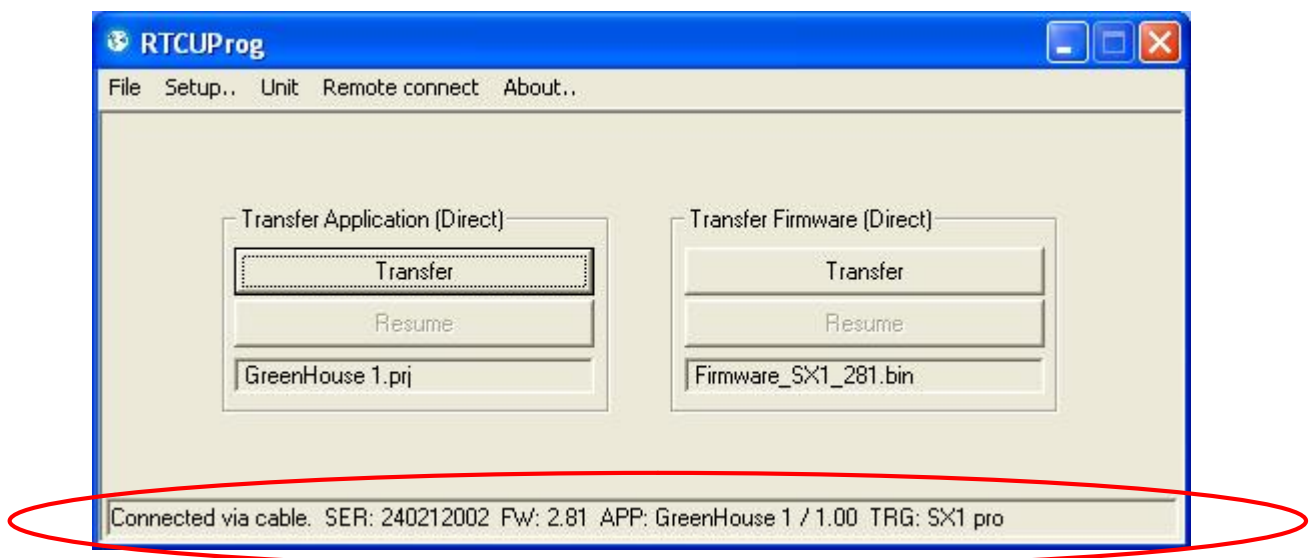


Figure 2, The RTCUProg unit information

Application and firmware update

The application and firmware update can be done by direct update or as a background update. Choose the file menu and select the application or firmware submenu and click select file. Use the open file dialog to browse for the RTCU-IDE project file or firmware file. Setup the type of update (direct or background) under the file menu -> application or firmware submenu. See the description of the two types of update methods below.

Direct update

Direct update will halt the execution of the RTCU unit, and start overwriting the old application or firmware with the new file. When the transfer is complete the unit will reset and run the new application or firmware.

Background update

Background update will as the name refers to transfer the application or firmware while the RTCU unit continues to operate and hereby maximizing the "up-time". When a background update is initiated the application or firmware will be transferred to the flash memory in the RTCU unit. If the connection is terminated or the RTCU unit is powered off, a resume feature is supported whenever the connection is reestablished. When the transfer is complete the unit must be reset. The reset can be activated by the RTCUProg (see the utilities described below), or it can be controlled by the VPL application, so the reset is carried out at a suitable time. When a transfer is complete and the unit has been reset, the new application or firmware will be installed. This will delay the start of the VPL application with approximately 5-20 seconds.

Unit utilities

A set of unit utilities is available from the Unit menu once a connection to a RTCU unit is established.

Adjust clock	Set the Real Time Clock in the RTCU unit
Set password	Change the password needed to access the RTCU unit
Set PIN code	Change the PIN code used to activate the GSM module
Software upgrade	Upgrade the RTCU unit ¹
Request unit options	Request options for the RTCU unit from server at Logic IO. ²
Options	Enable certain options in the RTCU unit.
TCP/IP settings	Set the parameters needed for the RTCU unit to use GPRS
Gateway settings	Set the parameters needed for the RTCU unit to use a RTCU Gateway
Halt execution	Stops the VPL application running in the RTCU unit
Reset unit	Restarts the VPL application running in the RTCU unit.
SMS messages	Send or receive SMS messages to or from the RTCU unit
Debug messages	Monitor debug messages send from the RTCU unit

¹ Unlike the other utilities, Software upgrade can be selected when a unit is connected but logon failed. In this situation however only an upgrade key to clear the password will be accepted.

² Like the 'Software upgrade', only the 'clear password' option can be requested when logon has failed.