

NR Java Serial Interface User's Guide

javAPRSSrvr 4.3.3

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Section 1 - Introduction

NRJSIntf is written to provide a universal interface between Java applications and a serial port using the gnu.io serial package available from the NR Java Serial group <http://code.google.com/p/nrjavaserial/> and has been tested with version 3.8.8. NR Java Serial is a fork of the RXTX development which incorporates binaries within the base jar.

NRJSIntf extends net.ae5pl.serialintf.SerialIntf allowing a single serial port to be shared by multiple clients.

Section 2 - Program Requirements and Description

NRJSIntf is designed to run on any Java VM supported by javAPRSSrvr and any OS supported by the NR Java Serial group.

NRJSIntf is comprised of a number of classes which Java looks at as objects. The main class is net.ae5pl.NRJSIntf.NRJSIntf. This class is called at startup, sets parameters, and begins execution of the different support threads.

NRJSIntf extends net.ae5pl.serialintf.SerialIntf to provide full, bidirectional communication with the serial port. All IGate and TNC logic is handled at in other classes which leaves the NRJSIntf to concentrate on sending and receiving serial data.

Section 3 - Configuration Parameters

The configuration properties reside in properties files for each client adjunct, server adjunct, and port. The main properties file is called javaprssrvr.properties by default. You can use any text file for the main properties file if you pass the name into javAPRSSrvr as a command line parameter.

The property names are not case sensitive but the values can be. Defaults are shown below.

NOTE: UNLESS YOU REQUIRE A SETTING OTHER THAN THE DEFAULT, DO NOT INCLUDE ANY PARAMETERS WITH DEFAULT SETTINGS.

List parameters (L) may be defined on the property line or may be defined in a text file with the suffix .lst. If defined on the line, each entry is separated by a semicolon. If defined in a file, each entry is put on a separate line in the .lst file and the file name is the property value. Do not put blank lines in the file. For instance, this could be a definition for ListProperty (example only):

```
ListProperty=first.aprs.net:1313;second.aprs.net:1313
```

Or you could have the following 2 lines in a file named hubs.lst:

```
first.aprs.net:1313  
second.aprs.net:1313
```

with ListProperty=hubs.lst

Properties preceded by a (M) are unchangeable and should not be included in your properties files. They are included in the descriptions below to indicate what common properties are available vs. those that have been forcibly overridden.

javAPRSSvr Properties

SerialPorts=

(L)This must include the NRJSIntf properties file.

NRJSIntf General Properties

ClassPath=

(Deprecated)(L) Must include NRJSIntf.jar.

Class=

(Deprecated)Must be set to net.ae5pl.nrjsintf.NRJSIntf.

InterfaceType=

Set this to serial or NRJava

IntfName=

This is the name of the serial interface. This must match the respective client IntfName property.

InitFile=

The contents of this file are sent to the serial interface as-is at start-up.

RFSpeed=1200

This is used to pace output to the serial interface.

SharedTransmit=true

Sets whether clients will see each other's packets.

KISSMode=false

If true, a number of optimizations are implemented at the serial interface to enhance KISS TNC support.

TCPPorts=

(L)Either IP:port or port list. Each defined port opens a listener which provides bidirectional access to the serial interface.

Serial Port Properties

SerialPortName=

This is the "file" name of the serial port.

SerialSettings=9600,8,1,n

This are the basic settings for the serial port.

The settings are speed(bps), data bits(5, 6, 7, 8), stop bits (1, 1.5, 2), and parity:

n = None

e = Even

o = Odd

s = Space

m = Mark

SerialFlowCtrl=none

This specifies the flow control for the serial port.

Valid values are:

none (no flow control) (recommended)

hardware (hardware flow control RTS/CTS)

xonxoff (software flow control Ctrl-S/Ctrl-Q)

Section 4 - Recommended Configurations

Set the port to the settings required by your “modem” or TNC.

Section 5 - Installation Instructions

NRJSIntf is NRJSIntf.jar. Set the ClassPath property in your NRJSIntf properties file to NRJSIntf.jar if using the deprecated -jar switch. Download and use the NR Java Serial jar file from the NR Java Serial group <https://github.com/NeuronRobotics/nrjavaserial> .

This version of NRJSIntf has been tested with version 3.8.8 and above.