RXTX Interface User's Guide
javAPRSSrvr 4.3

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Section 1 - Introduction

RXTXIntf is written to provide a universal interface between Java applications and a serial port using the gnu.io serial package available from the RXTX group http://rxtx.qbang.org and has been tested with 2.2pre2 on Linux and Windows.

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

Section 2 - Program Requirements and Description

RXTXIntf is designed to run on any Java VM supported by javAPRSSrvr and any OS supported by RXTX.

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

RXTXIntf 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 RXTXIntf 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.

javAPRSSrvr Properties

SerialPorts=

(L)This must include the RXTXIntf properties file.

RXTXIntf General Properties

ClassPath=
(L) Must include RXTXIntf.jar.

Class=
Must be set to net.ae5pl.rxtxintf.RXTXIntf.

LibraryPath=
(L) Must include the path to the RXTX native library(ies).

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

RXTXIntf is RXTXIntf.jar. Set the ClassPath property in your RXTXIntf properties file to RXTXIntf.jar and the RXTX jar file from the RXTX group. You will need to load the RXTX library file(s) in a directory and point the LibraryPath property in your RXTXIntf properties file to that directory.

This version of RXTXIntf has been tested with Linux and Windows RXTX 2.2pre2.