



icaste JCommJavaxComm 1.0 API for JCommSerial Installation Instructions

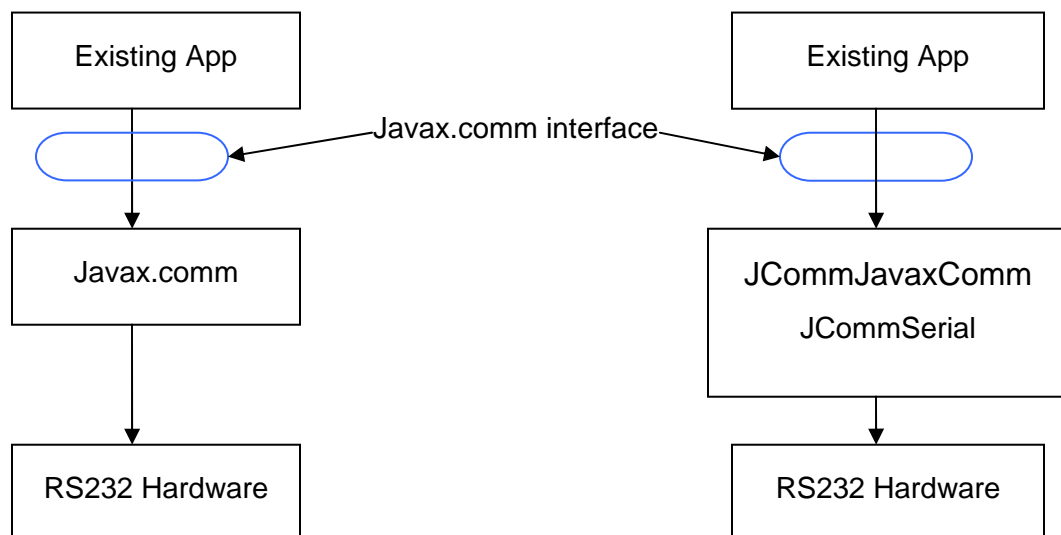
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What is JCommJavaxComm?

JCommJavaxComm is a helper API that provides a javax.comm interface for JCommSerial.

Using JCommJavaxComm you can interact with the JCommSerial API just like you would interact with javax.comm.

JCommJavaxComm contains all the classes, interfaces and functions exactly as they appear in javax.comm, however the implementation of some javax.comm functions is limited. See the compatibility matrix in appendix A for details.



Any application that uses the basic features of javax.comm can be quickly and easily ported to JCommSerial using JCommJavaxComm to emulate the javax.comm interface.

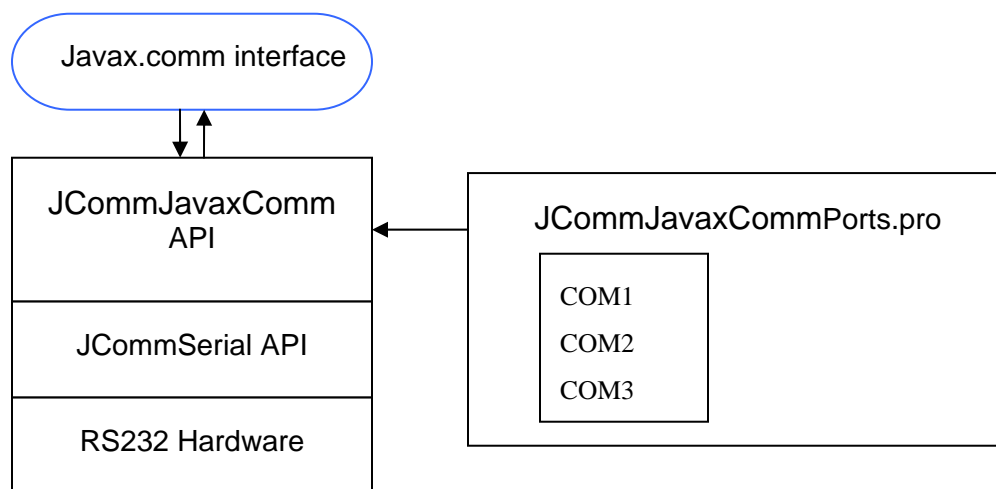
Developers wishing to harness the power of JCommSerial, but preferring to use a Sun standard interface, can design and build their application using the javax.comm interface over JCommSerial using JCommJavaxComm.

As JCommSerial only supports RS232 serial hardware, JCommJavaxComm only supports the RS232 serial subsection of javax.comm. Therefore the ParallelPort and ParallelPortEvent classes are not present in JCommJavaxComm.

How **JCommJavaxComm** works

The JCommJavaxComm sits directly on top of the JCommSerial API and provides protocol conversion between the javax.comm API and JCommSerial API.

The main work of javax.comm and JCommSerial is the locating, opening and configuring of com ports, prior to obtaining and using the IO streams. JCommJavaxComm provides all the basic javax.comm features required to open, configure and use a serial com port, along with providing the SerialPortEventListener event mechanism used in javax.comm.



An additional file required by JCommJavaxComm is the “JCommJavaxCommPorts.pro” file. This file must be located in your JRE/lib directory, and must contain a list of com ports available in the system. The “JCommJavaxCommPorts.pro” file is provided in the distribution and already contains a listing for COM1, if you need to add additional ports just list the additional port names under “COM1”. You can find a list of the available com ports on your system in;

“Control panel”->“System”->“Hardware”->“Device Manager”

See the installation chapter for more details.

The IO stream objects provided by JCommJavaxComm are the exact same IO stream objects provided by the underlying JCommSerial API, therefore JCommJavaxComm does not introduce any overhead in the read/write methods of the IO stream objects.

Limitations

Although JCommJavaxComm includes all the javax.comm classes and functions required to interface with a serial port, some of the functions have limited or no effect. See the compatibility matrix for more details.

As JCommSerial only supports serial ports, the JCommJavaxComm only contains classes required to interface with serial ports, therefore the ParallelPort and ParallelPortEvent classes are not included.

When porting existing code to JCommJavaxComm from javax.comm, use the compatibility matrix to ensure that all the function calls you make are supported by JCommJavaxComm.

The InputStreams returned by JCommJavaxComm are non blocking, this means that any call to read will return immediately with any data present in the input buffer. See the JCommJavaxComm Java Doc for detail.

Requirements

The following is required to install and use the JCommJavaxComm API;

- J2RE or J2SDK version 1.5.0_05 or better.
- Windows XP service pack 2 or better.
- Windows .NET Framework 2.0 or better (free download from Windows Update).
- Working install of JCommSerial 2.0 or better.

The act of installing this software acknowledges you have read and understand the license agreement.

Installation Instructions

Step 1.

Copy "JCommJavaxCommPorts.pro" into your current JRE/lib directory.

Step 2.

Copy JCommJavaxComm_1_0.jar to your project directory or workspace in the same location as your working install of JCommSerial_2_0.jar. JCommJavaxComm_1_0.jar must be in the same directory as JCommSerial_2_0.jar.

Installation Instructions**Step 3.**

Add JCommJavaxComm_1_0.jar to your classpath.

Step 4.

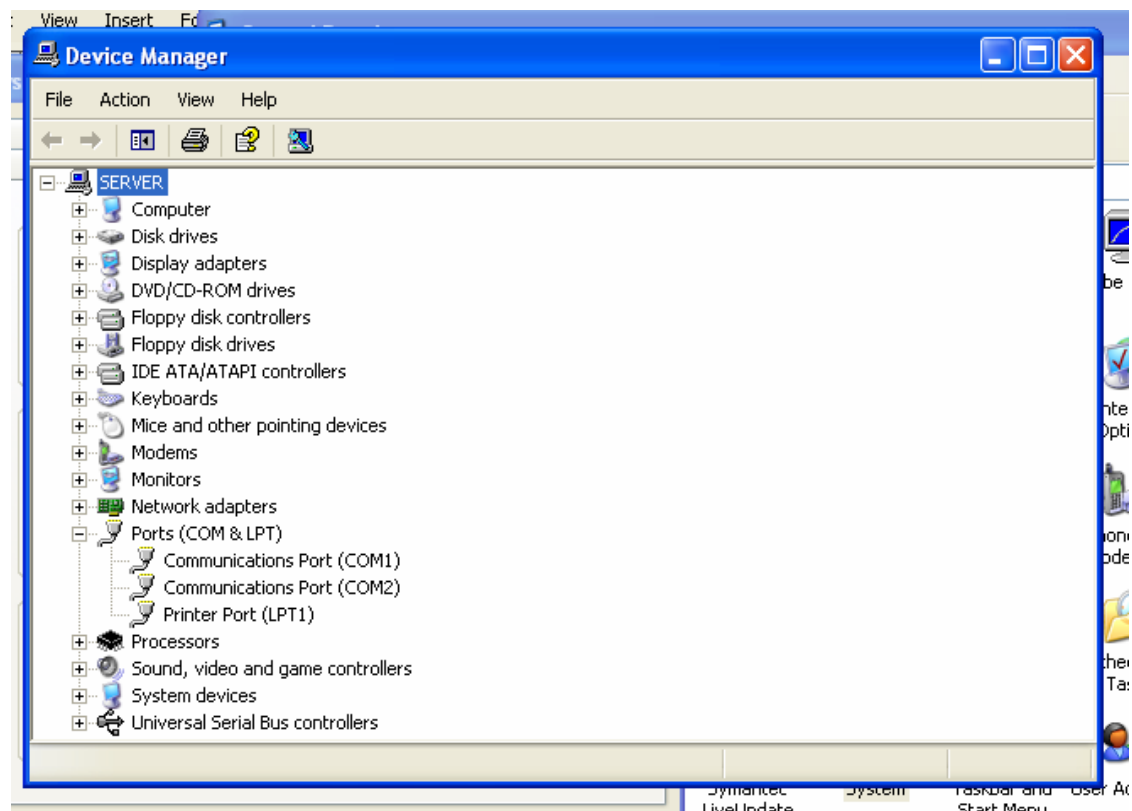
Run JCommJavaxComm_1_0.jar to confirm the install was successful. The JCommJavaxComm.InstallTest class includes a main method and has been included in JCommJavaxComm_1_0.jar for your convenience. To run JCommJavaxComm.InstallTest from the command prompt;

```
"java -jar JCommJavaxComm_1_0.jar"
```

Step 5.

Add any additional com ports to JCommJavaxCommPorts.pro. You can find additional ports available on your system in;

"Control panel"->"System"->"Hardware"->"Device Manager"



Step 6.

In your application source code be sure to add the import statement;

```
“import com.icaste. JCommJavaxComm.*”
```

and remove any import statements that import “javax.comm.*” or
“com.icaste.JCommSerial.*”.

Trouble Shooting

If you receive Class ambiguity errors make sure your source code only imports JCommJavaxComm where it previously imported javax.comm or JCommSerial.

Contact support@icaste.com at any time for best effort support.

Installation Instructions

Appendix A: Compatibility Matrix

The following tables list all the javax.comm classes and functions supported by JCommJavaxComm. See the Java Doc for detailed compatibility info on each function.

Class	javax.comm method / variable	JCommJavaxComm		Notes
		Implemented	Supported	
CommPort	disableReceiveFraming()	Yes	No	Performs no action.
CommPort	disableReceiveThreshold()	Yes	No	Performs no action.
CommPort	disableReceiveTimeout()	Yes	No	Performs no action.
CommPort	enableReceiveFraming()	Yes	No	Throws UnsupportedOperationException
CommPort	enableReceiveThreshold()	Yes	No	Throws UnsupportedOperationException
CommPort	enableReceiveTimeout()	Yes	No	Throws UnsupportedOperationException
CommPort	getInputBufferSize()	Yes	No	Returns 0
CommPort	getInputStream()	Yes	Yes	Some behavioural differences, see JavaDoc
CommPort	getName()	Yes	Yes	
CommPort	getOutputBufferSize()	Yes	No	Returns 0
CommPort	getOutputStream()	Yes	Yes	
CommPort	getReceiveFramingByte()	Yes	No	Returns -1
CommPort	getReceiveThreshold()	Yes	No	Returns -1
CommPort	getReceiveTimeout()	Yes	No	Returns -1
CommPort	isReceiveFramingEnabled()	Yes	Yes	
CommPort	isReceiveThresholdEnabled()	Yes	Yes	
CommPort	isReceiveTimeoutEnabled()	Yes	Yes	
CommPort	setInputBufferSize(int)	Yes	No	Performs no action.
CommPort	setOutputBufferSize(int)	Yes	No	Performs no action.

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Class	javax.com method / variable	JCommJavaxComm		Notes
		Implemented	Supported	
CommPortIdentifier	addPortName(String)	Yes	No	Performs no action.
CommPortIdentifier	addPortOwnershipListener(CommPortOwnershipListener)	Yes	No	Performs no action.
CommPortIdentifier	getCurrentOwner()	Yes	No	Returns "Unknown"
CommPortIdentifier	getName()	Yes	Yes	
CommPortIdentifier	getPortIdentifier(CommPort)	Yes	Yes	
CommPortIdentifier	getPortIdentifier(String)	Yes	Yes	Port access based on JCommJavaxCommPorts.pro
CommPortIdentifier	getPortIdentifiers()	Yes	Yes	Port Enumeration and access is based JCommJavaxCommPorts.pro
CommPortIdentifier	getPortType()	Yes	Yes	
CommPortIdentifier	isCurrentlyOwned()	Yes	No	Returns false Throws
CommPortIdentifier	open(FileDescriptor)	Yes	No	UnsupportedComOperationException
CommPortIdentifier	open(String,int)	Yes	Yes	AppName & Timeout not used.
CommPortIdentifier	PORT_PARALLEL	Yes	Yes	
CommPortIdentifier	PORT_SERIAL	Yes	Yes	
CommPortIdentifier	removePortOwnershipListener(CommPortOwnershipListener)	Yes	No	Performs no action.



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Class	javax.com method / variable	JCommJavaxComm		Notes
		Implemented	Supported	
SerialPort	addEventListener(SerialPortEventListener)	Yes	Yes	
SerialPort	DATABITS_5	Yes	Yes	
SerialPort	DATABITS_6	Yes	Yes	
SerialPort	DATABITS_7	Yes	Yes	
SerialPort	DATABITS_8	Yes	Yes	
SerialPort	FLOWCONTROL_NONE	Yes	Yes	
SerialPort	FLOWCONTROL_RTSCCTS_IN	Yes	Yes	
SerialPort	FLOWCONTROL_RTSCCTS_OUT	Yes	Yes	
SerialPort	FLOWCONTROL_XONXOFF_IN	Yes	Yes	
SerialPort	FLOWCONTROL_XONXOFF_OUT	Yes	Yes	
SerialPort	getBaudRate()	Yes	Yes	
SerialPort	getDataBits()	Yes	Yes	
SerialPort	getFlowControlMode()	Yes	Yes	
SerialPort	getParity()	Yes	Yes	
SerialPort	getStipBits()	Yes	Yes	
SerialPort	isCD()	Yes	Yes	
SerialPort	isCTS()	Yes	Yes	
SerialPort	isDSR()	Yes	Yes	
SerialPort	isDTR()	Yes	Yes	
SerialPort	isRI()	Yes	Yes	
SerialPort	isRTS()	Yes	Yes	
SerialPort	notifyOnBreakInterrupt(boolean)	Yes	Yes	
SerialPort	notifyOnCarrierDetect(boolean)	Yes	Yes	
SerialPort	notifyOnCTS(boolean)	Yes	Yes	
SerialPort	notifyOnDataAvailable(boolean)	Yes	Yes	
SerialPort	notifyOnDSR(boolean)	Yes	Yes	
SerialPort	notifyOnFramingError(boolean)	Yes	Yes	



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Class	javax.com method / variable	JCommJavaxComm		Notes
		Implemented	Supported	
SerialPort	notifyOnOutputEmpty(boolean)	Yes	Yes	
SerialPort	notifyOnOverrunError(boolean)	Yes	Yes	
SerialPort	notifyOnParityError(boolean)	Yes	Yes	
SerialPort	notifyOnRingIndicator(boolean)	Yes	Yes	
SerialPort	PARITY_EVEN	Yes	Yes	
SerialPort	PARITY_MARK	Yes	Yes	
SerialPort	PARITY_NONE	Yes	Yes	
SerialPort	PARITY_ODD	Yes	Yes	
SerialPort	PARITY_SPACE	Yes	Yes	
SerialPort	removeEventListener()	Yes	Yes	
SerialPort	sendBreak()	Yes	No	Performs no action.
SerialPort	setDTR(boolean)	Yes	Yes	
SerialPort	setFlowControlMode(int)	Yes	Yes	
SerialPort	setRcvFifoTrigger(int)	Yes	No	Deprecated
SerialPort	setRTS(boolean)	Yes	Yes	
SerialPort	setSerialPortParams(int,int,int,int)	Yes	Yes	
SerialPort	STOPBITS_1	Yes	Yes	
SerialPort	STOPBITS_1_5	Yes	Yes	
SerialPort	STOPBITS_2	Yes	Yes	