DashboardClient Java Lib. User Manual

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Preface

Revision table

Date	Version No.	Change content	Author
2024-02-05	1.0.0	Initial release	funh

Table of Contents

1. DELIVERABLE CONTENT

Deliverable content	Description	Dependency
dashboard.jar	Dashboard client java implementation, compatible with UR CB3 and e-series	URCap API 1.11
User manual	NA	NA

2. INTEGRATION SNIPPET IN POM

```
<dependencies>
        <dependency>
                <groupId>com.URPlus</groupId>
                <artifactId>dashboardCom</artifactId>
                <version>1.0.3</version>
                <scope>provided</scope>
        </dependency>
        …

</dependencies>
```

3. FUNCTION DETAIL

3.1 DashboardClient

This is a constructor for creating a DashboardClient instance.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
ipAddress	string	CB3 & CB5	NA	NA	UR robot ip address
Return value	DashboardClient	A DashboardClient class instance			

Sample code:

```
private DashboardClient dashboardClient = new DashboardClient("127.0.0.1");
```

3.2 setRobotMajorVersion

To set cobot major version to adjust dashboard server.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description

nb	Integer	CB3 & CB5	5	3 or 5	Cobot major version number, CB3 case: 3 CB5 case: 5
Return value	void	void			

Sample code:

```
dashboardClient.setRobotMajorVersion(5);
```

3.3 getRobotMajorVersion

This method will return current cobot generation setting.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
nb	Integer	CB3 & CB5	5	3 or 5	Cobot major version number, CB3 case: 3 CB5 case: 5
Return value	Integer	Current Dashboard instance's cobot generation setting.			

Sample code:

```
Integer majorVersion = dashboardClient.getRobotMajorVersion();
```

3.4 play

This method complies with Dashboard manual on "play" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
NA	NA	CB3 & CB5	NA	NA	NA
Return value	String	Return string is complied with official Dashboard Server manual.			

Sample code:

```
String result = dashboardClient.play();
```

3.5 stop

This method complies with Dashboard manual on "stop" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
NA	NA	CB3 & CB5	NA	NA	NA
Return value	String	Return string is complied with official Dashboard Server manual.			

Sample code:

```
String result = dashboardClient.stop();
```

3.6 pause

This method complies with Dashboard manual on "pause" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
NA	NA	CB3 & CB5	NA	NA	NA
Return value	String	Return string is complied with official Dashboard Server manual.			

Sample code:

```
String result = dashboardClient.pause();
```

3.7 quit

This method complies with Dashboard manual on "quit" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
NA	NA	CB3 & CB5	NA	NA	NA
Return value	String	Return string is complied with official Dashboard Server manual.			

Sample code:

```
String result = dashboardClient.quit();
```

3.8 shutdown

This method complies with Dashboard manual on "quit" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
NA	NA	CB3 & CB5	NA	NA	NA

Return value	void	void

Sample code:

```
dashboardClient.shutdown();
```

3.9 running

This method complies with Dashboard manual on "running" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
NA	NA	CB3 & CB5	NA	NA	NA
Return value	String	Return string is complied with official Dashboard Server manual.			

Sample code:

```
String result = dashboardClient.running();
```

3.10 robotmode

This method complies with Dashboard manual on "robotmode" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
NA	NA	CB3 & CB5	NA	NA	NA
Return value	String	Return string is complied with official Dashboard Server manual.			

Sample code:

```
String result = dashboardClient.robotmode();
```

3.11 loadProgram

This method complies with Dashboard manual on "load + str" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
str	String	CB3 & CB5	null	null	Name of robot program to load.
Return value	String	Return string is complied with official Dashboard Server manual.			

Sample code:

```
String result = dashboardClient.loadProgram("test.urp");
```

3.12   getLoadedProgram

This method complies with Dashboard manual on "get load program" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
NA	NA	CB3 & CB5	NA	NA	NA
Return value	String	Return string is complied with official Dashboard Server manual.			

Sample code:

```
String result = dashboardClient.getLoadedProgram();
```

3.13   popup

This method complies with Dashboard manual on "popup" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
msg	String	CB3 & CB5	NA	NA	Message to popup.
Return value	void	void			

Sample code:

```
dashboardClient.popup("message to popup.");
```

3.14   closePopup

This method complies with Dashboard manual on "close popup" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
NA	NA	CB3 & CB5	NA	NA	NA
Return value	void	Void			

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Sample code:

```
dashboardClient.closePopup();
```

3.15   addToLog

This method complies with Dashboard manual on "addToLog + str" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
strLog	String	CB3 & CB5	NA	NA	Message to add in Log tab page.
Return value	String	Return string is complied with official Dashboard Server manual.			

Sample code:

```
String result = dashboardClient.addToLog("message to add in Log");
```

3.16   isProgramSaved

This method complies with Dashboard manual on "isProgramSaved" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
NA	NA	CB3 & CB5	NA	NA	NA
Return value	String	Return string is complied with official Dashboard Server manual.			

Sample code:

```
String result = dashboardClient.isProgramSaved();
```

3.17   programState

This method complies with Dashboard manual on "programState" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
NA	NA	CB3 & CB5	NA	NA	NA
Return value	String	Return string is complied with official Dashboard Server manual.			

Sample code:

```
String result = dashboardClient.programState();
```

3.18   PolyscopeVersion

This method complies with Dashboard manual on "PolyscopeVersion" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
NA	NA	CB3 & CB5	NA	NA	NA
Return value	String	Return string is complied with official Dashboard Server manual.			

Sample code:

```
String result = dashboardClient.PolyscopeVersion();
```

3.19   setOperationalMode

This method complies with Dashboard manual on "set operational mode + mode" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
mode	String	CB5	NA	"manual" or "automatic"	Set cobot into manual or automatic mode
Return value	String	If send mode with correct string, it will return string that complied with official Dashboard Server manual. If send wring string, it will return "wrong mode input". If in CB3 case, it will return "deprecated".			

Sample code:

```
String result = dashboardClient.setOperationalMode("manual");
```

3.20   getVariable

This method can extract a target variable value in cobot runtime.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
varName	String	CB3 & CB5	NA	NA	Get variable value in String.

Return value	String	Return variable value in String

Sample code:

```
String result = dashboardClient.getVariable("varName");
```

3.21 getOperationalMode

This method complies with Dashboard manual on "set operational mode + mode" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
NA	NA	CB5	NA	NA	NA
Return value	String	In CB5 case: return string is complied with official Dashboard Server manual. In CB3 case: return "deprecated".			

Sample code:

```
String result = dashboardClient.getOperationalMode();
```

3.22 clearOperationalMode

This method complies with Dashboard manual on "clear operational mode" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
NA	NA	CB5	NA	NA	NA
Return value	String	In CB5 case: return string is complied with official Dashboard Server manual. In CB3 case: return "deprecated".			

Sample code:

```
String result = dashboardClient.clearOperationalMode();
```

3.23 setUserRole

This method complies with Dashboard manual on "setUserRole" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
strRole	String	CB3	NA	"programmer"	Role string

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			"operator" "none" "locked"	
Return value	String	In CB3 case: return string is complied with official Dashboard Server manual. In CB5 case: return "deprecated".		

Sample code:

```
String result = dashboardClient.setUserRole("operator");
```

3.24   getUserRole

This method complies with Dashboard manual on "getUserRole" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
NA	NA	CB3	NA	NA	NA
Return value	String	In CB3 case: return string is complied with official Dashboard Server manual. In CB5 case: return "deprecated".			

Sample code:

```
String result = dashboardClient.getUserRole();
```

3.25   powerOn

This method complies with Dashboard manual on "power on" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
NA	NA	CB3 & CB5	NA	NA	NA
Return value	void	void			

Sample code:

```
dashboardClient.powerOn();
```

3.26   powerOff

This method complies with Dashboard manual on "power on" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description

NA	NA	CB3 & CB5	NA	NA	NA
Return value	void	void			

Sample code:

```
dashboardClient.powerOff();
```

3.27 brakeRelease

This method complies with Dashboard manual on "brake release" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
NA	NA	CB3 & CB5	NA	NA	NA
Return value	void	void			

Sample code:

```
dashboardClient.brakeRelease();
```

3.28 safetyStatus

This method complies with Dashboard manual on "safetystatus" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
NA	NA	CB5	NA	NA	NA
Return value	String	In CB5 case: return string is complied with official Dashboard Server manual. In CB3 case: return "deprecated".			

Sample code:

```
String result = dashboardClient.safetyStatus();
```

3.29 safetymode

This method complies with Dashboard manual on "safetymode" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
NA	NA	CB3	NA	NA	NA
Return value	String	In CB3 case: return string is complied with official Dashboard Server manual.			

		In CB5 case: return "deprecated".			

Sample code:

```
String result = dashboardClient.safetymode();
```

3.30   unlockProtectiveStop

This method complies with Dashboard manual on "unlock protective stop" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
NA	NA	CB3 & CB5	NA	NA	NA
Return value	void	void			

Sample code:

```
dashboardClient.unlockProtectiveStop();
```

3.31   closeSafetyPopup

This method complies with Dashboard manual on "close safety popup" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
NA	NA	CB3 & CB5	NA	NA	NA
Return value	void	void			

Sample code:

```
dashboardClient.closeSafetyPopup();
```

3.32   loadInstallation

This method complies with Dashboard manual on "close safety popup" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
strInstallation	String	CB3 & CB5	NA	NA	Name of target .installation file
Return value	String	return string is complied with official Dashboard Server manual.			

Sample code:

```
String result = dashboardClient.loadInstallation("default.installation");
```

3.33   restartSafety

This method complies with Dashboard manual on "restart safety" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
NA	NA	CB3 & CB5	NA	NA	NA
Return value	void	void			

Sample code:

```
dashboardClient.restartSafety();
```

3.34   isInRemoteControl

This method complies with Dashboard manual on "is in remote control" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
NA	NA	CB5	NA	NA	NA
Return value	String	In CB5 case: return string is complied with official Dashboard Server manual. In CB3 case: return "deprecated".			

Sample code:

```
String result = dashboardClient.isInRemoteControl();
```

3.35   getSerialNumber

This method complies with Dashboard manual on "get serial number" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
NA	NA	CB3 & CB5	NA	NA	NA
Return value	String	return string is complied with official Dashboard Server manual.			

Sample code:

```
String result = dashboardClient.getSerialNumber();
```

3.36　　　getRobotModel

This method complies with Dashboard manual on "get robot model" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
NA	NA	CB3 & CB5	NA	NA	NA
Return value	String	return string is complied with official Dashboard Server manual.			

Sample code:

```
String result = dashboardClient.getRobotModel();
```

3.37　　　generateFlightReport

This method complies with Dashboard manual on "generate flight report + <Type>" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
strType	String	CB3 & CB5	NA	NA	controller software system
Return value	String	return string is complied with official Dashboard Server manual.			

Sample code:

```
String result = dashboardClient.generateFlightReport("system");
```

3.38　　　generateSupportFile

This method complies with Dashboard manual on "generate support file + <directoryPath>" command.

Parameter name	Parameter type	Compatibility	Default value	Parameter range	Parameter description
strDirectory	String	CB3 & CB5	NA	NA	where represents path to an already existing directory location inside the programs directory.
Return value	String	return string is complied with official Dashboard Server manual.			

Sample code:

```
String result = dashboardClient.generateSuppportFile(".");
//store file inside of default Systems folder.
```