

什么是 Dashboard Server 功能

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机器人软件适用版本：Polyscope 1.4 及以上

适用机器人：UR3、UR5、UR10

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上位机可以通过 TCP/IP 协议，与机器人建立 socket 通讯，并且发送给机器人一些优傲机器人规定的字符串，这种功能我们成为 Dashboard。此时机器人作为 Server，监听端口 29999，上位机作为 Client。注意上位机给机器人发送的信息必须以'/n'结尾。

下表即是 Dashboard 表

Command	Return value	Description	Supported from	CB 1	CB 2	CB 3
load <program.urp>	"Loading program: <program.urp>" OR "File not found: <program.urp>"	Loads the specified program	v1.4	x	x	x
play	"Starting program"	Starts program, if any program is loaded and robot is ready	v1.4	x	x	x
stop	"Stopped"	Stops running program	v1.4	x	x	x
pause	"Pausing program"	Pauses the running program	v1.4	x	x	x
quit	"Disconnected"	Closes connection	v1.4	x	x	x
shutdown	"Shutting down"	Shuts down and turns off robot and controller	v1.4	x	x	x
running	"Robot running: True" OR "Robot running: False"	Execution state	v1.6		x	x



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Command	Return value	Description	Supported from	CB 1	CB 2	CB 3
enquiry						
robotmode	CB2: integer is returned <ul style="list-style-type: none"> • NO_CONTROLLER_MODE = -1 • ROBOT_RUNNING_MODE = 0 (This is "normal" mode) • ROBOT_FREEDRIVE_MODE = 1 • ROBOT_READY_MODE = 2 • ROBOT_INITIALIZING_MODE = 3 • ROBOT_SECURITY_STOPPED_MODE = 4 • ROBOT_EMERGENCY_STOPPED_MODE = 5 • ROBOT_FAULT_MODE = 6 • ROBOT_NO_POWER_MODE = 7 • ROBOT_NOT_CONNECTED_MODE = 8 • ROBOT_SHUTDOWN_MODE = 9 CB3: text is returned "Robotmode: <mode>", where <mode> is <ul style="list-style-type: none"> • NO_CONTROLLER • DISCONNECTED • CONFIRM_SAFETY • BOOTING • POWER_OFF • POWER_ON • IDLE • BACKDRIVE • RUNNING 	Robot mode enquiry	v1.6		x	x
get loaded program	"Program loaded: <path to loaded program file>" OR "No program loaded"	Which program is loaded	v1.6		x	x
popup <popup-	"showing popup"	The	v1.6		x	x



Command	Return value	Description	Supported from	CB 1	CB 2	CB 3
text>		popup-text will be translated to the selected language, if the text exists in the language file				
close popup	"closing popup"	Closes the popup	v1.6		x	x
addToLog <log-message>	"Added log message" Or "No log message to add"	Adds log-message to the Log history	v1.8.116 57		x	x
setUserRole <role>	"Setting user role: <role>" OR "Failed setting user role: <role>"	Simple control of user privileges: controls the available options on the Welcome screen	v1.8.116 57		x	x
isProgramSaved	"True" OR "False"	Returns the save state of the active program	v1.8.119 97		x	x
programState	"STOPPED" if no program is running OR "PLAYING" if program is running	Returns the state of the active	v1.8.119 97		x	x



Command	Return value	Description	Supported from	CB 1	CB 2	CB 3
		program, or STOPPED if no program is loaded				
polyscopeVersion	version number, like "3.0.15547"	Returns the version of the Polyscope software	v1.8.140 35		x	x
setUserRole <role>, where <role> is	"Setting user role: <role>" OR "Failed setting user role: <role>" <ul style="list-style-type: none"> programmer = "SETUP Robot" button is disabled, "Expert Mode" is available (if correct password is supplied) operator = Only "RUN Program" and "SHUTDOWN Robot" buttons are enabled, "Expert Mode" cannot be activated none (or send setUserRole) = All buttons enabled, "Expert Mode" is available (if correct password is supplied) locked = All buttons disabled and "Expert Mode" cannot be activated 	Control of user privileges: controls the available options on the Welcome screen. Note: If the Welcome screen is not active when the command is sent, the user privileges defined by the new user role will not be effective until the	v1.8.140 35		x	x



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Command	Return value	Description	Supported from	CB 1	CB 2	CB 3
		user switches to the Welcome screen.				
power on	"Powering on"	Powers on the robot arm	v3.0			x
power off	"Powering off"	Powers off the robot arm	v3.0			x
brake release	"Brake releasing"	Releases the brakes	v3.0			x
safetymode	"safety mode: <mode>", where <mode> is <ul style="list-style-type: none"> • NORMAL • REDUCED • PROTECTIVE_STOP • RECOVERY • SAFEGUARD_STOP • SYSTEM_EMERGENCY_STOP • ROBOT_EMERGENCY_STOP • VIOLATION • FAULT 	Safety mode enquiry	v3.0			x
unlock protective stop	"Protective stop releasing"	Closes the current popup and unlocks protective stop	v3.1			x
close safety popup	"closing safety popup"	Closes a safety popup	v3.1			x
setUserRole	"Restricted" works like "operator" but does not give access to the move tab.		v3.1.17136			x

Command	Return value	Description	Supported from	CB 1	CB 2	CB 3
<p><role> extended with new role:</p> <ul style="list-style-type: none"> • restricted 						

现在使用第三方软件 SocketTest 来测试 Dashboard 功能。

设置电脑 IP: 192.168.3.1 机器人 IP: 192.168.3.3

先在机器人上运行任意一个程序，在 SocketTest 发送 “play”，机器人就会运行程序，发送 “pause” 机器人就会暂停程序。

