How to use CVI drivers for the Rohde & Schwarz CMU 300 Universal Radio Communication Tester

Contents

CMU 300 Instrument Drivers

The instrument driver suite for CMU 300 currently consists of several instrument drivers.

Instrument Driver	Supported Instrument Options	Standard
RSCMU200/RSCMU300		RF Non-Signalling, Audio
RSCMU300	For compatibility and RSCMUK3G only	RF Non-Signalling, Audio
RSCMUK3G	K30, K31, K32, K33, K41	GSM BS
RSCMUNB	K75, K76	WCDMA Node B, 3GPP FDD

All RSCMUKxx instrument drivers can only be installed and used when RSCMU300 driver module is installed on the system. This applies to every development system and application that will make calls to these drivers.

CMU 300 Function Groups

Each function group on the instrument represents a separate VISA session to the instrument. The following table shows initialize and close functions that should be used to initialize and close each currently supported function group.

Function Group	Initialize Function	Close Function
RSCMU200/RSCMU300		
RSCMU_BASE	RSCMU_Init_Base	RSCMU_Close_Base
RSCMU_RF_NSIG	RSCMU_Init_RF_NSig	RSCMU_Close_RF_NSig
RSCMU_AUDIO_NSIG	RSCMU_Init_Audio_NSig	RSCMU_Close_Audio_NSig
RSCMU300	**For compatibility and RSCMUK3G only**	
RSCMU300_BASE	RSCMU300_Init_Base	RSCMU300_Close_Base
RSCMU300_RF_NSIG	RSCMU300_Init_RF_NSig	RSCMU300_Close_RF_NSig
RSCMU300_AUDIO_NSIG	RSCMU300_Init_Audio_NSig	RSCMU300_Close_Audio_NSig
RSCMUK3G		
RSCMU300_GSM400BS_NSIG	RSCMU300_Init_GSM_NSig	RSCMU300_Close_GSM_NSig
RSCMU300_GSM400BS_SIG	RSCMU300_Init_GSM_Sig	RSCMU300_Close_GSM_Sig
RSCMU300_GSM850BS_NSIG	RSCMU300_Init_GSM_NSig	RSCMU300_Close_GSM_NSig
RSCMU300_GSM850BS_SIG	RSCMU300_Init_GSM_Sig	RSCMU300_Close_GSM_Sig
RSCMU300_GSM900BS_NSIG	RSCMU300_Init_GSM_NSig	RSCMU300_Close_GSM_NSig
RSCMU300_GSM900BS_SIG	RSCMU300_Init_GSM_Sig	RSCMU300_Close_GSM_Sig
RSCMU300_GSM1800BS_NSIG	RSCMU300_Init_GSM_NSig	RSCMU300_Close_GSM_NSig
RSCMU300_GSM1800BS_SIG	RSCMU300_Init_GSM_Sig	RSCMU300_Close_GSM_Sig
RSCMU300_GSM1900BS_NSIG	RSCMU300_Init_GSM_NSig	RSCMU300_Close_GSM_NSig
RSCMU300_GSM1900BS_SIG	RSCMU300_Init_GSM_Sig	RSCMU300_Close_GSM_Sig
RSCMUNB		
RSCMU_NB_NSig	RSCMU_NB_Init_NB_NSig Parameter: WCDMA1900NBFDD_NSig	RSCMU_NB_Close_NB_NSig

For more information regarding the CMU 300 VXIPnP instrument drivers, please read the readme.txt file that comes with each driver.

RSCMUK3G driver

Please use the CMU300 Base driver

RSCMUNB driver

For Node B please use the CMU200/CMU300 Base driver.

LabWindows/CVI Application Examples

The following set of application program examples is available for CMU 300. The examples are built on top of the CMU 300 instrument drivers. The primary purpose of these examples is to demonstrate how the applications are built using the CMU 300 instrument drivers.

Example	Description	Required Instrument Drivers
rscmu_rf_nsig_example	RF Non-Signalling Measurements	RSCMU200/RSCMU300

CMU 300 Instrument Drivers Improved Help System

Newly updated and released instrument drivers are equipped with help file in compressed html format (the name of the file is prefix.chm, where prefix is prefix of the instrument driver). The help file is accessible as a standalone chm file in the installation directory of the instrument driver.
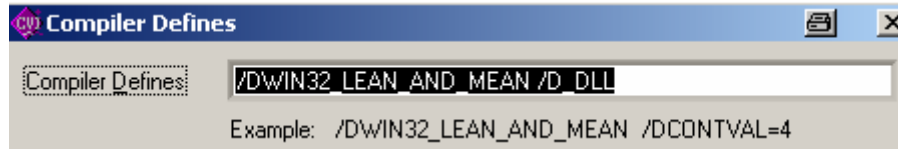
List of updated drivers with new help included:
- rscmu200/rscmu300 version 3.50.00 or higher
- rscmuk3g, version 3.22.00 or higher
- rscmunb, version 3.20.01or higher

How to build a Dynamic Link Library

Compiler Defines

When creating a DLL _DLL must be defined in Compiler Defines (D_DLL).

CMU200/CMU300 Base driver

Please add following files to your project:

RSCMUK3G driver

Please add rscmu300.h and the rscmu300.lib files to your project..

RSCMUNB driver

Please add rscmu200.h and the rscmu200.lib files to your project..

LabWindows/CVI 7.0 bug

LabWindows CVI 7.0 is not able to handle some CMU drivers fp files.
This bug will be fixed in LabWindows/CVI version 7.1. In the meantime please use LabWindows/CVI version 6.

Workaround for CVI 7.0
There is also a workaround but you will lose the tree structure of the driver.

Enable Library Tree Flatten option: