How to use VXIPnP LabVIEW drivers for the Rohde & Schwarz CMU 200 Universal Radio Communication Tester

Contents

CMU 200 Instrument Drivers

The instrument driver suite for CMU 200 currently consists of several instrument drivers.

Instrument Driver	Supported Instrument Options	Standard
RSCMU200	B41	RF Non-Signalling, Audio
RSCMUK2G	K20, K21, K22, K23	GSM
RSCMUK2A	K29	AMPS
RSCMUK2T	K27, K28	TDMA
RSCMUK8C	K81, K82	CDMA
RSCMUC2K	K83, K84, K85, K86	CDMA2000
RSCMU2BT	K53	BLUETOOTH
RSCMUK6W	K65, K66, K67, K68, K69	WCDMA FDD UE

All RSCMUKxx instrument drivers can only be installed and used when the RSCMU200 driver module is installed on the system. This applies to every development system and application that makes calls to these drivers.

CMU 200 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		
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
RSCMUK2G		
RSCMU_GSM400MS_NSIG	RSCMU_Init_GSM_Nsig Parameter: GSM400	RSCMU_Close_GSM_NSig
RSCMU_GSM400MS_SIG	RSCMU_Init_GSM_Sig Parameter: GSM400	RSCMU_Close_GSM_Sig
RSCMU_GSM850NSIG	RSCMU_Init_GSM_Nsig Parameter: GSM850	RSCMU_Close_GSM_NSig
RSCMU_GSM850SIG	RSCMU_Init_GSM_Sig Parameter: GSM850	RSCMU_Close_GSM_Sig
RSCMU_GSM900MS_NSIG	RSCMU_Init_GSM_Nsig Parameter: GSM900	RSCMU_Close_GSM_NSig
RSCMU_GSM900MS_SIG	RSCMU_Init_GSM_Sig Parameter: GSM900	RSCMU_Close_GSM_Sig
RSCMU_GSM1800MS_NSIG	RSCMU_Init_GSM_Nsig Parameter: GSM1800	RSCMU_Close_GSM_NSig
RSCMU_GSM1800MS_SIG	RSCMU_Init_GSM_Sig Parameter: GSM1800	RSCMU_Close_GSM_Sig
RSCMU_GSM1900MS_NSIG	RSCMU_Init_GSM_Nsig Parameter: GSM1900	RSCMU_Close_GSM_NSig
RSCMU_GSM1900MS_SIG	RSCMU_Init_GSM_Sig Parameter: GSM1900	RSCMU_Close_GSM_Sig
RSCMUK2T		
RSCMU_IS136800MS_NSIG	RSCMU_Init_TDMA Parameter: RSCMU_CDMA800MS_NSIG	RSCMU_TDMA_Close
RSCMU_IS136800MS_SIG	RSCMU_Init_TDMA Parameter: RSCMU_IS136800MS_SIG	RSCMU_TDMA_Close
RSCMU_IS1361900MS_NSIG	RSCMU_Init_TDMA Parameter: RSCMU_IS1361900MS_NSIG	RSCMU_TDMA_Close
RSCMU_IS1361900MS_SIG	RSCMU_Init_TDMA Parameter: RSCMU_IS1361900MS_SIG	RSCMU_TDMA_Close
RSCMUK2A		
RSCMU_AMPSMS_NSIG	RSCMU_Init_AMPS Parameter: RSCMU_AMPSMS_NSIG	RSCMU_AMPS_Close
RSCMU_AMPSMS_SIG	RSCMU_Init_AMPS Parameter: RSCMU_AMPSMS_SIG	RSCMU_AMPS_Close

Function Group	Initialize Function	Close Function
RSCMUK8C		
RSCMU_CDMA800MS_NSIG	RSCMU_Init_CDMA Parameter: RSCMU_CDMA800MS_NSIG	RSCMU_CDMA_Close
RSCMU_CDMA800MS_SIG	RSCMU_Init_CDMA Parameter: RSCMU_CDMA800MS_SIG	RSCMU_CDMA_Close
RSCMU_CDMA1900MS_NSIG	RSCMU_Init_CDMA Parameter: RSCMU_CDMA1900MS_NSIG	RSCMU_CDMA_Close
RSCMU_CDMA1900MS_SIG	RSCMU_Init_CDMA Parameter: RSCMU_CDMA1900MS_SIG	RSCMU_CDMA_Close
RSCMUC2K		
RSCMU_CDMA2K450MS_NSIG	RSCMU_Init_CDMA2K Parameter: RSCMU_CDMA2K450MS_NSIG	RSCMU_CDMA_Close
RSCMU_CDMA2K450MS_SIG	RSCMU_Init_CDMA2K Parameter: RSCMU_CDMA2K450MS_SIG	RSCMU_CDMA_Close
RSCMU_CDMA2KCELLMS_NSIG	RSCMU_Init_CDMA2K Parameter: RSCMU_CDMA2KCELLMS_NSIG	RSCMU_CDMA_Close
RSCMU_CDMA2KCELLMS_SIG	RSCMU_Init_CDMA2K Parameter: RSCMU_CDMA2KCELLMS_SIG	RSCMU_CDMA_Close
RSCMU_CDMA2KPCSMS_NSIG	RSCMU_Init_CDMA2K Parameter: RSCMU_CDMA2KPCSMS_NSIG	RSCMU_CDMA_Close
RSCMU_CDMA2KPCSMS_SIG	RSCMU_Init_CDMA2K Parameter: RSCMU_CDMA2KPCSMS_SIG	RSCMU_CDMA_Close
RSCMU_CDMA2KIMT2KMS_NSIG	RSCMU_Init_CDMA2K Parameter: RSCMU_CDMA2KIMT2KMS_NSIG	RSCMU_CDMA_Close
RSCMU_CDMA2KIMT2KMS_SIG	RSCMU_Init_CDMA2K Parameter: RSCMU_CDMA2KIMT2KMS_SIG	RSCMU_CDMA_Close
RSCMU2BT		
RSCMU_BLUETOOTH_NSIG	RSCMUBT_Init_BT_NSig	RSCMUBT_Close_BT_NSig
RSCMU_BLUETOOTH_SIG	RSCMUBT_Init_BT_Sig	RSCMUBT_Close_BT_Sig
RSCMUK6W		
RSCMU_WCDMA1900FDDMS_NSIG	RSCMU_WCDMA_NSig_Init Parameter: WCDMA 1900 FDD	RSCMU_WCDMA_NSig_Close
RSCMU_WCDMA1900FDDMS_SIG	RSCMU_WCDMA_Sig_Init Parameter: WCDMA 1900 FDD	RSCMU_WCDMA_NSig_Close

CMU 200 LabVIEW Application Examples

The following set of application program examples is available for CMU 200. The examples are built on top of the CMU 200 instrument drivers. The primary purpose of these examples is to demonstrate how the applications are built using the CMU 200 instrument drivers.

Example	Description	Required Instrument Drivers
rscmu_rf_nsig_example	RF Non-Signalling Measurements	RSCMU200
rscmu_gsm_nsig_example	GSM-MS Non-Signalling Measurements	RSCMUK2G RSCMU200
rscmu_gsm_sig_example	GSM-MS Signalling Measurements	RSCMUK2G RSCMU200
rscmu_tdma_example	TDMA-MS Signalling Measurements	RSCMUK2T RSCMU200
rscmu_amps_example	AMPS-MS Non-Signalling Measurements	RSCMUK2A RSCMU200
rscmu_cdma2000_nsig_example	CDMA2000-MS Non-Signalling Measurements	RSCMUC2K RSCMU200
rscmu_wcdma_ue_nsig_example	WCDMA FDD UE Non-Signalling Mode Measurements	RSCMUK6W RSCMU200
rscmu_wcdma_ue_sig_example	Example to demonstrate WCDMA FDD UE Signalling Mode Measurements	RSCMUK6W RSCMU200
Rscmu2bt_FastTest	Example to demonstrate Fast Bluetooth Measurements	RSCMU2BT RSCMU200

CMU 200 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). In LabVIEW 6.1 if you will show the on-line help (by pressing the Ctrl+H key sequence) you can see in the help window statement ‘Click here for more help’. After pressing the link the help file will be opened with the position in the file updated.
In previous versions of LabVIEW this feature does not work, but the help file is accessible as a standalone chm file in the installation directory of instrument driver (for example C:\VXIPNP\GWINNT\RSCMUK2G\RSCMUK2G.CHM).
List of updated drivers with new help included:

- rscmu200, version 3.50.0 or higher
- rscmuk2g, version 3.20.1 or higher
- rscmuc2k, version 3.11.4 or higher
- rscmuk2a, version 3.50.0 or higher
- rscmuk6w version 3.20.2 or higher
- rscmu2bt version 3.50.00 or higher

Use the VXIPnP LabVIEW drivers as standard LabVIEW drivers

The installation of the CMU modules follow the rules of the VXIPnP consortium.
LabVIEW has to know how to find the driver llb.
You have to define the custom directory Vxipnp\gwinNT\rscmu200 (Win NT) for the CMU200 base driver.

The best way is to copy this directory to the LabVIEW\instr.lib directory.
This is the standard directory and you have not to define anything else.

Please copy:
Vxipnp\gwinNT\rscmu200 (Win NT) directory to the LabVIEW\instr.lib directory
or
Vxipnp\gwin95\rscmu200 (95/98 ....) directory to the LabVIEW\instr.lib directory

You have to do the same for other CMU modules.
For GSM:
Vxipnp\gwinNT\rscmuk2g (Win NT) directory to the LabVIEW\instr.lib directory
or
Vxipnp\gwin95\rscmuk2g (95/98 ....) directory to the LabVIEW\instr.lib directory

Driver for other LabVIEW Versions

LabVIEW 6.0 driver

If there is no LabVIEW 6.0 driver available, please contact Rohde & Schwarz Customer Support Center

LabVIEW 8 driver

If there is no LabVIEW 8 driver available, please use the LabVIEW 7 driver.

Additional Information

For more information regarding the CMU 200 VXIPnP instrument drivers, please read the readme.txt file that comes with each driver.