

IVI.NET driver history for R&S® Power Sensors Driver Documentation

Products:

- | R&S®NRPxxS/SN – Diode Power Sensors
- | R&S®NRPxxT/TN – Thermal Power Sensors
- | R&S®NRPxxA/AN – Average Power Sensors



- | R&S®NRPM - OTA Sensors



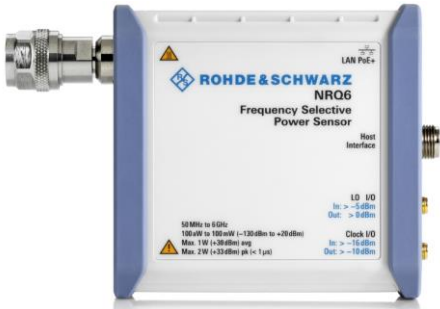
- | R&S®NRP2



- | R&S NRX (compatibility mode)



- | R&S®NRQ6



Driver history for IVI.NET - C#, Visual Basic .NET

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1 Supported Instruments

In the following table, the supported R&S instruments and firmware versions are listed:

Which instruments are supported?		
Current revision of instrument driver supports these instruments and firmware versions:		
Instrument	Supported Firmware	Remarks
NRPxxX/XN	16.05.13.02	
NRPM	17.06.28.04	
NRP2 base unit	7.13	
NRQ6	2.00	
NRX	2.20	Compatibility support

2 IVI.NET driver history

IVI.NET Instrument Driver		
Driver history		
Revision	Date	Note
1.7.0.0	05/2019	<ul style="list-style-type: none"> * Update only relevant for users of the NRX base unit with the newest firmware 2.20 - Breaking change for NRX: <ul style="list-style-type: none"> - Some units before the firmware 2.20 were fixed in WATT. Now they depend on setting of the units. Default units after *RST are dBm. Affected attributes and functions: <ul style="list-style-type: none"> - RsPwrMeter.Channel.Trigger.Level - trigger level for a single channel - RsPwrMeter.Trigger.Level - trigger level for all channels - RsPwrMeter.Measurement.Block.Limits.Lower.Power, RsPwrMeter.Measurement.Block.Limits.Upper.Power - RsPwrMeter.System.IO.Out1.AnalogOutput.Upper.Power, RsPwrMeter.System.IO.Out1.AnalogOutput.Lower.Power
1.6.1.0	03/2019	<ul style="list-style-type: none"> * New properties/methods: <ul style="list-style-type: none"> - RsPwrMeter.Measurement.FetchIqData() * Modified properties/methods: <ul style="list-style-type: none"> - RsPwrMeter.Channel.AdaptingToTestSignal.ResolutionBandwidth - Short command was modified - RsPwrMeter.Channel.AdaptingToTestSignal.CurrentResolutionBandwidth - Short command was modified - RsPwrMeter.Channel.Mixer.LocalOscillator.OutputEnabled - Short command was modified - RsPwrMeter.Channel.Mixer.LocalOscillator.Frequency - Short command was modified - RsPwrMeter.Channel.Mixer.IntermediateFrequencySideband.AutoEnabled - Short command was modified - RsPwrMeter.Channel.Mixer.IntermediateFrequencySideband.Selected - Short command was modified - RsPwrMeter.Channel.Mixer.IntermediateFrequencySideband.Frequency - Short command was modified - RsPwrMeter.ReferenceOscillator.Source - Short command was modified - RsPwrMeter.ReferenceOscillator.ReferenceIOOutputEnabled - Short command was modified - RsPwrMeter.ReferenceOscillator.SampleClockOutputEnabled - Short command was modified
1.6.0.0	12/2018	<ul style="list-style-type: none"> - Added compatibility support for NRX Base Unit - Added sub-system RsPwrMeter.System * New properties/methods: <ul style="list-style-type: none"> - RsPwrMeter.UtilityFunctions.GetInstrumentOptions - RsPwrMeter.UtilityFunctions.GetBaseUnitSensorsPresence - RsPwrMeter.UtilityFunctions.QueryWithOPCSync - RsPwrMeter.UtilityFunctions.QueryBinaryBlockToStream - RsPwrMeter.UtilityFunctions.WriteBinaryBlockFromStream - RsPwrMeter.UtilityFunctions.QueryBinaryDataBlockToStreamWithOPCSync - RsPwrMeter.UtilityFunctions.WriteCommandWithOPCSync

IVI.NET Instrument Driver		
Driver history		
Revision	Date	Note
		<ul style="list-style-type: none"> * Breaking changes: <ul style="list-style-type: none"> - Removed RsPwrMeter.UtilityFunctions.WriteToInstrumen, replacement is RsPwrMeter.System.WriteString - Removed RsPwrMeter.UtilityFunctions.ReadInstrumentData, replacement is RsPwrMeter.System.ReadString - Removed RsPwrMeter.UtilityFunctions.ErrorMessage, error message strings are now returned in exception messages - Interface System moved from RsPwrMeter.GeneralInstrumentSettings to RsPwrMeter
1.5.2.0	08/2018	<ul style="list-style-type: none"> - Fixed sporadic issue with USB interface when measurements took too long to complete - OPC timeout changed from 10 seconds to 30 seconds - Fixed incorrect endianness of data transfer
1.5.0	03/2018	<ul style="list-style-type: none"> * Added support for NRQ6 power sensor * New properties/methods: <ul style="list-style-type: none"> - RsPwrMeter.Channel.Averaging.Domain - RsPwrMeter.Channel.Trigger.Jitter.Method - RsPwrMeter.Channel.Trigger.Jitter.CurrentValue - RsPwrMeter.Channel.Trigger.Jitter.TriggerOffset - RsPwrMeter.Channel.Corrections.NoiseCorrection.Enabled - RsPwrMeter.Channel.Trace.TraceTimeAuto - RsPwrMeter.Channel.Trace.NumberOfSamples - RsPwrMeter.Channel.Trace.SampleRateForTrace - RsPwrMeter.Channel.ACLR.ApertureTime - RsPwrMeter.Channel.ACLR.Spacing - RsPwrMeter.Channel.VoltIq.SampleRate - RsPwrMeter.Channel.VoltIq.SampleCount - RsPwrMeter.Channel.AdaptingToTestSignal.AutosetFrequency - RsPwrMeter.Channel.AdaptingToTestSignal.Autoset() - RsPwrMeter.Channel.AdaptingToTestSignal.ResolutionBandwidth - RsPwrMeter.Channel.AdaptingToTestSignal.CurrentResolutionBandwidth - RsPwrMeter.Channel.AdaptingToTestSignal.FilterType - RsPwrMeter.Channel.AdaptingToTestSignal.AutosetFilterType - RsPwrMeter.Channel.AdaptingToTestSignal.BandwidthType - RsPwrMeter.Channel.AdaptingToTestSignal.InputAttenuation - RsPwrMeter.Channel.AdaptingToTestSignal.InputAttenuationAuto - RsPwrMeter.Channel.AdaptingToTestSignal.AutosetInputAttenuation - RsPwrMeter.Channel.Mixer.LocalOscillator.OutputEnabled - RsPwrMeter.Channel.Mixer.LocalOscillator.Frequency - RsPwrMeter.Channel.Mixer.IntermediateFrequencySideband.AutoEnabled - RsPwrMeter.Channel.Mixer.IntermediateFrequencySideband.Selected - RsPwrMeter.Channel.Mixer.IntermediateFrequencySideband.Frequency - RsPwrMeter.Channel.Mixer.FrequencyTracking.Enabled

IVI.NET Instrument Driver		
Driver history		
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		<ul style="list-style-type: none"> - RsPwrMeter.Channel.Mixer.FrequencyTracking.CurrentState - RsPwrMeter.Channel.Mixer.FrequencyTracking.CurrentFrequency - RsPwrMeter.ReferenceOscillator.Source - RsPwrMeter.ReferenceOscillator.REFFrequency - RsPwrMeter.ReferenceOscillator.USBFrequency - RsPwrMeter.ReferenceOscillator.CLKFrequency - RsPwrMeter.ReferenceOscillator.ReferenceIOOutputEnabled - RsPwrMeter.ReferenceOscillator.SampleClockOutputEnabled - RsPwrMeter.UtilityFunctions.DeviceFootprint() - RsPwrMeter.UtilityFunctions.SystemTestLevels - RsPwrMeter.UtilityFunctions.SystemSensorName * Modified properties/methods: <ul style="list-style-type: none"> - RsPwrMeter.Channel.Mode - Added ACLR and IQVoltageTrace modes for NRQ - RsPwrMeter.ReferenceOscillator.REFFrequency - Changed name and constant to be same as in newest operating manual and web interface * Modified Range Tables: <ul style="list-style-type: none"> - MeasurementMode - RSPWRMETER_ATTR_CHANNEL_MODE <li style="padding-left: 40px;">New items: ACLR, IQVoltageTrace
1.4.0	07/2017	<ul style="list-style-type: none"> * IVI.NET shared components 1.4.0 used * Added support for NRPM OTA power sensors * Added support for channel 0. If zero is used, the channel in SCPI command is not specified * New properties/methods: <ul style="list-style-type: none"> - RsPwrMeter.Channel.Trigger.SynchronizePort - RsPwrMeter.Channel.Trigger.AutoTriggerDelay - RsPwrMeter.Measurement.FetchAllChannels() - RsPwrMeter.Measurement.FetchAllChannelsBuffered() - RsPwrMeter.GeneralInstrumentSettings.MeasurementPath.Present - RsPwrMeter.GeneralInstrumentSettings.MeasurementPath.Enabled - RsPwrMeter.UtilityFunctions.StaticErrorQueryAll() * Modified Repeated Capabilities: <ul style="list-style-type: none"> - Channel - Identifiers ("CH0,CH1,CH2,CH3,CH4", "CH1,CH2,CH3,CH4") - Channel - Command Values ("1,2,3,4", "1,2,3,4")
1.3.4	05/2017	<ul style="list-style-type: none"> * Fixed culture invariant parsing in Fetch() methods
1.3.3	03/2017	<ul style="list-style-type: none"> * Breaking change: method RsPwrMeter.RsPwrMeterChannel.Zero() now has no arguments and performs complete range zeroing * Class implementation of measurement range modified * Zeroing is OPC synchronized
1.3.2	02/2017	<ul style="list-style-type: none"> * Class implementation modified to support various configurations of base unit and sensors
1.3.1	02/2017	<ul style="list-style-type: none"> * Modified IviPwrMeterMeasurement.ReadChannel - now does not configure channel, only selects current channel
1.3.0	11/2016	<ul style="list-style-type: none"> * Added support for NRP6A, NRP6AN, NRP18A, NRP18AN, NRP18T, NRP18TN, NRP40T,

IVI.NET Instrument Driver		
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		<p>NRP40TN, NRP50T, NRP50TN, NRP33SN-V, NRP67T, NRP67TN, NRP110T, NRP110TN</p> <ul style="list-style-type: none"> * IVINET.Internal.VisaException replaced with Ivi.Driver.IOException, * IVINET.Internal.ErrorException replaced with Ivi.Driver.InstrumentStatusException * using the namespace IVINET.Internal is no longer needed * Installer compliant with IVI 3-17: <ul style="list-style-type: none"> - side-by-side installation - more driver versions can be installed at the same time, older versions must be uninstalled manually - installation paths changed <p>64-bit driver installation path: "c:\Program Files\IVI Foundation\IVI\Microsoft.NET\Framework64\v4.0.30319\RohdeSchwarz.RsPwrMeter 1.3.0.0"</p> <p>32-bit driver installation path: "c:\Program Files (x86)\IVI Foundation\IVI\Microsoft.NET\Framework32\v4.0.30319\RohdeSchwarz.RsPwrMeter 1.3.0.0"</p>
1.2.0	03/2016	<ul style="list-style-type: none"> * Modified range tables: <ul style="list-style-type: none"> - MeasurementMode - help updated - TriggerSource - help updated, added new value External2
1.1.0	03/2016	<ul style="list-style-type: none"> * Added UtilityFunctions class. Some methods and properties from GeneralInstrumentSettings have been moved here * Fixed instrument identification * Fixed zeroing on standalone sensor * Fixed test mode on standalone sensor * Added support for NRP8S, NRP8SN, NRP33S, NRP33SN, NRP40S, NRP40SN, NRP50S, NRP50SN
1.0.3	12/2015	<ul style="list-style-type: none"> * Exception handling changed from R&S specific exceptions to IVI standard exception according to IVI 3.2 document. IVINET.Internal exceptions are replaced by Ivi.Driver exceptions. Using the namespace IVINET.Internal is not needed anymore * Bug fixed in RsRwrMeter.RsPwrMeterMeasurementChannel.TraceData * New: <ul style="list-style-type: none"> - RsRwrMeter.RsPwrMeterMeasurementChannel.TraceDataWithAuxiliary
1.0.2	08/2015	<ul style="list-style-type: none"> * Removed RsPwrMeter.Channel.Trace.Realtime
1.0.1	07/2015	<ul style="list-style-type: none"> * Added RsPwrMeter.Channel.ContAv.FastUnchoppedEnabled
1.0.0	12/2014	<ul style="list-style-type: none"> * Initial Release

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