

## R-958 TetraNode SDK

### General Description

The R-958 TetraNode Software Development Kit (SDK) is a powerful middleware library designed to simplify development of applications that interact with TetraNode functionality.

The TetraNode SDK uses the Microsoft .NET framework for ease of programming using the C#, C++ or Visual Basic programming languages. Applications can be developed to run on the Microsoft Windows Vista and Windows 7, 8 operating systems.

Amongst others, the SDK is well suited for development of solutions for Automatic Vehicle Location (AVL), status and data messaging, voice services as well as providing access to supplementary services such as Dynamic Group Number Assignment offered by the TETRA standard. The SDK requires a data-only or voice+data TIGv2 license on a TetraNode system, depending on the requirements of the application.

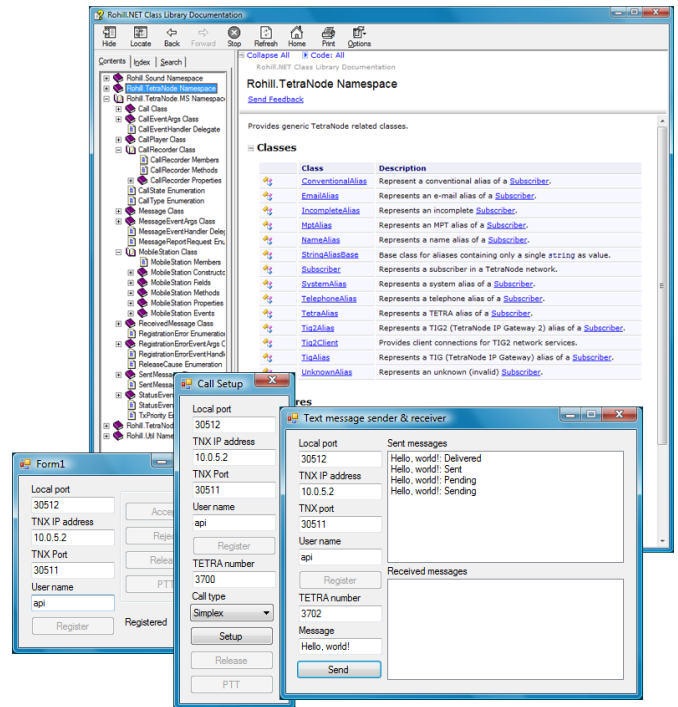
### Additional Details

The TetraNode SDK has an object-oriented software structure, enabling the development of highly structured and modular software components, which can be easily reused in multiple applications. Functions are part of structured classes, designed for ease-of-use and intuitive software programming.

The TetraNode SDK uses a modern event-driven software architecture. Functions can be registered for execution when events occur, such as incoming calls, status or text messages, and call progress events. The event-driven architecture allows non-blocking execution of functions, providing better responsiveness and lower CPU load.

For call setup and invocation of supplementary services, a rich set of functions is provided, with the appropriate events to provide indications of progress.

An extensive set of documentation is supplied as a Windows help file for easy reference. The structure of the documentation is identical to the Microsoft .NET Application Programming Interface (API).



### Key Features

- Voice, Data, Events and Subscriber database access through one single SDK
- Designed for the Microsoft .NET 3.5 SP1 platform, with support of Windows Vista and Windows 7
- Supports development of C#, C++ and Visual Basic applications within the Microsoft Visual Studio software development environment
- Support of the full range of TetraNode IP Gateway version 2 functionalities (for more information, please refer to the Product Sheet of the R-951 TetraNode IP Gateway)
- Support of Latin, UCS2 and UTF character sets for text message transfer

## Technical specifications

### General

Operating System support  
Microsoft 32- and 64-bit versions of Windows Vista and Windows 7  
Microsoft .NET 3.5 SP1 framework required  
(downloadable from Microsoft website)

### Functionality data-only SDK

Access to subscriber database, including aliasing  
Text messaging  
Status messaging  
Binary messaging  
GPS location messages

*Note: no support of group-addressed text, status en binary messaging in the direction of mobile station to application*

### Functionality TETRA vocoder SDK

Multi-stream encoding of TETRA ACELP voice  
Multi-stream decoding of TETRA ACELP voice

### Functionality voice+data SDK

All features listed for data-only SDK  
Group-addressed text, status and binary messaging from mobile stations to application  
Individual simplex call, outgoing and incoming  
Individual duplex call, outgoing and incoming  
Group call, outgoing and incoming  
Broadcast call

- Priority and Pre-Emptive Priority (Emergency) call
- Talking Party Identification
- Call Identification
- Dynamic Group Number Assignment
- Ambience Listening
- Discreet Listening of voice & data
- Call Authorised by Dispatcher
- Call Forwarding, unconditional and conditional
- Remote Enable and Disable
- Patching of groups and individual subscribers
- Include and Transfer Call
- Telephony (PABX/PSTN) calls

## Ordering specifications

### Deliverable system

- R-959
  - L-959 on USB
  - RAPP
  - Version D , DV , VOC or DV&VOC

### Accessories

- N.A..

The TetraNode SDK can be supplied in four different versions:

- The **data-only SDK** allows development of applications for status and text transfer. Also generic location update (GPS) messages are supported for development of AVL applications.
- The **data+voice SDK** supports development of applications that can handle status and text messaging, as well as voice services and supplementary services. In addition, system status events are supported.
- The **TETRA vocoder SDK** offers conversion of ACELP into PCM and vice-versa.
- Finally, the **voice+data+vocoder SDK** offers the services of the above two SDK components.

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# TetraNode Mission Critical Communications