

# ASN.1, 5G/LTE, and XML Products

DELIVERING THE TECHNOLOGY YOU  
NEED TO CONNECT **THINGS**



## Just Clicks Away

With **ASN.1 Studio**, you need only a few mouse clicks to take any ASN.1 specification and run an application that encodes and decodes ASN.1 messages that are based upon it.

ASN.1 Studio can produce source code that demonstrates how to encode or decode any message whose type is defined in an ASN.1 specification. You can copy the generated demonstration source code into your application, then simply replace the sample message fields with the actual fields that a message should contain.

ASN.1 Studio can export its projects to a format that is understood by a target language compiler, linker, or IDE, such as Microsoft Visual Studio. This further simplifies the process of building your ASN.1-based application.

**OSS Nokalva**

## Technology at work for you

**OSS Nokalva®**, Inc., a privately held company located in Somerset, New Jersey, has been offering the highest quality standard-based software, support, and services since 1988. OSS has been instrumental in shaping and developing **ASN.1, 5G/LTE, XML**, and biometric standards and standard-based solutions.

## Flexible solutions for your business needs

### OSS ASN.1 PRODUCTS

All of the **OSS ASN.1 Tools** include **ASN.1 Studio™**, an intuitive ASN.1 IDE, and runtime libraries that support the following encoding rules: BER, CER, DER, PER, CPER, UPER, OER, COER, XER, E-XER, and JER (JSON encoding rules).

The **OSS ASN.1 Tools for C** is a powerful development toolkit for rapidly building applications using ASN.1. This product features a powerful **ASN.1:2021** capable compiler, a runtime library that is the fastest on the market, support for partial/selective decoding, and a rich collection of utilities to simplify and speed your development.

The **OSS ASN.1 Tools for C++** is the right choice if you use object-oriented concepts in your application. The ASN.1/C++ compiler maps ASN.1 syntax into true C++ classes. The runtime libraries include C++ runtime classes to encode and decode application messages.

The **OSS ASN.1 Tools for Java** is a platform independent solution. The ASN.1/Java compiler maps ASN.1 syntax into Java classes. The runtime jar files facilitate encoding, decoding, and other operations on application messages.

The **OSS ASN.1 Tools for C#** is the solution for you if you would like to build ASN.1 applications for .NET Framework, .NET Core, Universal Windows Platform, and Xamarin. The compiler maps ASN.1 syntax into C# classes, and the runtime DLL facilitates encode, decode, and other operations on application messages.

**OSS Nokalva, Inc.**

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# ASN.1, 5G/LTE, and XML Products

## Specialized Products

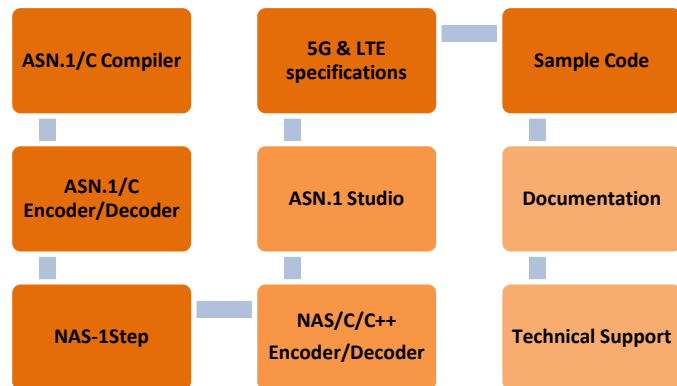
**ASN-1Step** offers our intuitive IDE, ASN.1 Studio, for ASN.1 analysis and development. ASN.1 Studio is a powerful tool for working with ASN.1 messages in human readable format. It features syntax checking, message validation, encoding and decoding, and much more.

The **PER Analyzer** add-on tool is highly recommended for protocol analysis and parsing PER (Packed Encoding Rules) messages at runtime. It provides detailed information about a PER encoding while allowing you to directly control the output format.

The **Compile-And-Go-Library (CAGL)** allows you to dynamically compile your ASN.1 specification at runtime – a perfect solution for CDR (Call Detail Record) processing applications. Use this runtime library to create, encode, and decode messages without having to rebuild your application.

**OSS NOKALVA, INC.**

[www.oss.com](http://www.oss.com)



**5G & LTE Tools**- Get all you need to support 5G/LTE ASN.1 and NAS development, all in one place, and all from a company whose commitment to quality and service you know you can rely on.

## OSS 5G/LTE PRODUCTS

Building on our 30 years of ASN.1 expertise and our high-performance PER encoder/decoder, OSS offers 3GPP 5G/LTE Release 8 - 16 compliant products that go beyond support for low-level ASN.1 development – the OSS NAS Tools (available for C, C++, C#, Java, and Python) and NAS-1Step, which provide the same performance, reliability, and quality that companies worldwide know they can expect from OSS.

The **OSS 5G & LTE Tools** present a complete, powerful, yet easy-to-use 5G/LTE, ASN.1, and NAS product suite that delivers everything you need to jump start your 5G/LTE development, along with 5G/LTE schema, sample code, and technical support. The available 5G/LTE products include:

- **OSS NAS Tools for C/C++**
- **OSS NAS Tools for Java**
- **OSS NAS Tools for C#**
- **OSS NAS Tools for Python**
- **NAS-1Step**, a visual tool for debugging NAS messages

## OSS FAST & COMPACT XML

Take advantage of two complementary, proven technologies – XML and binary encoding. OSS offers its Fast & Compact XML solution: **Efficient XML Interchange (EXI) Tools**. OSS' EXI Tools available for C, C++, and C#, efficiently compress your XML using the EXI standard. You achieve cost reduction without losing XML's many benefits such as inherent self-description and interoperability.