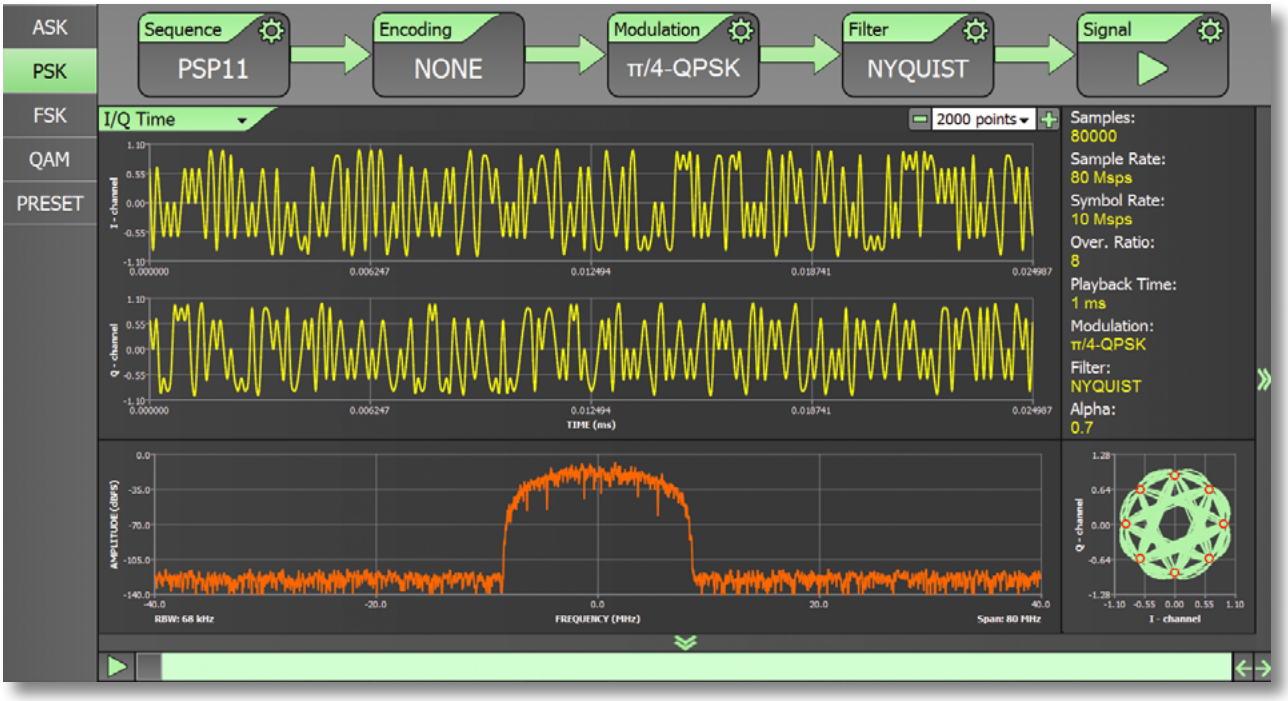
Signal Lab software



— ASK, FSK, PSK and QAM modulation support

— 4G LTE support

Signal Lab is a software that extends the capabilities of Micran's vector signal generator and creates signals with digital modulation methods and latest standards of digital communications.

Flexible tools of Signal Lab software allow to save your time spent for test signals generation and impove the transmitters and receivers testing process. Signal Lab is a ready-made solution that does not require any mathematical model development or specific software.

Our dedicated team of engineers is aimed at broadening the functionality of the Signal Lab capacity, so that a single software can be used for testing different devices.

User-friendly interface

All elements including signal parameters are arranged in sequence of operations performed with them. The user see the results on diagrams and evaluate the generated signal immediately. The signal may be displayed in time and frequency domains and on vector diagram.

Signal Lab offers you:

- Signal processing according to ASK, FSK, PSK and QAM modulation types (GCDM option);
- Signal processing according to 4G LTE (GLTE option);
- User-friendly interface with a wide range of settings;
- Display of vector diagrams, signal spectrum and I and Q components vs. time graphs;
- Possibility to define coding type, symbol rate, parameters of generating filter and data source;
- View and edit of previously created files.
- Auto-add files to catalogue of the signal generator's control programm.
- Flexible setups of the generating filter.
- Creation of user markers.

Signal Lab capabilities

Modulation type

ASK / modulation index	ASK, 2ASK, 4ASK, 8ASK / 0 ... 100 % with 0.1 % step
FSK / frequency deviation	MSK, 2FSK, 4FSK, 8FSK, custom / 10 Hz ... 3 × fsym
PSK	BPSK, π/2-DBPSK, QPSK, OQPSK, QPSK EDGE, QPSK π/4 offset, π/4-DQPSK, π/8-D8PSK, 8PSK, 8PSK EDGE, D8PSK, 16PSK
QAM	16QAM, 32QAM, 64QAM, 128QAM, 256QAM, 512QAM, 1024QAM, custom

Generating filter

Filter type	none, Nyquist, square root of raised cosine, Gauss, square
Oversampling factor	2, 4, 8, 16
Filter order	16 ... 1024
Nyquist filter coefficient square root of raised cosine	0.05 ... 1.00
Gauss filter coefficient	0.10 ... 1.00

Data source parameters

Data source	" all ones", "all zeros", pseudorandom sequence, sequence and data file
Number of symbols	2 to 1 000 000
Pseudorandom sequence	9, 11, 16, 20, 21
Sequence, bit	1 ... 16

Other specifications

Symbol rate	1 kHz ... 62.5 MHz with 0.1 Hz step
Coding type	none, Gray, differential, differential + Gray, GSM, NADC, PDC, PHS, TETRA, TFTS
Presets	Bluetooth, DECT, GSM, NADC, PDC, PHS, TETRA, WCDMA 3GPP, Worldspace, TFTS