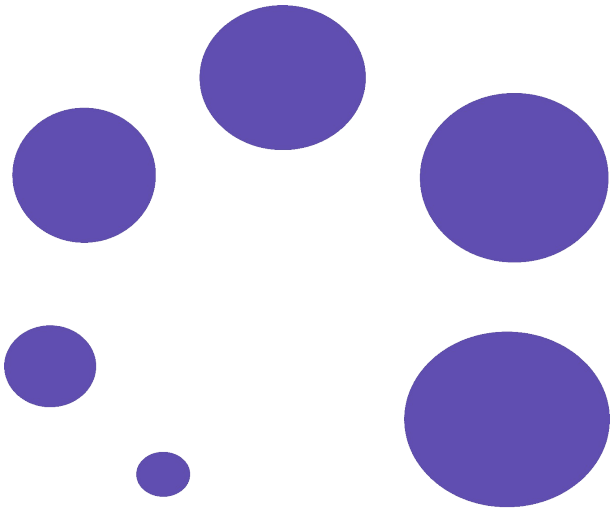
Spark

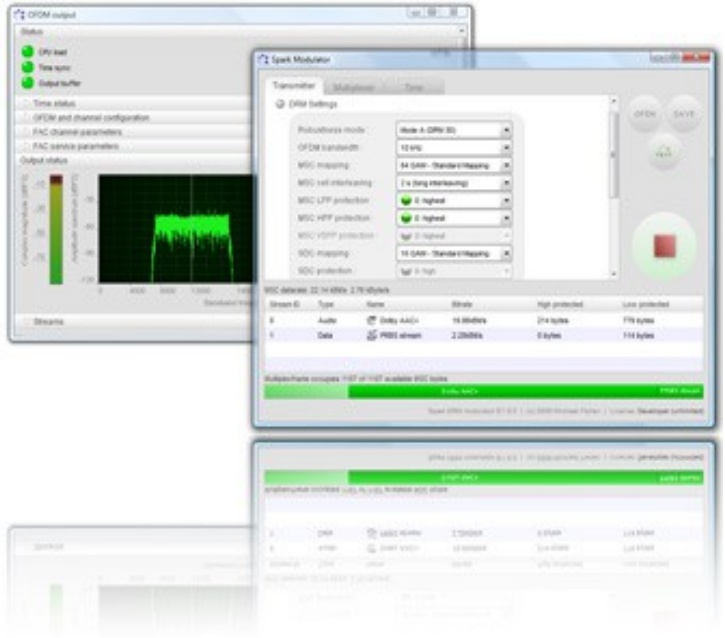
Multi-Standard Radio Modulator



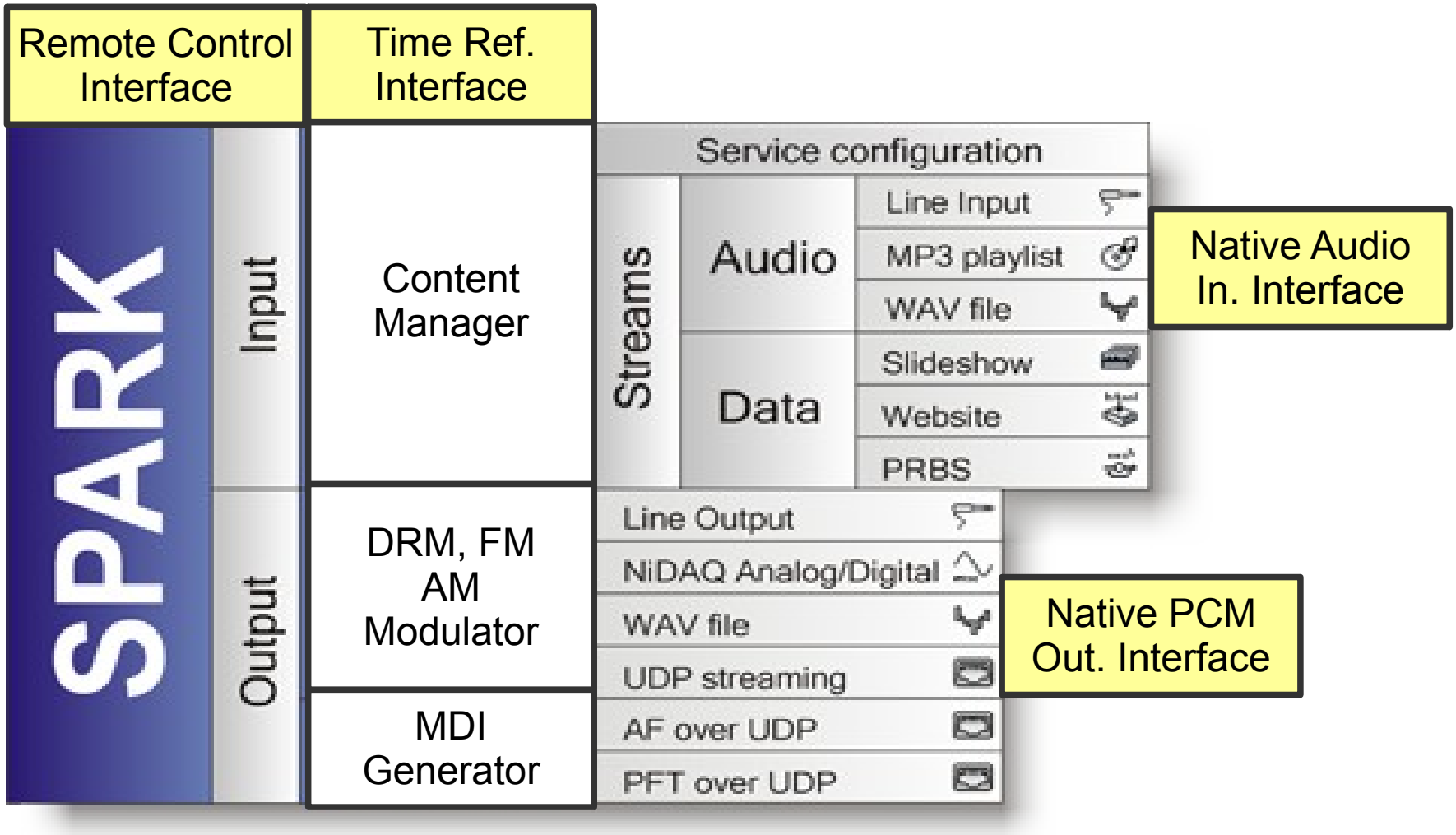
Michael Feilen
03.07.2014

What is Spark?

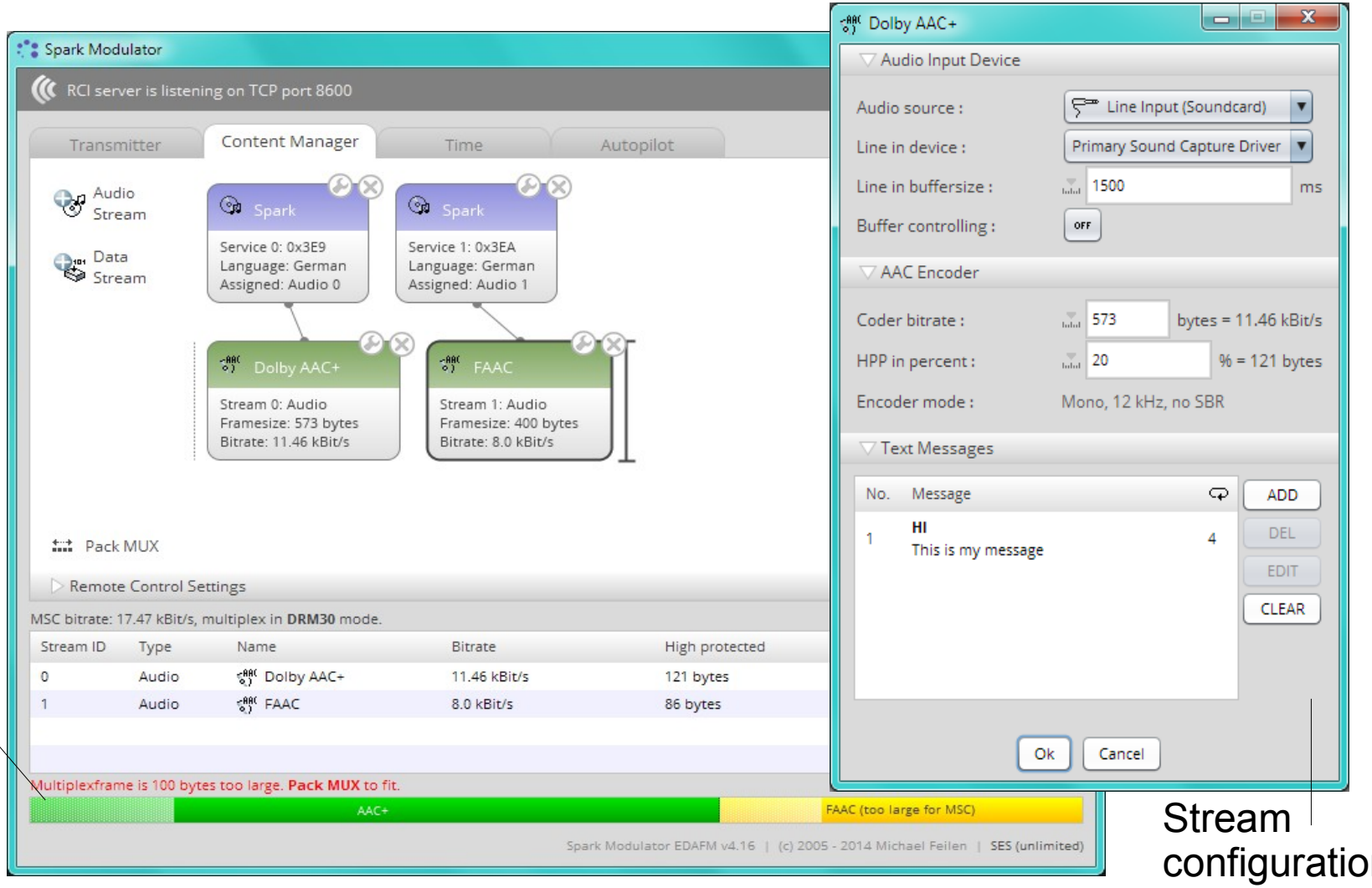
- Signal generator for DRM, FM-RDS, AM-AMSS
- Integrated content multiplexer
- Windows / Linux
- Java / C
- Remotely controllable



Architecture



DRM Multiplex Configuration

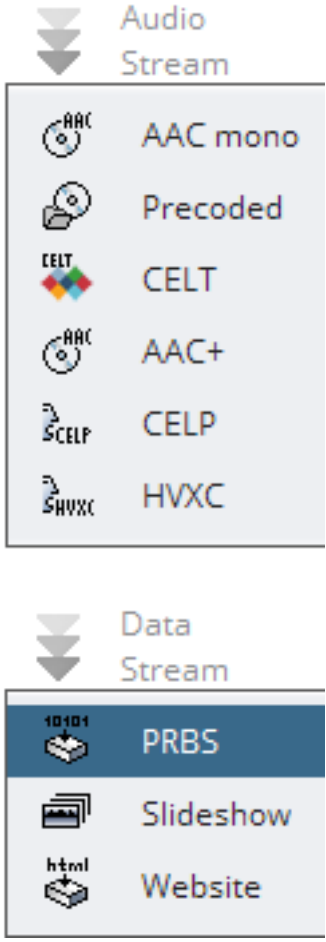


Bandwidth indicator

Stream configuration

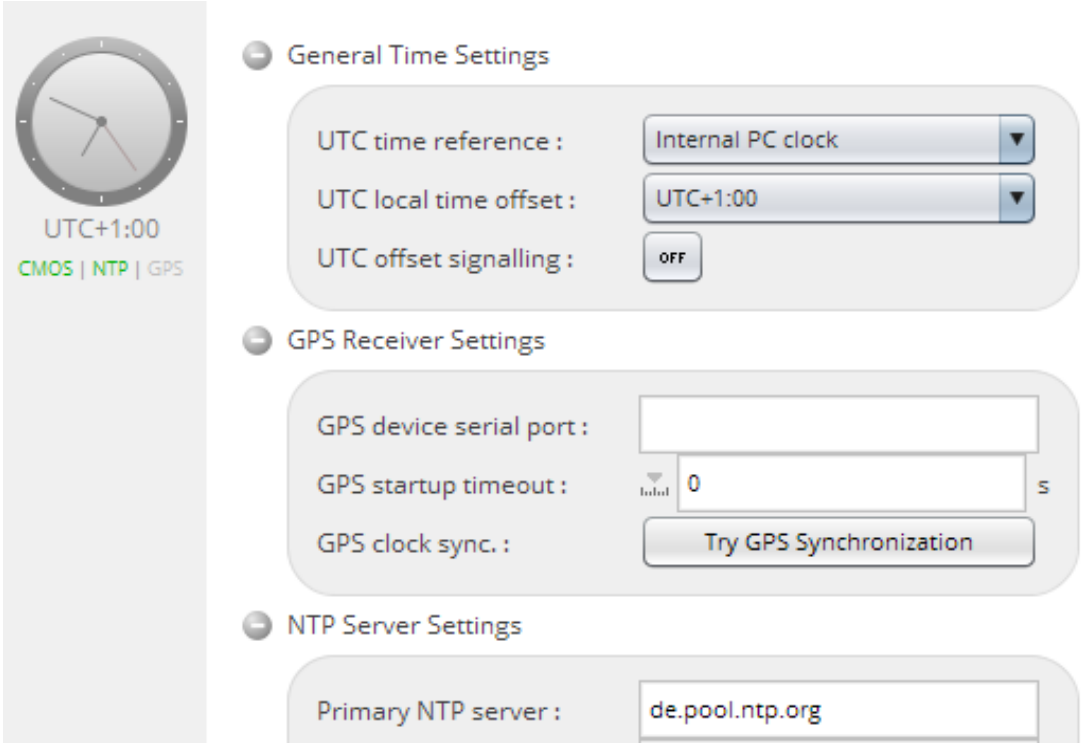
DRM Multiplex Streams

- AAC+, CELP, HVXC liveaudio
- AAC+, CELP, HVXC precoded
- MOT slideshow
- MOT website
- Text messages
- PRBS



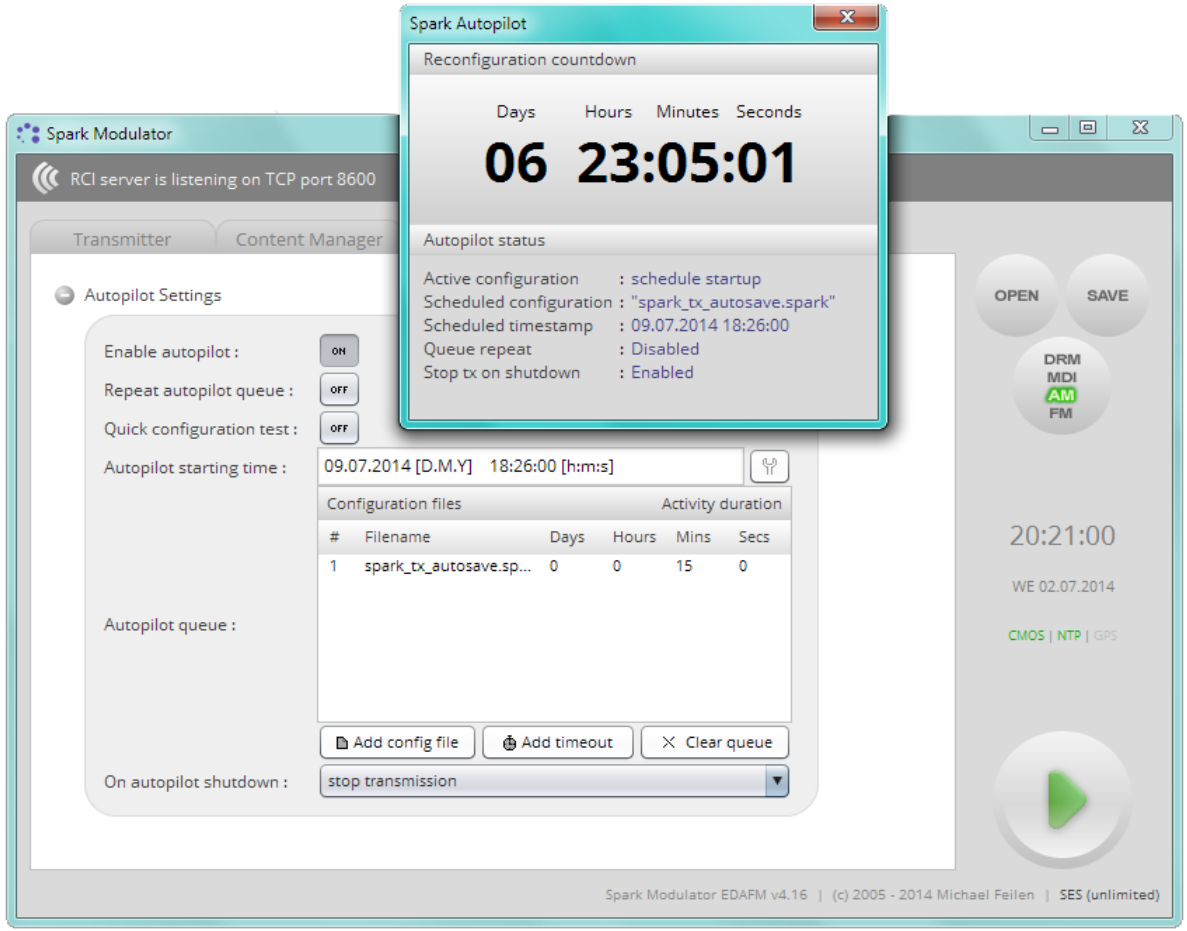
Time Ref. Input

- Synchronization monitoring
- NTP client
- GPS interface
- PC clock



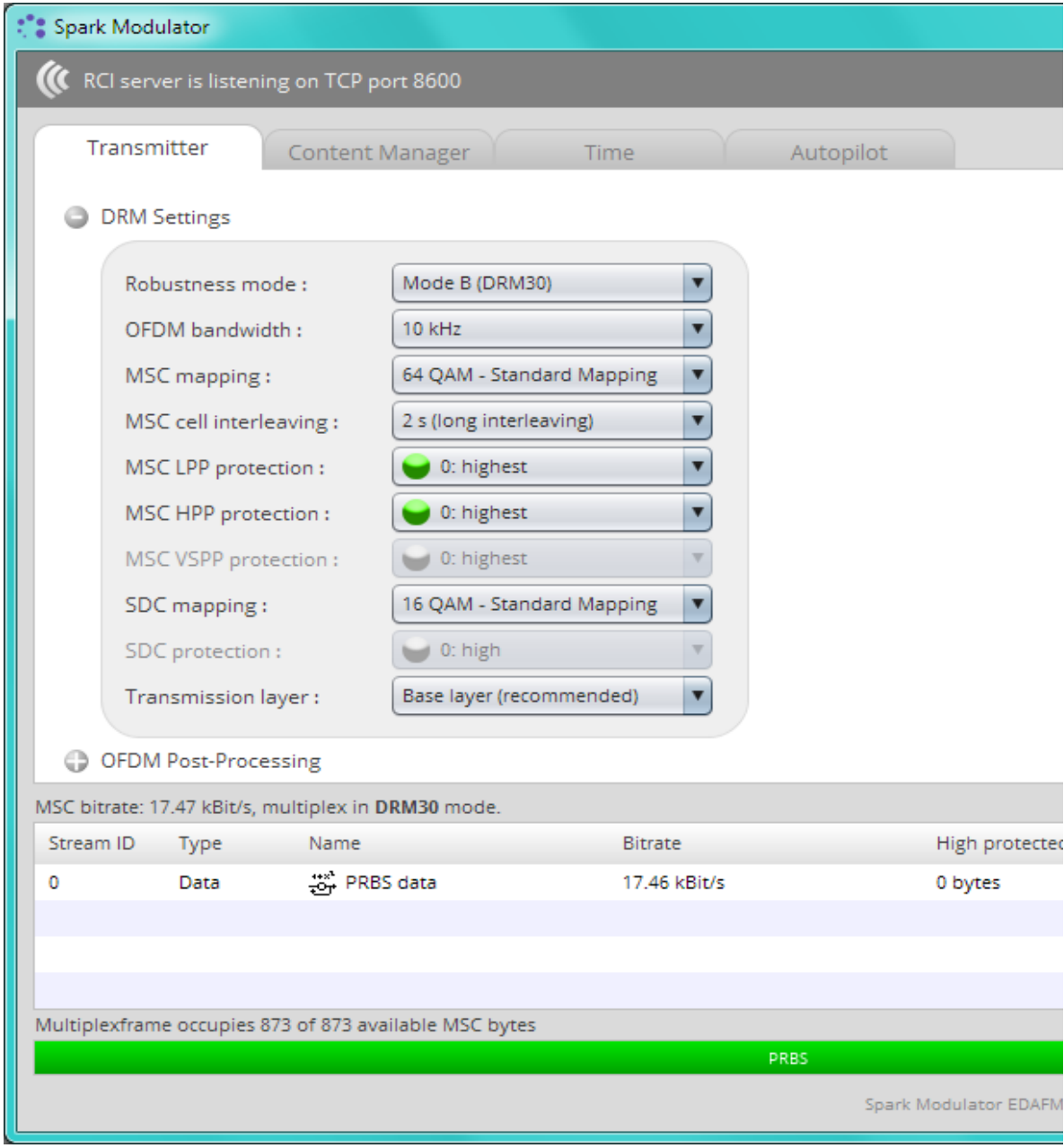
Autopilot :D

- Scheduled broadcasting
- Automated test file generation
- Batch testing



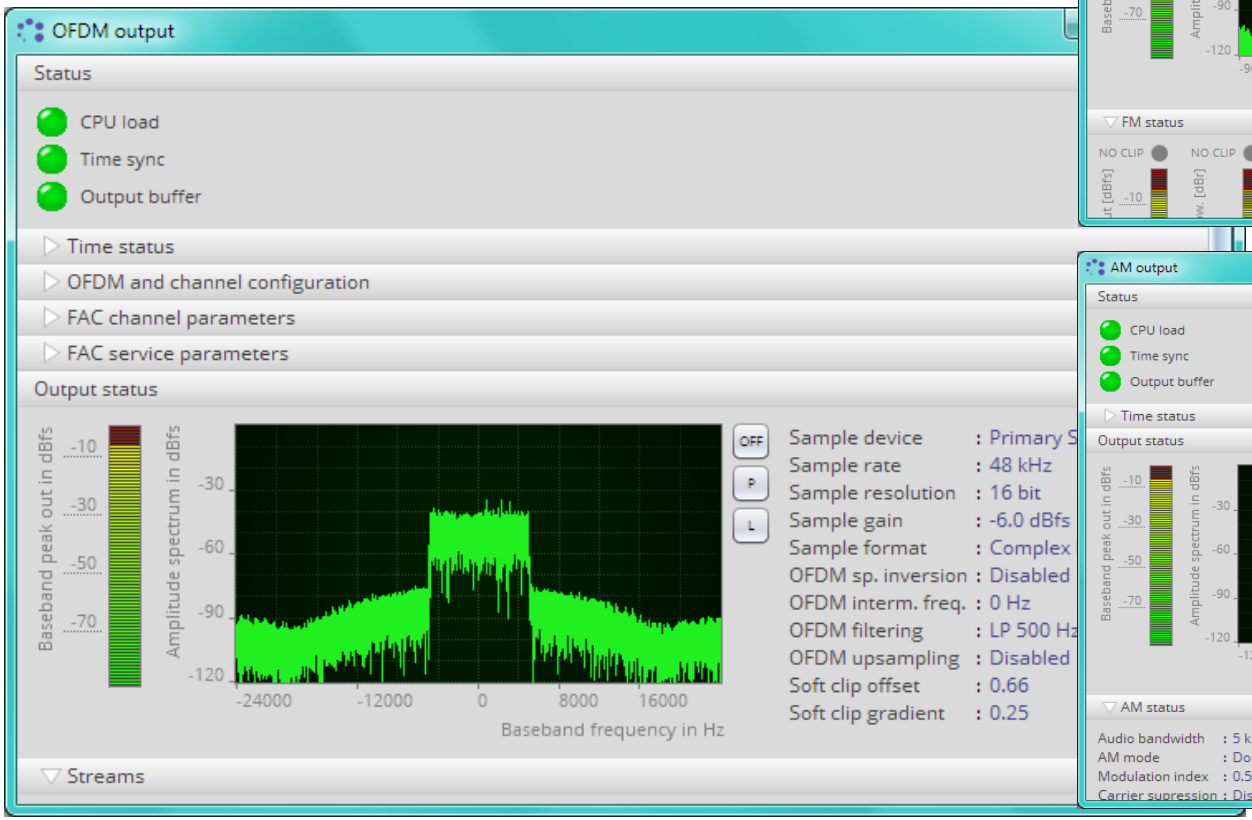
DRM options

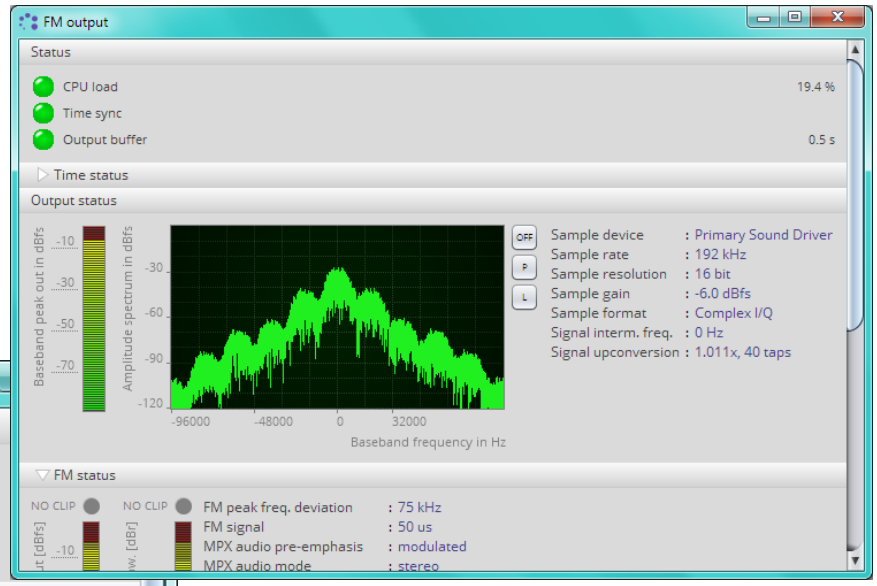
- DRM30 or DRM+
- All modes/rates
- Automatic MUX rate adoption

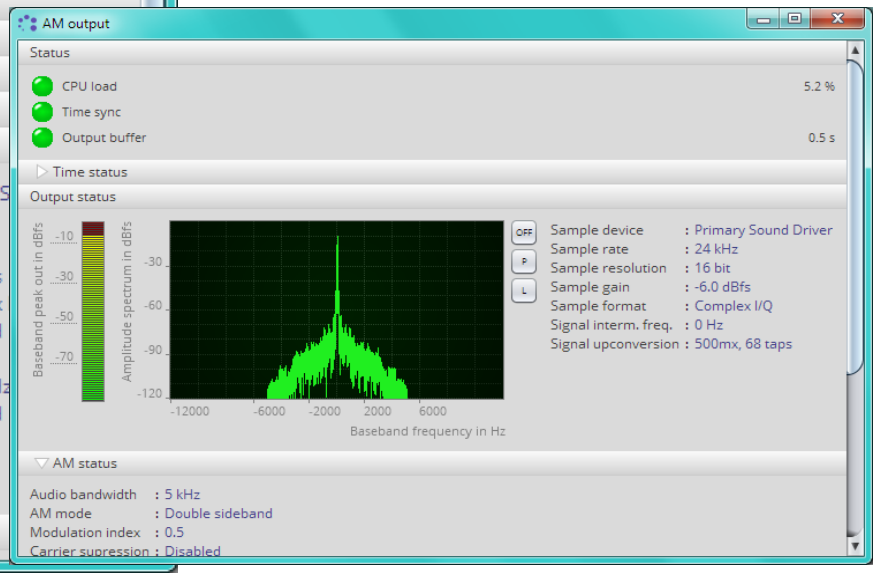


Output monitoring

- Real-time spectrum

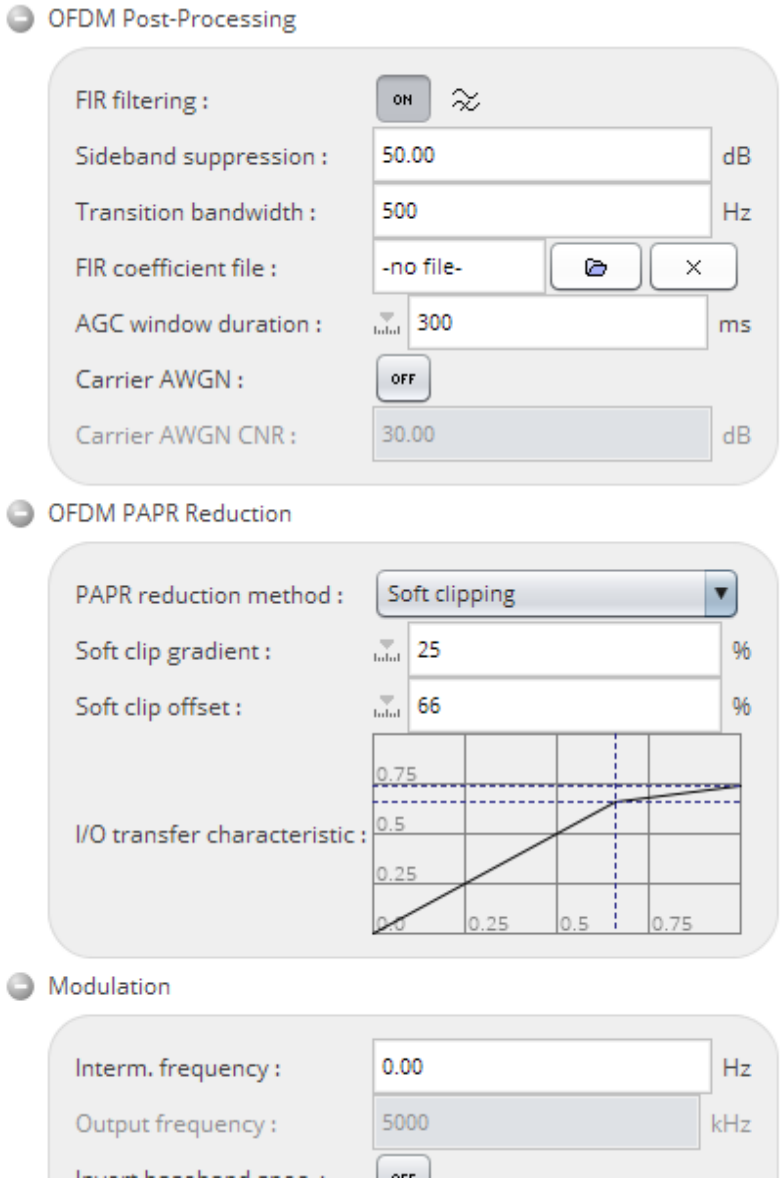






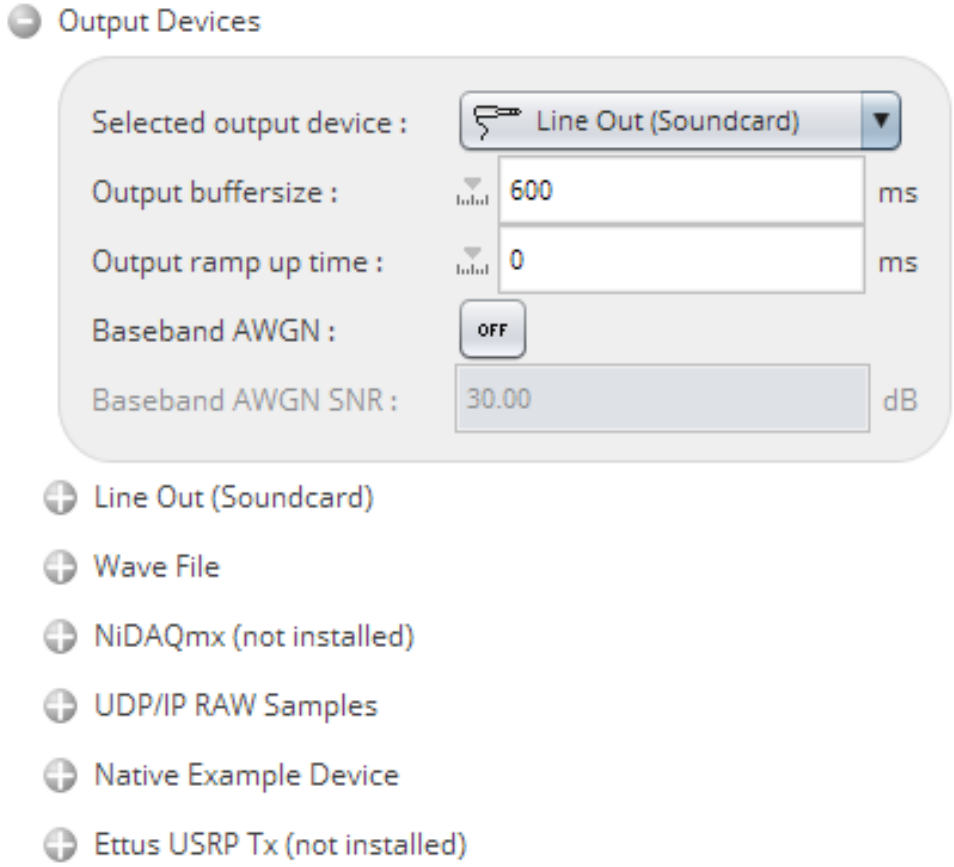
OFDM options

- Output AGC
- PAPR reduction
- Carrier AWGN
- FIR filtering
- IF modulation

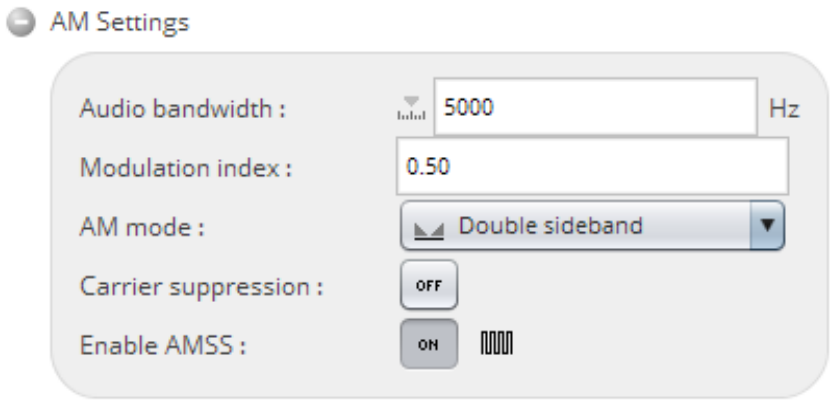


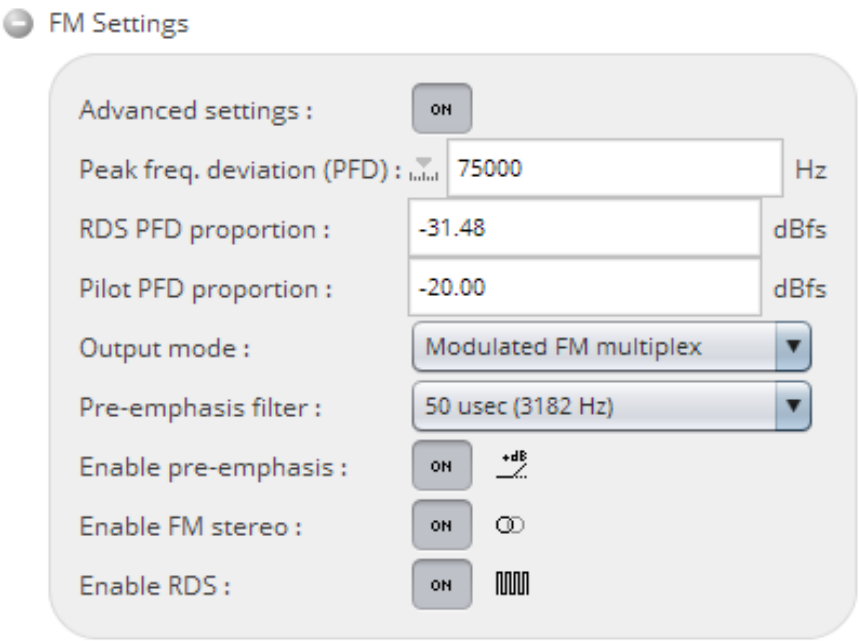
Output options

- IQ, real or env.-phase
- Baseband AWGN
- Ramp-up
- ETTUS and NI device support



AM/AMSS and FM/RDS





Thank you!