go2signals

RELEASE NEWS VERSION 22.1



What does the new version mean for you?

You have ...

... a valid update service contract?

Then you get the new update delivered automatically.

... another previous version of the software?

Now is the right time to get back into it. We will be happy to help you: sales@procitec.de

... interest, but are not yet a customer

Let's start with go2signals, ask for your trial version: sales@procitec.de

FAQ about the update

Can I update?

Customers using go2signals 21.2 (go2MONITOR 21.2 / go2DECODE 21.2 / go2ANALYSE 21.2) are able to update their instance directly to version 22.1. Also, older versions can be updated; in this case please contact us to discuss your individual solution: sales@procitec.de

Will my data and customizations be preserved?

On a standard update your data will be preserved. If you have made customizations in function and design, we recommend that you check them in advance. If you need consulting or support we are happy to prepare a suitable offer for you: sales@procitec.de

What are the benefits of an update?

There are many benefits. You can find out which ones are specifically important for you while reading the following pages and discuss with us afterwards.

Why are updates generally useful?

The signal world is constantly changing. Updates guarantee that you keep up with the times. In addition to new features, our updates also bring optimization. The optimizations positively effect the speed, the security and the stability of the software. Additionally, updates maintain compatibility with host Operating-Systems' patches and updates, assuring stability of the latest versions of components such as Python etc.

Increase Input Bandwidth from 1 to 5 MHz as Standard

With this new release, go2MONITOR offers now a wider input bandwidth of 5 MHz (VUHF, 1 MHz HF) for wideband detection, classification and recording as standard configuration. Decoding channels bandwidth has also been increased from 1.5 to 4 MHz, which e.g. enables decoding of the new ADS-B decoder even in the basic version without additional costs.



Decoding ADS-B with 5 MHz wideband input and 4 MHz decoding channel

New AMT task type: Continuous Fixed-Frequency Monitoring

Automatic monitoring and tasking (option AMT) is one of the performance features of go2MONITOR. The main use case is to filter with wideband classifier parameters for SOIs and decode them fully automatically. If the frequencies of SOIs are known, this new task type can set up a fixed decoding channel to permanently monitor this frequency for signal activity.

@ Create a new task	@ Fixed Frequency Monitoring example							
Task type Chose a task type	Basic task parameters Set basic task parameters and activation/deactivation criteria							
Weleband Search O Weleband signal search with live processing	Priority: Normal V Nome: Non-Section example							
Interactive rule-based detection, classification and processing of emissions in a wideband frequency range	Description							
Wideband signal search with automatic narrowband channel processing								
Pully automatic rule-based detection, classification and processing of emissions in a wideband frequency range	Frequency Time Region							
Fixed-Frequency Monitoring								
 Step-mode fixed-frequency monitoring 	Active Name Prequency Bendwidth Type Remark							
Processes set of fixed frequencies with a single channel stepping through the frequency list.	1 (c) Shannon H-DU (D/) Z. 2999-MHz 3.0003-kg Search trequency Shannon 52442.32 "08/944/"							
Ontinuous fixed-frequency monitoring	a diamonifeta (b/) and the standard gradient and and and and a standard and and a standard an							
Processes set of fixed frequencies with a dedicated channel for each frequency.	4 Sharoon HPDL (027) 6.5334 MHz 3.000 kHz sewith frequency Sharoon 5244732" 408/95447"							
Withhard Revention	5 Sharnon HFDL (D7) 8.8444 MHz 3.000 Wiz search frequency Sharnon 5294232" 48W5447"							
Time-based wideband recording	6 Shennon HPDL (D27) 8.9434 Mitz 3.000 kHz search frequency Shennon 52942732"-08W5447"							
Renned sofehand storal based on a time schedule	7 Shannon HFDL (ID7) 10.0824 MHz 3.000 KHz search frequency Shannon 5294/232**08W5447**							
	8 🗹 Shannon HPDL (ID7) 11.3854 MHz 3.000 kHz search frequency Shannon 52/42/32"*06W5447"							
Hagger to machine texture Reserve sectors of the second detected emission.								

Setup up new task type to a list of known frequencies for monitoring

New Signal Activity Triggered Recording

Each decoder channel in go2MONITOR has its own IF recording function. New in 22.1 is the possibility to set a SNR threshold to record only active signal parts and remove the pauses automatically. Additional parameters like leadtime, duration, etc. complete the new feature.

📓 Weekend 🗸 🖉 Option Stat () 1 1 Marcel 🗸 552.000 () 14 () 2 50.00 () 2 50.00 () 14 () 2 50.00 () 14 () 2 50.00 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 14 () 1															
	Classification result History				[Ch1 filtered by classification]								Only if signal detected		
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	\$	Symbol rate	18000.00 Bd		TETRA	Detecti	production	96 %	sync	1800	0.0 Hz	392.	Follow-up time:	15 🗘	Cell service level: 0 1
	101	Modem	TETRA		TETRA DMO	Detecting	no result	0 %		0.0 Bd	0.0 Hz	390	Max. duration:	01:00:00 0	202 NAC-RESOURCE Plain Ifc AdrType: 1 SSI: Broadcast Chan 0 Frame: 7
ETRA	b.l.d	Modem ID	7										Min. nause:	0 4 2	Cell service level: 0]
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	9	Version	В										SNK THESTOD:	000 -	Cell service level: 0 1
		Frequency	392.6626 MHz										21.12.20	021 12:26:4	0.315 NAC-RESOURCE Air Interface Encrypted AdrType: 1 SSI: Chan 0 Frame: 9
		Bandwidth	23926 Hz										21.12.20	021 12:26:4	0.542 MAC-RESOURCE Plain Ifc AdrType: 1 SSI: Broadcast Chan 0 Frame: 13
392,650 (MHz)		SNR	32 dB										D-NWRX-B	BROADCAST:	[Cell service level: 0]
392.67 MHz		Signal time	21.12.21 11:19:47												v
1 F Decoding		TETRA	MC	C:	MINC: CC: LA:										

Configuration of signal Activity Triggered Recording in manual decoding mode

This feature is also part of the configuration of "Continuous Fixed-Frequency Monitoring" tasks (with option AMT).

Fixed frequency task example X Task action Define NB-processing action which should be performed for each emission which fits the defined task trigger. No action Q only if signal detected Lead time: 1s © Follow-up time: 1s © Max. duration: 01:00:00 © Min. pause: 1s © SNR: 10 dB © Classification Direction Finding Modem Recognition and Decoding Modem Mod		
Task action Define NB-processing action which should be performed for each emission which fits the defined task trigger. No action Recording Only if signal detected Lead time: 1s P Follow-up time: 1s P Max. duration: 01:00:00 P Min. pause: 1s P SNR: 10 dB P Classification Direction Finding Modem Recognition and Decoding	Fixed frequency task example	×
No action ✓ Recording ✓ Only if signal detected Lead time: 1s ♥ Follow-up time: 1s ♥ Max. duration: 01:00:00 ♥ Min. pause: 1s ♥ SNR: 10 dB ♥ Classification Direction Finding Modem Recognition and Decoding	Task action Define NB-processing action which should be performed for each emission which fits the defined task trigger.	
	No action	
Only if signal detected Lead time: 1s © Follow-up time: 1s © Max. duration: 01:00:00 © Min. pause: 1s © SNR: 10 dB © Classification Direction Finding Modem Recognition and Decoding	✓ Recording	
Classification Direction Finding Modem Recognition and Decoding Modem	🗹 Only if signal detected Lead time: 1s 🗘 Follow-up time: 1s 🗘 Max. duration: 01:00:00 🗘 Min. pause: 1s 🗘 SNR	10 dB 🗘
Direction Finding Modem Recognition and Decoding Modem	Classification	
Modem Recognition and Decoding Modem	Direction Finding	
Modem ^	Modem Recognition and Decoding	
	Modem	^

Recording settings for "Continuous Fixed-Frequency Monitoring" tasks

Decoder and Demodulator Enhancements

As with every release, we updated our demodulators and decoders to stay current with the changing signal world and provide a better experience.

This time we particularly highlight new decoders for ADS-B or HF fax modes and new decryption features like implemented in TETRA or DMR.

Demodulator News

- + ASK unipolar: add modulation order 4 and 8
- + FSK discr.: add modulation order 8
- + New TFM5 demodulator

Decoder News

- + New decoders:
 - ADS-B/Mode-S
 - Siemens CHP-200
 - DUP-FEC-2
 - DUP-ARQ 2
 - HF-FAX/Weather-Fax
 - KG-STV
 - SSTV
- + Improve voice quality with AMBE codec when decoding weak signals for:
 - NXDN
 - APCO25
 - DMR
 - DPMR
- + CODAN Chirp: added burstinfo output
- + DMR
 - Implemented automatic decryption of Hytera Basic
 - Save IP data as pcap file
 - Improved decoding and output of IP data
- + DMR continuous
 - Implemented automatic decryption of Motorola Basic
 - Decryption of ARC4/DES/AES with provided key
 - Save IP data as pcap file
 - Improved decoding and output of IP data

- + TETRA
 - Decryption of TEA 1/3/4 with given key (DMO, Downlink)
- + NXDN
 - Full decoding of trunking repeater frames
- + New detector for CIS-3000
- + Improved decoding of acars messages
 - Decoding of Media Advisory Messages
 - Decoding of Media Independent Aircraft Messaging including reassembly
 - Reassembly of fragmented acars messages
 - XML output for post-processing
 - Affected decoders:
 - HFDL
 - VDL2
 - ACARS
 - Inmarsat AERO P/R/T

pyDDL News



A special feature of go2MONITOR enables the customer to develop their own decoders and integrate them into their systems. This release is the next step in expanding the decoder development language from DDL to pyDDL. The long list of new features and converted decoders underlines this progress.

Additional pyDDL features

- New helper functions for splitting a BitBuffer into smaller chunks
- Added a predefined hamming code generator matrix for BlockDecoder
- search_pattern: defining a pattern mask is no longer always neccessary
- generate_lfsr_sequence: allow up to 64 bit (was 63 bit)
- Faster hamming weight calculation (pop count) of long bitbuffers
- Added alphabet CCIR 476 (SITOR)
- Added alphabet ITA3

Updated decoders to pyDDL

- ALCATEL 801H 8 Tone
- ALIS2
- APCO25
- APCO25 Phase 2 Downlink
- ARQ-M2-242/342
- ARQ-M4-242/342

- CIS11
- CIS112 burst/stream
- CIS128
- CIS81
- CIS36
- CIS36-50
- CIS14
- CIS45
- CHN MIL 4FSK
- CHU FSK
- CIS FSK 200 1000
- CODAN Chirp
- DGPS
- DUP-ARQ
- FLEX
- FMS-BOS
- Inmarsat AERO R/C/T/P
- JSM
- MFSK8/16
- Olivia
- POL-ARQ
- QPSK31
- RUM-FEC
- SI-ARQ
- SI-FEC
- SP14
- SELCALS: EURO, EIA, EEA, MODAT, NATEL, VDEW, CCIR-1, CCIR-2, CCIT
- Tetrapol
- THROB/X
- XPA
- XPA2
- Yaesu Fusion

Classifier Enhancements

Modulation and modem classifiers process the entire wideband input band to obtain detailed information about all signals received and filter for Signals of Interest (SOI). The entire input band is split into individual signals, classified, and signal changes are tracked. The most important new functions are listed here:

- + New modulation classifier for OQPSK
- + New modem classifier ALE-4G
- + New modem classifier DAB
- + New modem classifier **DVB-T**
- + Added new DMR-Cont. variant

Noteworthy Changes

- + Updated frequency range for SAT-X to 7.2-10.7 GHz
- + New corporate design for icons, splash screen etc.
- Decoders with additional files (for example alphabets) can now be used with go2MONITOR
- + Improved system shutdown process to allow all result files to be closed and all actions to be finished properly
- The length of NB-recording files stored by AMT tasks changed from 30 s to 5 minutes to match the length of produced audio files.
- + Changed triggering strategy in AMT: If begin of triggering emission cannot be reached by using delay buffer, the action will start with the current time and not with the maximal de-lay time
- + Improved detection if frequency is already processed for AMT Live Processing task, to prevent duplicate processing of the same emission

- + Parts of AMT Task Wizard redesigned
- + Changing time from-to in ResultViewer for recording results is not possible anymore, to make sure that metadata in the database fits underlying recording files and their meta-information
- Configuration with longer maximal delay time (license option) in a channel allow entering delay value manually instead of only choosing from a drop-down
- + If trigger based on detection in overview spectrum is used in an AMT-Live task, the option "Use modem list from trigger emission" will be turned off and disabled
- In Viewer GUI configuration, File or Stream Playback address for narrowband channels will be determined automati cally, without need to set "FilePlaybackIPAddress" value in the configuration
- + Various improvements in frequency management: Column group will be automatically enlarged during editing, new frequencies will remain visible after adding, speed up frequencies import with duplicated entries



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Management System ISO 9001:2015

