PROCITEC®

HOUSE OF SIGNALS

**Technical
Specifications**

Monitoring Suite
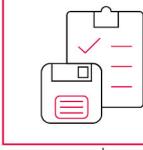
Product Version v26.1

January, 2026

GO2MONITOR OVERVIEW

Narrowband Classification Results
Modem Recognition Results
Narrowband I/Q Recordings Results
Narrowband Production Results

Result Database

Wideband Classification Results

Wideband Recording Results

① Wideband Input

② Wideband Classification

③ Production of a selected narrowband signal in production channel

④ Automatic Monitoring and Tasking

⑤ ResulViewer

go2MONITOR PRODUCT CONFIGURATIONS

go2MONITOR 1/2/4/8	- Radio monitoring, signal classification, signal decoding and signal recording software solution for complete signal scenario surveillance (HF, VHF, UHF, SAT bands) - Core product includes all standard product features. - Optional product features can be added, see optional product features table later in this brochure
go2MONITOR LOWSWAP	• Radio monitoring, signal classification, signal decoding and signal recording software solution for complete signal scenario surveillance (HF, VHF, UHF, SAT bands) optimized for low-SWaP equipment
go2MONITOR OPERATOR	• Application to setup an additional workstation for processing radio signals and viewing the results stored in the central system • go2MONITOR Operator enables several users to access a central go2MONITOR 1/2/4/8 independently of each other and to process signals autonomously 　- Shared access to the processing resources of a central go2MONITOR system 　- Local use of free narrowband channels for independent signal processing 　- Access to active wideband signal inputs (controlled centrally) 　- Viewing and editing of all results in a common, central results database 　- Installation on an additional workstation (access to the central system via network) 　- The go2MONITOR Operator product includes one ResultViewer each 　- With the NRC option it is also possible to assign handoff receivers directly to an operator • Recommended computing resources: client workstation/notebook with Intel i5 or higher (launch date not older than 3 years), 4 CPU cores with min. 2 GHz clock rate per core, 16 GB RAM and access to the central system via network and Full HD screen
go2MONITOR RESULT	• ResultViewer application to setup an additional workstation for viewing the results stored in the central system • go2MONITOR Result enables several users to access the result data of a central go2MONITOR 1/2/4/8 or LowSWaP independently of each other and to jointly process its results: 　- Shared access to a central go2MONITOR result database 　- Viewing and editing of all results 　- Work in parallel while creating new results in the central database 　- Listen to audio, even from IF recordings 　- Display filtered and grouped results, graphical and table view, data export 　- Installation on an additional workstation (access to the central system via network) 　- The ResultViewer application can display the results of multiple databases (not simultaneously) • Recommended computing resources: client workstation/notebook with access to the central system via network and Full HD screen
SIGNAL CLASSIFIER LIBRARY (SCL)	• C++ library for integration of automatic signal classifier functionality • Multi-stage classification concept: 　- Signal detection and segmentation 　- Classification of modulation types 　- Classification of modems • Input: 　- Digital IF (complex I/Q) via memory buffer 　- Digital IF/AF recordings (real / complex WAV 8, 16, 32 Bit) • Faster than real-time processing depending on hardware performance • Recommended computing resources: Intel i5 or higher (launch date not older than 3 years), min. 2.6 GHz clock rate per core, 1 Core per SCL channel

The performance of our software products depends on the hardware used. Technical parameters can differ under real operational conditions.
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go2MONITOR STANDARD

GUI	• Customize GUI and software workflow:
	  - GUI layouts and perspectives depending on use cases
	  - Modem list editor
	  - Frequency list manager
	• Supports multiple monitors
	• Simple and intuitive to operate
	• Full drag-and-drop support
	• Light and dark color theme
	• Language: English or German

RECOMMENDED COMPUTING RESSOURCES	• CPU: Intel i5 or higher (launch date not older than 3 years), min. 2.6 GHz clock rate per core. 2 Cores and 3 GB RAM • Per demodulation and decoding channel additional 1 CPU core and 2 GB RAM • Per 1 MHz max. wideband input bandwidth additional 1.2 GB RAM • Per started 10 MHz max. wideband input bandwidth additional 1 CPU core • HDD/SSD: min. 100 GB or more, depending on total time of signal recording • Screen Resolution: Full HD, multiple monitors recommended • Network: depending on digital IF input bandwidth
OS	- Windows 10/11 de/en, 64 bit with Media Feature Pack - Red Hat Enterprise Linux RHEL 8 (8.8 or higher, 8.10 recommended), 64 bit - Red Hat Enterprise Linux RHEL 9 (9.2 or higher, 9.2 recommended), 64 bit - Ubuntu 22.04 LTS (22.04.2 or higher, 22.04.2 recommended), 64 bit
LICENCE	• USB-Dongle (CodeMeter) as default • Optional: License sharing with license server • The AMBE+2™ voice coding Technology embodied in this product is protected by intellectual property rights including patent rights, copyrights and trade secrets of Digital Voice Systems, Inc. This voice coding Technology is licensed solely for use within this Licensed Product. The user of this Technology is explicitly prohibited from attempting to extract, remove, decompile, reverse engineer, or disassemble the object code, or in any other way convert the Object Code into a human-readable form. US Patent Nos. #8,595,002, #8,359,197, #8,315,860, #8,200,497, #7,970,606, #6,912,495 B2, #6,199,037.
ISO 9001:2015	• Company is certified

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go2MONITOR STANDARD PRODUCT FEATURES

RECEIVER CONTROL	• Native supported receivers, see later-back • Generic receiver control (frequency, bandwidth, gain, etc.) • Step and scan mode • PSD receiver overview display • Parallel use of receivers from different vendors possible • Support of wide- and narrowband receivers • Hand-off receiver input as additional option: NRC-4/8
WIDEBAND INPUT, CLASSIFICATION AND RECORDING	• Data Acquisition: - Digital IF (complex I/Q, VITA49) via stream or receiver - Digital IF/AF recordings (real / complex WAV 8, 16, 32 Bit; TCI cap, Medav DAT, Custom RAW, Midas BLUE, SigMF and SignalHound IQ file format) - 2 wideband inputs in parallel • Input bandwidth: - Depending on used receiver and hardware resources, limited at 200 MHz • Wideband classifier bandwidth: - Coherent 1 kHz up to 5 MHz (1 MHz HF) - Up to 20 MHz (2.5 MHz HF) as additional option: WCL-10/20 • Waterfall and spectrum display with information like station names and classifier results • Classification of modulation and modem types • Classification modes: - Manually triggered - Interval snapshots (at 10, 20, … . sec) - Continuous classification as additional option: AMT - Sequential snapshot classification in product configuration: go2MONITOR low SWaP • Recording: - Coherent 5 MHz (1 MHz HF) - Up to 20 MHz as additional option: WBR-10/20 • Recommended min. input bandwidth 50 kHz
MULTI CHANNEL PROCESSING	• 1, 2, 4 or 8 channels • Other channel configurations on request • Data Acquisition: - Internal DDC I/Q stream from wideband input - Digital IF (complex I/Q, VITA49) via stream - Digital IF/AF recordings (real / complex WAV 8, 16, 32 Bit; TCI cap, Medav DAT, Custom RAW, Midas BLUE, SigMF and SignalHound IQ file format) - Hand-off receiver input as additional option: NRC-4/8 • Input bandwidth: 2 kHz - 4 MHz • Additional functions: - Live audio listening (analogue and digital voice) - Analogue Audio buffering (default 30 min) with playback from position, in loop, noise skip and changed speed - Digital IF I/Q recording - Demodulated bit recording - Live signal analysis (Raster display, I/Q display) - Links to station names from frequency list • Operation modes: - Classification only - Decoding only - Modem recognition and decoding - Full automatic (classification, modem recognition, decoding) - Analogue audio only in product configuration: go2MONITOR low SWaP • Result feedback in GUI and database

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go2MONITOR STANDARD PRODUCT FEATURES

DEMODULATION AND DECODING	- Universal demodulators: - AGC, AFC and automatic baud rate synchronization - Blind or modem specific equalization - Pre-parametrized related to the selected decoder/modem - Extensive list of available standard decoders - PMR/SAT and MIL decoder packages as additional option - Latest decoder list: www.procitec.com/go2signals-decoderlist - Special decoder functions: - Multiple data output (text, audio/voice, files, raw, …) - Automatic modem recognition with adjustable decoder list - No loss of data during analyzing, modem recognition and protocol changes (first bit) - Decryption functions (automatic key detection, manual key input) - Parametrizable decoders (alphabet, encryption keys, framing parameters, etc.) - Extendable with user-defined decoders based on Decoder Description Language pyDDL (with go2modem-studio) - Content metadata post processing (customizable) - Output: - Decoder result window, configurable format by XSLT - All results are continuously saved in database - Metadata and content (text, audio, graphic, binaries) - Post-processing results: sender ID, recipient ID, position, etc. - Alarming based on post-processing results - Various export functions
STANDARD AUTOMATION	- Mission and task planning for multi-channel processing - Triggers based on wideband signal detection: - Signal energy - Modulation type - Modem type - Filter: - Signal parameters - Frequencies (band, fixed frequency, frequency channels) - Blocked frequencies (band, fixed frequency, job-specific and system wide) - System location - Time - Tasks: - Type: Wideband signal search with live processing - Additional task types as option: AMT - Enhance processing capacity and speed with additional option: WMPC-16/32 - Alarming for signal detection in wideband - Bulk File Processing - Observe a list of directories for new recordings and process them - Speech-To-Text (STT) interface to Whisper (OpenAI) - Transcript audio to text for many different languages - Translate to English - Different language models available - Quality and functionality are defined by Whisper software

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go2MONITOR STANDARD PRODUCT FEATURES

RESULTVIEWER	• Display, filter, edit and export from result database
	• Display of:
	  - Decoder output
	  - Demodulated audio files (CW, TETRA, etc.)
	  - Text output (ALE, HFDL, etc.)
	  - Binary and graphical files
	  - Audio demodulation and playback
	  - Recognized modems (protocols)
	  - Wide- / narrowband classification results
	  - Recorded wide- / narrowband IF-signals
	  - Result metadata like time, frequency, modulation, etc.
	• Integrated map:
	  - Display decoded signal position if position is transmitted (e.g. HFDL)
	  - Display line of bearing if direction finding is connected
	  - Display position if location system is connected
	  - Maps from local file data (in go2MONITOR included maps)
	  - Maps from local ESRI/ArcGIS servers
	  - Maps from global map servers over https (OpenStreetMap and ArcGIS servers)
	• Functions:
	  - Advanced filter
	  - Filter data using GUI, SQL or scripting
	  - Sorting and grouping function
	  - Mark cells in table using user-defined rules
	  - Manual correction of results (with bulk editing mode)
	  - Windows are implemented as docking /floating windows and can be freely positioned
	  - Table and graphical (time-frequency plane) result display
	  - Timeline view for temporal behavior and relationship analysis
	  - Listen to audio, even from IF recordings (includes demodulation)
	  - Select, extract (DDC) and store emission from wideband recording as independent recording

INTEGRATION	• API for application control and streaming (full back-end integration possible) • Receiver control and integration framework (RCM) • VITA 49, SoapySDR and ExtIO • Generic PROCITEC/PLATH IF streaming interface • Several customization possibilities based on Python scripting for DF, content post-processing, data export, etc.

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go2MONITOR OPTIONAL PRODUCT FEATURES

PMR DECODER	• Additional set of PMR/SAT decoders, see www.procitec.com/go2signals-decoderlist • May require export approval prior to supply
MIL DECODER	• Additional set of military demodulators and decoders, see www.procitec.com/go2signals-decoderlist • Requires export approval prior to supply
WIDEBAND INPUT CLASSIFICATION 10 OR 20 MHZ **(WCL-10/20)**	• Increase wideband classifier bandwidth • WCL-10: Coherent up to 10 MHz (1 MHz HF) • WCL-20: Coherent up to 20 MHz (2.5 MHz HF) • Recommended additional computing resources: WCL-10: 2-4 CPU cores. WCL-20: 4-8 CPU cores
WIDEBAND RECORDING 10 OR 20 MHZ **(WBR-10/20)**	• Increase wideband recording bandwidth • WBR-10: Lossless recording of up to 10 MHz • WBR-20: Lossless recording of up to 20 MHz • Recording scheduler and loop recording as additional option: AMT • Recommended additional computing resources: CPU: 1-2 CPU cores, HDD/SSD volume depends on total time of signal recording, HDD/SSD speed for WBR-10: 500 Mbit/s and WBR-20: 1 Gbit/s sustained write speed

ENHANCED AUTOMATION
 	
(AMT)
	• Additional Automation features:
	  - Continuous classification mode
	  - Task types:
	    o Wideband signal search with automatic narrowband channel processing
	    o Continuous fixed-frequency monitoring
	    o Wideband recording (time based or emission triggered)
	• Enhance processing capacity and speed with option: WMPC-16/32

WIDEBAND MULTI PRODUCTION 16 OR 32 CHANNELS **(WMPC-16/32)**	• Extends the number of channels with functionality channelizing (DDC), classification, analog demodulation and recording in steps of 16, 32 or more • Raises channel speed for digital demodulation and decoding faster than real-time (in average: 4-times faster) • Enhance processing capacity and speed for automatic processing with option: AMT • If in combination with WCL-10/20, recommended additional computing resources (in addition to standard and WMPC-16/32 recommendations): WMPC-16: 1-2 CPU cores and 4 GB RAM. WMPC-32: 2-4 CPU cores and 8 GB RAM
NARROWBAND RECEIVER CONTROL 4 OR 8 CHANNELS **(NRC-4/8)**	• Receiver control for handoff receivers • Process signals parallel and independent from wideband input • Handoff signal production triggered by wideband scan receiver result as additional option combined with: AMT • NRC-4: enables up to 4 handoff receivers for go2MONITOR 1/2/4 • NRC-8: enables up to 8 handoff receivers for go2MONITOR 8

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go2MONITOR OPTIONAL PRODUCT FEATURES

HOPPER DETECTION **(HOPD)**	• Recognition and recording of hopper signals in combination with AMT (use option WBR-20 to enlarge recording bandwidth) • Minimum signal duration: 2 seconds, at least 100 hops • Minimum signal bandwidth: 250 kHz • Hop rate: 5 to 50 hops/s for HF or 100 to 1.000 hops/s for V/UHF • Minimum hop bandwidth: 1 kHz • Recommended additional computing resources for 20 MHz max input bandwidth: 4-8 CPU cores and 24 GB RAM • Requires export approval prior to supply
32 ANALOG AUDIOCHANNELS **(AUDIO-32)**	• Extension of the production channels already available in go2MONITOR with complete functionality (classification, demodulation, decoding, recording, analog audio) by additional channels with exclusively analog audio functionality • The additional audio channels are used for manual monitoring of audio signals • A total of 32 audio channels (channels from the base license together with the additional audio channels) are available • Complete decoder channels included in the base license are retained; these can be used for decoding and/or audio as required • Each audio channel can demodulate on one frequency LSB, USB, AM, FM or WFM with squelch function • Audio buffering (default 30 min) with playback from position, in loop, noise skip and changed speed • Demodulated audio can be automatically recorded and saved in the results database
DIRECTION FINDING **(DF)**	• Add additional functions for querying and displaying measured values from direction finder hardware received via an external interface • Adaptable scripting interface for connecting a wide range of direction finders with scripting function available • Read out and save measured results from the direction finders (bearing angle, time, frequency, bandwidth, etc.) • Start a bearing in production channel for a manually selected signals • Automatic start of a bearing when certain signals are detected (AMT option is required) • Displaying the bearing beams on the map
REMOTE CONTROL API	• C++ library and API interface for system integration
RCM FRAMEWORK	• C++ framework for receiver integration

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FEATURE COMPARISON TABLE go2MONITOR 1/2/4/8 vs. low-SWaP

FEATURE	go2MONITOR 1/2/4/8	go2MONITOR low-SWaP
Wideband classification	Instantaneous snapshot and continuous classification	Sequential snapshot classification
Wideband I/Q input bandwidth	Depending on receiver and hardware resources	Depending on receiver and hardware resources
Wideband recording function	Yes	No
Rule based fixed frequency to channel allocation	Yes	Yes
Product option enhanced automatic monitoring and tasking (AMT)	Yes (dynamic)	No
Channel with fully automatic modem recognition, demodulation and decoding	Yes	No
Channel limited to demodulation of analog signals	No	Yes
Channel limited to demodulation and decoding of digital signals	No	Yes
Channel with signal buffer (decoding of the first bit)	Yes	No
All channels include recording function	Yes	Yes
Automatic alerting and notification ('cross-cue') to 3rd-party systems (e.g. ISR/CEMA assets)	Yes	Yes
Additional PMR and MIL decoder packages available	Yes	Yes
Product option multichannel production (WMPC)	Yes	No
Integration based on API	Yes	No
Includes support for receivers, classification, demodulation, decoding and decryption	Yes	Yes

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go2MONITOR / SIGNAL CLASSIFICATION LIBRARY MODULATION CLASSIFIER*

Modulation	Spec. general	Spec. HF	Spec. V/UHF	Recognition quality (Eb/No) for a detection rate > 90% and false alarms < 1%
Max. signal bandwidth		50 kHz	50 kHz – 80% of input bandwidth	
Signal energy detection min.		6 dB	6 dB	

Analogue modulated voice detection (no SELCALS)		- USB J3E
		- LSB J3E
		- AM A3E
		- DSB-SC
			- USB J3E
			- LSB J3E
			- AM A3E
			- NFM F3E
			  (Radio frequency
			  ≥ 25 MHz)
			- DSB-SC	

ASK 2/4			100 Bd – 50 kBd	14 – 18 dB
FSK 2**	m = 1 - 10	25 - 4800 Bd	1.2 - 25 kBd	11 - 15 dB
FSK 2**	m = 0.75 - 1.5		25 - 75 kBd	≥ 25 dB
FSK 4**	(shift > sr)	25 - 4800 Bd	1.2 - 25 kBd	14 - 16 dB
GMSK**	m = 0.5	300 - 4800 Bd	1.2 - 125 kBd	14 - 16 dB
MCFSK2	m ≥ 1; 2 - 64 channels	40 - 250 Bd 120 - 1000 Hz channel spacing (min. 2x shift)	40 - 250 Bd 120 - 1000 Hz channel spacing (min. 2x shift)	17 dB
MORSE		30 - 250 CPM	30 - 250 CPM	
MSK**	m = 0.5	100 - 4800 Bd	1.2 - 125 kBd	14 - 16 dB
Multitone FSKn**	8 - 64 tones (shift > sr)	3 - 200 ms (5 - 330 Bd)	3 - 200 ms (5 - 330 Bd)	14 - 16 dB
OFDM		**Bandwidth ≤ 50 kHz** - 25 - 512 Channels - Tg/Tu 0.125 - 1 - Max. channel spacing 250 Hz - Min. 25 Bd (Tested with PSK8 channel modulation)	**Bandwidth ≤ 50 kHz** - See Spec. HF **Bandwidth > 50 kHz -12.5 MHz** - 128 - 32768 Channels - Tg/Tu 0.0625 – 0.25 - Max. channel spacing 15 kHz - Min. 50 Bd (Tested with PSK8 channel modulation)	14 - 18 dB

* Measurement conditions: Typically, 4 seconds sample and correct segmentation of emission. Signal bandwidth is not more than 80% of the input bandwidth.
  Shift is defined as frequency difference between neighboring tones.

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go2MONITOR / SIGNAL CLASSIFICATION LIBRARY MODULATION CLASSIFIER*

Modulation	Spec. general	Spec. HF	Spec. V/UHF	Recognition quality (Eb/No) for a detection rate > 90% and false alarms < 1%
OTH Radar	FM-CW variants only	Detection only		
Multichannel (D)PSK 2, 4 A/B	max. 10 kHz signal bandwidth; 2 - 64 channels	31.25 - 250 Bd 50 - 300 Hz channel spacing	31.25 - 250 Bd 50 - 300 Hz channel spacing	13 - 15 dB
(D)PSK 2 A/B		31.25 - 4800 Bd	1.2 kBd - 50 MBd	7 - 10 dB, A/B Decision: 8 - 15 dB
(D)PSK 4 A/B		31.25 - 4800 Bd	1.2 kBd - 50 MBd	8 - 12 dB, A/B Decision: 10 - 15 dB
(D)PSK 8 A/B		31.25 - 4800 Bd	1.2 kBd - 50 MBd	HF: 8 - 12 dB, A/B Decision: 10 - 15 dB V/UHF: 10 - 14 dB, A/B Decision: 12 - 15 dB
OQPSK **			100 Bd – 50 MBd	10 dB
PSK 16		300 - 4800 Bd	1.2 kBd - 50 MBd	14 - 16 dB
QAM	Order: 8, 16, 32, 64 Selected constellations	100 - 4800Bd (Constellation dependent, at least 50 symbols per constellation point within classification interval)	100 Bd - 12.5 MBd (Constellation dependent, at least 50 symbols per constellation point within classification interval)	Constellation dependent 12 - 20 dB
FM-PSK	After FM-demodulation PSK is searched in 300 – 3400 Hz band		100 – 2400 Bd	
WFM (FM Broadcast only)			Radio frequency: 65 MHz - 108 MHz Bandwidth: 50 kHz - 300 kHz	

* Measurement conditions: Typically, 4 seconds sample and correct segmentation of emission. Signal bandwidth is not more than 80% of the input bandwidth.

Shift is defined as frequency difference between neighboring tones.

** Includes ML/AI technology

go2MONITOR / SIGNAL CLASSIFICATION LIBRARY MODEM CLASSIFIER

HF	V/UHF
ALE 3G	ACARS-VHF
ALE 4G	APCO-25
CHN 4+4	APCO-25 Phase 2 Downlink
CHN MIL Hybrid 8FSK-PSK	DAB
CIS Akula 500Bd/1000Hz	DECT
CIS-45 OFDM (33Bd and 45 Bd)	DMR
CIS-60 OFDM (30Bd and 35.55Bd)	DMR Continuous
CIS-93 OFDM	dPMR
CIS-112 OFDM	D-STAR
CIS-128 OFDM 3kHz	DVB-T (8 MHz Mode only)
CODAN 3212 16 Channel PSK (includes CODAN 3012 variant)	Flex
HFDL	GSM (<3G), UMTS, LTE
LINK 11 (CLEW and SLEW)	INMARSAT IsatPhone Uplink
LINK 22	Iridium Uplink
MIL-STD-188-110A Serial (single tone) mode (a.k.a. STANAG 4539)	MPT1327
MIL-STD-188-110B/C App. C (a.k.a. STANAG 4539 HDR)	NXDN (2400 Bd and 4800 Bd)
MIL-STD-188-110C App. D	TETRA Downlink
PACTOR (I, II, II FEC, III, 4)	TETRA Uplink
STANAG 4285/4481 (PSK)	Tetrapol
STANAG 4529	Thuraya Uplink
STANAG 4539	VDL-2
	Yaesu System Fusion (including NB variant)

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go2MONITOR / SIGNAL CLASSIFICATION LIBRARY MEASURED MODULATION TYPE PARAMETERS

Parameters	Description	OFDM	CARRIER	FSK	MFSK (FSKn)	MSK	CW	PSK	MCPSK	QAM	FM-PSK	ASK	MCFSK	Voice	FM Broadcast	Unknown
Modulation	Type of modulation and its quality	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Pitch	Pitch of the modulated voice													•		
Type	Type of voice like LSB, USB, AM, FM													•		
Symbol rate	Symbol rate in Bd	•		•	•	•		•	•	•	•	•	•			
Order	Number of phaseshifts / levels							•	•		•	•				
Version	Version of PSK A or B							•	•		•					
CPM	Transmitted characterper minute						•									
Dash Dot Ratio	Ratio between the length of dashes and dots						•									
Shift	Measured shift			•	•	•							•			
Channel spacing	Measured distance between channel in Hz	•							•				•			
Frequency	Center frequency ofthe signal	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	Sub-carrier center frequency										•					
Bandwidth	Overall bandwidth of the signal	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	Sub-carrier bandwidth										•					
SNR	Signal to noise ratioin dB	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Signal time	Time of measurement	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

*   A field that contains up to three detected QAM constellation details based on the soft decision result. Each comprises its corresponding constellation name, constellation ID, and detection quality. Optionally, it can also provide the respective constellation XML tags.

go2MONITOR / SIGNAL CLASSIFICATION LIBRARY MEASURED MODULATION TYPE PARAMETERS

Parameters	Description	OFDM	CARRIER	FSK	MFSK (FSKn)	MSK	CW	PSK	MCPSK	QAM	FM-PSK	ASK	MCFSK	Voice	FM Broadcast	Unknown
Number of tones				•	•											
Number of channels									•				•			
Constellation info										•*						

*   A field that contains up to three detected QAM constellation details based on the soft decision result. Each comprises its corresponding constellation name, constellation ID, and detection quality. Optionally, it can also provide the respective constellation XML tags.

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go2MONITOR DEMODULATORS

ALE 3G*/4G*	MT63
AM/A3E (Voice)	OFDM
Analogue Selcal	OQPSK
ASK 2 (OOK), 4, 8	Pactor II, III, 4
Chirp	PSK 2, 4, 8, 16 A/B
Clover II	PSK data aided
Clover 2000	QAM:
Clover 2500	- QAM 16, 32, 36, 64, 128, 144, 256 (square)
Coquelet	- QAM 16, 32, 64 (circle)
DECT**	- APSK16_dvbs2
DPSK 2, 4, 8, 16 A/B	- ASK2PSK2 abs/diff
DRM	- ASK2PSK4 abs/diff
F1A	- ASK4PSK16 diff
FAX	- QAM 8
FM/F3E (Voice)	- QAM 16 v17 abs/diff
	- QAM 16 v22 abs/diff
F7B/F7W	Robust Packet
FreeDV	Serdolik System v2
FSK 2 matched	STANAG 4415*
FSK 2, 4, 8 disc.	TFM 3, 5
FSK (automatic chooses mode)	THROB / THROBX
GSM**	Wideband HF (MIL 110 App.D) *
Hybrid	
J3E (USB, LSB) (Voice)	
LINK11*	
LoRa	
MDPSK 2, 4, 8, 16 A/B	
MCFSK 2	
Mil39Tone*	
Morse (A1A, A2A, F1A, F2A)	
MPSK 2, 4, 8, 16 A/B	
MSK/GMSK	

Modem specialized demodulators are only useable in combination with its corresponding decoders
* requires optional product feature MIL decoder package
** requires optional product feature PMR decoder package

go2MONITOR Decryption*

Decoder / Encryption type	Detection	Recognize Type	Decryption
TETRA Downlink			
TEA 1,3,4	•		key entered
TEA 2, end-to-end	•		
TETRA Uplink			
TEA 1,2,3,4	•	•	
end-to-end	•	•	
TETRA DMO			
TEA 1,3,4	•	•	key entered
TEA 2, end-to-end	•	•	
DMR / DMR Continuous			
Motorola Basic	•	•	automatic / key entered
Alinco	•	•	automatic / key entered
Hytera Basic	•	•	automatic / key entered
Kenwood Basic	•	•	automatic / key entered
Enhanced/ARC4	•	•	key entered automatic key finding with go2key (optional)
Advanced encryptions (DES/AES)	•	•	key entered
APCO-25, APCO-25 P2			
ACCORDION 1.3	•	•	
BATON(Auto Even)	•	•	
FIREFLY Type 1	•	•	
MAYFLY Type 1	•	•	
SAVILLE	•	•	
BATON(Auto Odd)	•	•	
DES-OFB	•	•	key entered (only APCO-25)
2-key triple DES	•	•	key entered (only APCO-25)
3-key triple DES	•	•	key entered (only APCO-25)
AES	•	•	key entered (only APCO-25)
DES-XL	•	•	
ADP/RC4	•	•	key entered (only APCO-25)
NXDN			
Basic Encryption (scrambled)	•	•	automatic / key entered
DES 64	•	•	
AES 128	•	•	
DECT			
Encryption	•	•	
Tetrapol			
Encryption	•	•	

* requires optional product feature PMR decoder package

The performance of our software products depends on the hardware used. Technical parameters can differ under real operational conditions.
The parameters specified are limit values that cannot be guaranteed in all combinations. Specifications subject to change.

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go2signals

go2MONITOR SUPPORTED RECEIVERS*

Receiver	Max. Rx bandwidth	Spectrum overview	Scan	Windows	Linux	Remark
Aaronia SPECTRAN V6 PLUS and ECO	ECO: 49 MHz PLUS: 102 MHz			•	•	Support over Aaronia RTSA-Suite PPRO software
AirSpy	8 MHz			•		Experimental support
CommsAudit CA7851	5 MHz			•	•	VITA 49, No receiver control, only VITA-49 wideband signal interface
CommsAudit CA7852	20 MHz			•	•	VITA 49
CRFS RFeye Node 40-8	12.5 MHz	•	•	•	•	
EPIQ NDR364	125 MHz			•	•	
Grintek GRX Lan	1 MHz			•		
IZT R3xxx series	20 MHz	•	•	•	•	Up to 3 channels + spectrum
IZT R4000 (SignalSuite)	1 MHz			•	•	1 channel
IZT R5010 / R5040	120 MHz	•	•	•	•	
IZT R507x series	60 MHz	•	•	•	•	
narda® NRA-3000 RX	320 kHz			•	•	
narda® NRA-6000 RX	320 kHz			•	•	
narda® IDA 2	320 kHz			•	•	
narda® SignalShark® 3310	20 MHz			•	•	VITA 49
PLATH SIR 2110	20 MHz			•	•	External receiver control. Fully functional driver available from the receiver manufacturer
PLATH SIR 2115	4x20 MHz			•	•	External receiver control. Fully functional driver available from the receiver manufacturer
PLATH SIR 5110	12 MHz			•	•	16x768 kHz subbands External receiver control
PLATH SIR 5115	Full HF			•	•	40x768 kHz subbands External receiver control
R&S EB 500	2 MHz	•	•	•	•	

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go2MONITOR SUPPORTED RECEIVERS*

	Max. Rx bandwidth	Spectrum overview	Scan	Windows	Linux	Remark
R&S EB 510	5 MHz	•	•	•	•	
R&S EM100/PR100	500 kHz	•	•	•	•	
R&S EM200	2 / 40 MHz	•	•	•	•	40 MHz bandwidth only if using 10G Ethernet interface
R&S ESMD / ESME	15 MHz	•	•	•	•	
R&S ESME	80 MHz	•	•	•	•	80 MHz bandwidth only if using 10G Ethernet interface
RFSPACE NetSDR	1.6 MHz			•	•	
RTLSDR/Noxon USB-sticks	2.56 MHz			•		Experimental support. Continuous signal up to 2.4 MHz
SDRplay RSP1 & RSP2	6 MHz			•		Experimental support
SignalHound BB60C/D	27 MHz	•	•	•	•	
SignalHound SM200 A/B	20 MHz	•	•	•	•	
SignalHound SM200 C	165 MHz	•	•	•	•	
ThinkRF R5500-408	6.25 MHz			•	•	VITA 49
ThinkRF R5500-427	6.25 MHz			•	•	VITA 49
ThinkRF WSA5000-408	780 kHz			•	•	VITA 49
ThinkRF WSA5000-427	780 kHz			•	•	VITA 49
USRP X310	20 MHz			•	•	Support upon request only
WiNRADiO G31DDC	800 kHz			•		
WiNRADiO G33DDC	4 MHz	•		•		
WiNRADiO G35DDC	4 MHz	•		•		
WiNRADiO G39DDC	4 MHz	•		•		Up to 2 channels
Generic VITA 49 receiver support	Max. receiver bandwidth	•		•	•	Can be configured in a wide range for different receiver types
Generic SoapySDR support	Max. receiver bandwidth			•	•	Receiver SoapySDR support has to be adapted
Other generic „Winrad ExtIO" supported receivers	Max. receiver bandwidth			•		

* Performance and availability may be limited on receiver options, streaming interface, operating system and PC hardware.

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