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project title: Protocol Analyzer – User Manual

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n?									
9 Session	Open File Sa	ave To File							Settings
Serial to T	CP 🗵								
ial to TCP	CO	M4 forwarded to p	oort 52475						
		Rea	ader		[Host		
10	Command	Inata	Timo			Command	Data.	Timo	
10			[141111111111111] +0005		10	Command	Data	1 TINC	
101-071	State	IDLE	[[14.11.11.512] #0005						
		1			[01-08]	GET STATUS	REGISTER	[14:11:11:318] +0006	
[01-08]	GET STATUS	REGISTER	[14:11:11:324] +0006						
	Status Reg	000000000000000000000000000000000000000	9		FOF CAL	CET CDTO		[14:11:11:220] .0000	
[05-04]	GET GPTO		[14:11:11:334] +0004		05-04	GET GP10		[14:11:11:330] +0006	
00-041	Value	beeeeeeeeeeeeeeee	2000000000000000						
					[01-10]	GET ANTENNA	COUNT	[14:11:11:339] +0005	
[01-10]	GET ANTENNA	COUNT	[14:11:11:344] +0005						
	Antenna Count	1						· · · · · · · · · · · · · · · · · · ·	
[03 33]		NAME	[14:11:11:254] +0005		03-33	GET DEVICE	NAME	[14:11:11:349] +0005	
03-33	Status	SUCCESS	[14:11:11:354] +0005						
	Name	5000055							
					[03-35]	GET DEVICE	LOCATION	[14:11:11:360] +0006	
[03-35]	GET DEVICE	LOCATION	[14:11:11:366] +0006						
	Status	SUCCESS		_					
	Location			_	[03 03]		AT	[14:11:11:271] +0005	
					105-021	Mode	HEARTREAT DUPLEX ON	[14.11.11.5/1] +0005	
						Interval	1000 ms		
[03-02]	SET HEARTBE	AT	[14:11:11:377] +0006						
	Status	SUCCESS							
					[03-31]	GET PARAM		[14:11:11:382] +0005	
[03-31]	CET DADAM		[14-11-11-388] +0000			Audress	070002		
105 51	Status	SUCCESS	[[1111111100]].0000						
	Size	1		555					
	Data	66							
					[03-31]	GET PARAM		[14:11:11:393] +0005	
[01 14]	CET DADAM		[14,11,11,200] .0000			Address	0X0000		
03-31	Status	SUCCESS	[14:11:11:333] +9006						
	Size	1							
	Data	02							
					[03-31]	GET PARAM		[14:11:11:404] +0005	
						Address	0x0005		
[03-31]	GET PARAM	cucerer.	[14:11:11:409] +0005						
	Size	1							
	Data	01							

USER MANUAL

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1 Installing the Protocol Analyzer



To install the Protocol Analyzer execute the "Protocol Analyzer Setup".

Step through the installation and select the options you like.





On the last page after the installation you will be asked, if you want to install the driver for the RF-Embedded devices. If you are installing the Protocol Analyzer the first time, you should do so. If you already installed the Protocol Analyzer including the driver before, there is no need to install the driver.

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	Document	version:	V1.00
GmbH	Technical Specification	status: date:	2013-05-06
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2 Working with the Protocol Analyzer

The Protocol Analyzer is a tool that analyzes the messages that are sent to the reader by the host and vice versa. To analyze the messages the Protocol Analyzer is built up as a "man-in-the-middle" tool.



To start a new analyzing session, just click the button "New Session".



	Input
Serial	
	COM1
О ТСР	
	IP: 192, 168, 0, 100 Port: 52460
	Forward
O Serial	
	COM1
• TCP	
	Port: 52475
	V OK S Cancel

This brings up a dialog,

where you can choose the desired interfaces. The **Input** interface is the interface for the reader. The **Forward** interface is the interface for the host.

CAUTION: In the TCP forward mode the reader interface is not opened immediately, but when the host tries to connect to the reader. If there is any issue with opening the reader interface, the Protocol Analyzer will first show a message, when it tries to open the interface.

If the creation of a new session was successful, a new tab is shown. On top of the page, the interface settings are shown and coded by color the status of the connection:

- gray = idle
- green = connected



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Session Serial to Ti	Open File Saw	e To File							Settings	0
ial to TCP	сом	4 forwarded to	port 52475							
		Re	ader				Host			
ID	Connend	pata	Time	-	ID	connand	Data	Time		1
					[03-02]	SET HEARTBEAT		[15:16:22:276] +0002		
						Mode Tetrana 1	HEARTBEAT_OFF			-
[03-02]	SET HEADTREAT	r	[15:16:22:226] +0000			Turren ABT	436 83			
102.021	Status	SUCCESS	(accession of the second							
	-				[01-01]	GET SERIAL NU	MBER	[15:16:22:276] +0000		
[01-01]	GET SERIAL N	MBER	[15:16:22:276] +0000							
	Serial Nr.	00-00-00-0d		_						-11
Int of 2			147-47-53-5331 -0077		[01-02]	GET READER TY	PE	[15:16:22:276] +0000		
01-02	GET READER T		[15:16:22:277] +0001							
	neover type	02-00-04-00		-11	101-033	CET MADDUADE	DEVICTON	[15:16:22:272] +0000		
[01-03]	GET HARDWARE	REVISION	[15:16:22:277] +0000		101-051	OLT PROPAGE		[1
	Hardware Rev.	Rev. 1		111						111
					[01-04]	GET SOFTWARE	REVISION	[15:16:22:277] +0000		13
[01-04]	GET SOFTMARE	REVISION	[15:16:22:277] +0000							
	Software Rev.	Test - Appl - v	00.03 Kernel - v02.01							-11
				- 11	[01-05]	GET BOOTLOADE	R REVISION	[15:16:22:277] +0000		-
[01-05]	GET BOOTLOAD	R REVISION	[15:16:22:278] +0001							
	Boortogger Kev	101.07		-11	[01-06]	CET CURRENT S	VETEM	[15:16:22:2783 +0000		11
[01-06]	GET CURRENT S	SYSTEM	[15:16:22:278] +0000		101-001	Ser Content J				18
	system	Firmware								
					[01-07]	GET CURRENT S	TATE	[15:16:22:278] +0000		
[01-07]	GET CURRENT	STATE	[15:16:22:278] +0000							
	State	IDLE								
fee	Leen example of		145-45-43-4741 - 4844	- 11	[01-08]	GET STATUS RE	GISTER	[15:16:22:278] +0000		-
101-08]	GET STATUS RI	ULSTER	[15:10:22!278] +0000							
	aracos neg		~	-11	[05-05]	GET GRID		[15:16:22:278] +0000		11
[05-04]	GET GPIO		[15:16:22:278] +0000		100-041			(contraction of the second		18
	value		000000000000000000000000000000000000000							
					[01-10]	GET ANTENNA C	DUNT	[15:16:22:279] +0001		
[01-10]	GET ANTENNA	COUNT	[15:16:22:279] +0000							10
	Antenna Count	1		- 11						10
([_	[03-33]	GET DEVICE NA	HE .	[15:16:22:279] +0000		- 1
103-331	GET DEVICE N	ANC COLOR	[15:16:22:279] +0000							
	Name	ancest		-11						
				-11	[03-35]	GET DEVICE 10	CATTON	[15:16:22:279] +0000		
[03-35]	GET DEVICE LO	CATION	[15:16:22:279] +0000	-	100-001	att strict to				
	Status	SUCCESS								
										-

The message table in the settings dialog offers the possibility to select or filter specific messages. When the messages are activated, they are shown in the stream.

The Add Raw Message checkbox offers the possibility to also show the raw messages that are parsed by the Protocol Analyzer.

CAUTION: All changes in this dialog only affect the messages that will be parsed in the future. The already parsed and shown messages stay the same.

When the first messages between the reader and the host are exchanged, the Protocol Analyzer shows these messages in the split screen.

The messages are color coded by the first command byte. If there is any problem parsing the data from either the reader or the host, the corrupt message is also shown in the table.

Each session got its own settings, which can be changed by clicking the button Settings. This brings up the following dialog.

on	10	Message	
×	[01-01]	GET_SERIAL_NUMBER	
×	[01-02]	GET_READER_TYPE	
×	[01-03]	GET_HARDWARE_REVISION	
×	[01-04]	GET_SOFTWARE_REVISION	_
X	[01-05]	GET_BOOTLOADER_REVISION	_
×	[01-06]	GET_CURRENT_SYSTEM	_
×	[01-07]	GET_CURRENT_STATE	-
×	[01-08]	GET_STATUS_REGISTER	-
×	[01-10]	GET_ANTENNA_COUNT	-
	[02-01]	GET_ATTENUATION	
<u>.</u>	[02-02]		-
8	[02-03]		-
-	[02-04]		-
-	[02-01]		
2	[02-02]	SET_FREQUENCI	T
Al	ll dd Raw Me	issages	ancel



With the buttons "Save to File" and "Open File" each session can be stored into a file and again be opened. This makes it easy to debug remote applications.

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