

Wireless M-Bus Analyzer

Smart Meter Communication

Troubleshooting made easy

OVERVIEW

The Wireless M-Bus Analyzer supports the monitoring and analyzing of Wireless M-Bus traffic according to EN 13757-4. This tool provides an easy to use graphical user interface for rapid troubleshooting and maintenance of your Wireless M-Bus network. Long time packet capturing and packet visualization for many Wireless M-Bus configurations can be managed with only a few mouse clicks in combination with the PA-iM871A, a Wireless M-Bus USB adapter. The analyzer supports single radio and dual radio modes for monitoring of uplink and downlink channels with different physical settings in parallel. Decryption support enables to inspect also AES-128 bit encrypted packets. Flexible packet filtering and data visualization allows an easy and efficient way for troubleshooting and validation of complex wireless network configurations. With respect to the ETSI regulations a traffic monitor for duty cycle evaluation completes the list of supported features.



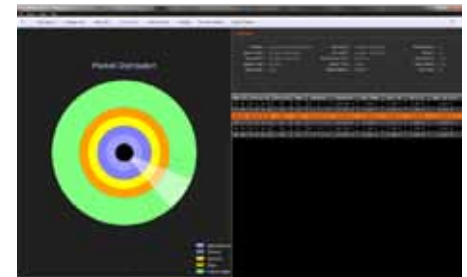
LINK MODES					
LINK MODE	FREQUENCY	CODING	CHIPRATE	BITRATE	FRAME FORMAT
S-Mode	868.30 MHz	Manchester	32768 cps	16384 bps	A
T-Mode (Meter to Other) (Other to Meter)	868.95 MHz	3-Out-Of-6	10000 cps	66666 bps	A
	868.30 MHz	Manchester	32768 cps	16394 bps	A
R-Mode (Meter to Other, 10 Channels) (Other to Meter)	868.03 MHz	Manchester	4800 cps	2400 bps	A
	...				
	868.57 MHz 868.33 MHz	Manchester	4800 cps	2400 bps	A
C-Mode (Meter to Other) (Other to Meter)	868.95 MHz	NRZ	100000 cps	100000 bps	A, B
	869.525 MHz	NRZ	50000 cps	50000 bps	A, B
C / T-Mode (Meter to Other)	868.95 MHz	NRZ	100000 cps	100000 bps	A, B
		3-Out-Of-6	100000 cps	66666 bps	A

PACKET DECRYPTION			
MODE	ENCRYPTION ALGORITHM	AUTHENTICATION	SUPPORTED
0	None	None	Yes
2	DES CBC	None	No
3	DES CBC	None	No
5	AES-128 CBC	None	Yes
7	AES-128 CBC, dynamic key	CMAC	Yes
8	AES-128 CTR	CMAC	No
9	AES-128 GCM	GCM/GMAC	Yes
10	AES-128 CCM	CCM	No
15	Customer specific modes can be added on demand		

DETAILED DECODING OF MESSAGE LAYERS & FLEXIBLE PACKET FILTERING					
LAYER	NAME	SUPPORTED	RELATED PARTS OF STANDARD	FILTER OPTIONS	OSI MODEL LAYER
PHY	Physical Layer	Yes	EN13757-2/-4/-5/-6		Physical
DLL	Data Link Layer	Yes	EN13757-2/-4/-5	L, C, M, A, Version, Type	Data Link
ELL	Extended Link Layer	Yes	EN13757-4	CI	
NWL	Network Layer	No	EN13757-5		Network
AFL	Authentication and Fragmentation Sublayer	Yes (single fragment)	EN13757-3	CI	Presentation
TPL	Transport Layer	Yes	EN13757-3/-4	CI, A, M, Version, Type	Session Transport
APL	Application Layer	Yes	EN13757-1/-3/-5		Application

Traffic Monitor View

The Traffic Monitor View gives an overview about the overall amount of captured radio packets and corresponding traffic in terms of air time and duty cycle per wireless M-Bus node. A table outlines the captured packets sorted by Manufacturer ID and Device ID. The distribution of captured packets is visualized as a pi-chart.



IMST GmbH

Carl-Friedrich-Gauss-Str. 2-4
47475 Kamp-Lintfort
Germany

T +49-2842-981-308
F +49-2842-981-199
E sales@imst.com
I www.wireless-solutions.com
shop.imst.de

