

## RF & MICROWAVE TECHNOLOGY

AWT-Global provides advanced telecommunication technology products and analyzers for a variety of RF and Microwave applications.

## EXPANDABLE PIM ANALYZERS

Production testing requires fast and highly reliable PIM analyzers. As the spectrum of manufactured products widens, PIM analysis may have to be performed on additional frequencies. Our Expandable PIM Analyzer is can be equipped with one to four different RF Units.

## PIM ANALYZERS FOR PRODUCTION

Production analyzers have to perform reliably 24 /7.

Besides Expandable PIM Analyzers for up to 4 frequency bands, AWT - Global offers also Single and Dual band analyzers.

# Expandable PIM Analyzer



- Expandable PIM Analyzer for Manufacturing and Laboratory.
- One Master Control Unit can control up to 4 different RF Units.
- 3 Measurement Modes: PIM Analyzer, PIM over Time, PIM over Frequency (Frequency Sweep).
- RF Units measure forward & reverse PIM (2-port).
- Measures Intermodulation products IM3, IM5 IM7, IM9, IM11 and IM13.

Passive Intermodulation (PIM) analyzers measure the amount of unwanted intermodulation signals generated by passive components. Increasing demand for wireless data bandwidth requires networks that operate optimally. Leading global wireless carriers use only low PIM components to guarantee best possible quality of their networks. Since PIM is detrimental to both, network performance and capacity, low PIM components are vital to achieve this goal.

PIM is caused by RF components that show non-linear frequency behavior. Reducing PIM to a minimum must be the ultimate goal for manufacturers of RF components.

### RF Components that may cause PIM:

- Cables
- Connectors
- Antennas
- Attenuators, Loads
- Surge Protectors
- Filter, Diplexer, Duplexer
- Combiner, Splitter, Coupler

AWT's Expandable PIM Analyzers grow with widening manufacturing requirements. The Main Control Unit can handle up to four RF Units with different frequency bands. To minimize expenses, customers can choose to start with only one basic frequency band and install additional RF Units later when needed. There is no need to send units back to the factory for the upgrade; additional RF Units can be installed in the field.

Whether growing with demand, or offering greatest flexibility with four frequency bands, AWT's Expandable PIM Analyzers are a cost efficient solution for manufacturing and laboratory.



# Models / Types

## PRODUCT QUALITY

AWT is committed to providing our customers with products meeting the highest quality standards. All AWT products undergo thorough quality checks and are ISO 9001 and ISO 14001 certified.

## PRODUCT DELIVERY

Delivery time for Expandable PIM Analyzers is typically 4 – 6 weeks ARO.

## MORE INFORMATION

For more information about any of our products or services please visit our Web site: [www.awt-global.com](http://www.awt-global.com) or contact one of our sales offices.

## SALES OFFICES

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Model Number / Type	Tx Frequency (MHz)	Rx Frequency (MHz)
Master Control Unit (required, controls up to 4 RF Units)	All	All
<b>RF Units</b>		
TETRA 400	390 ~ 400	380 ~ 384
E-TETRA400	420 ~ 430	410 ~ 412
LTE700-U	730 ~ 759	776 ~ 788
LTE700-L	728 ~ 759	698 ~ 716
AMPS/CDMA	869 ~ 896	824 ~ 851
GSM900	935 ~ 960	890 ~ 915
LTE-JP1500	1488 ~ 1520	1456 ~ 1480
DCS/GSM1800	1805 ~ 1880	1710 ~ 1785
PCS1900	1930 ~ 1990	1850 ~ 1910
AWS	2010 ~ 2155	1710 ~ 1755
TD-SCDMA(2000)	2010 ~ 2025	1900 ~ 1920
UMTS/W-CDMA	2110 ~ 2170	1920 ~ 1980
W-CDMA-JP	2150 ~ 2170	2110 ~ 2140
IMT-E(2600)	2620 ~ 2690	2500 ~ 2570
WiBro-KR	2110 ~ 2170 2300 ~ 2390	1910 ~ 1990
<b>Accessories</b>		
Opt. 2	Accessory Kit: (2) low PIM cables 3m / 10ft, (1) low PIM cable 1m / 3ft, low PIM load 100W, adapters, torque wrench with hard carry case	
Opt. 3	Low PIM Load 100W, < 165 dBc @ 2* 43W, DIN 7/16 (f)	
Opt. 4	PIM Source: Generator with preset PIM value. Quick indication and system test.	

# Specifications

Transmitter	
Carrier Power	+20 to +44 dBm (46 dBm optional)
Power Accuracy	+/- 0.35 dB
Frequency Accuracy	200 ppm
Reverse Pwr. Protection	+43 dBm for 5 sec

Dimensions / Weight / Environment / Electrical	
<b>Dimensions</b>	
Control Unit	483 x 305 x 500 (mm)
RF Units (exc. E-GSM)	483 x 667 x 143 (mm)
RF Units E-GSM	483 x 756 x 143 (mm)
<b>Weight</b>	
Control Unit	11.7 kg
RF Units	25 – 28 kg
Temperature	-10 °C to +40 °C
Humidity	80%, RH (non condensing)
Protection	IP20
AC Power	100 to 240V 50/60 Hz
<b>Power Consumption</b>	
Control Unit	88 Watts (VA)
RF Units	700 Watts (VA) max

Receiver	
Reverse IM @ 2x43dBm	-129 dBm / -172 dBc typ.
Forward IM @ 2x43dBm	-125 dBm / -168 dBc typ.
Noise Floor	-140 dBm (300 Hz BW)
Dynamic Range (typical)	> 96 dB (ref: -70 dBm)
Reverse Power Protection	+43 dBm for 5 sec
Operational Input Power	-40 dBm RMS
Max Input Power	-10 dBm
Measurement Accuracy	+/- 0.2 dB @ 2 x 43 dBm

