

## Air Interface Adapter AIAD-2/2+

MTS-No.: 25091

### Application

With the MTS AIAD you can emulate air interfaces for all imaginable scenarios. To avoid the influence from the live-net, the signals can be connected with cables directly from the different signal sources, as for example GSM or UMTS base stations or signal generators etc. over the MTS AIAD to mobile devices.

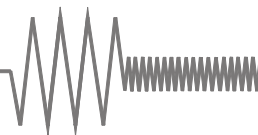
### Description

The Air Interface Adapter series AIAD is our most flexible solution for an air interface emulation. With the AIAD it is possible to emulate the in- and outputs according to the demands of the customer. The design allows program controlled attenuation of each port to each port at the same time. The function is carried out by power dividers on the input lines which lead through programmable attenuators to output combiners. Additionally connections for signal monitoring are attached to the inputs and outputs.



### Characteristics

- ▶ Ring system with 2 inputs coupled to 2 outputs through 95 dB attenuators and monitor connections for every port
- ▶ Frequency range from 30 MHz to 3000 MHz
- ▶ Attenuation range from 0 dB to 95 dB in 1 dB steps at each attenuator
- ▶ Switching time up to 10 ms
- ▶ Integrated power supply 100 V - 240 V AC
- ▶ Remote control by RS-232 and LAN (other interfaces on demand)
- ▶ 19" rack mount case with 3 HU
- ▶ Windows control programs can be offered
- ▶ High quality materials and components for extended durability
- ▶ Air Interface Adapters can be designed according to customers individual requirements



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### Configuration:

Ring system with 2 inputs coupled to 2 outputs through 95 dB attenuators, monitor port for each input and output

### Technical data:

#### 1 RF-specifications:

1.1 Impedance	50 $\Omega$		
1.2 Input power @ in- and outputs @ monitoring	+30 dBm max. +20 dBm max.		
1.3 Frequency range	30 MHz - 3000 MHz		
1.4 RF-connections	N female		
1.5 Attenuation	0 - 95 dB in 1 dB steps		
1.6 VSWR @ in- and outputs @ monitoring		<b>min.</b> 1.3 1.2	<b>typ.</b> 1.5 1.4
1.7 Insertion loss (IL) @ in- and outputs @ monitoring			<b>max.</b> 36 dB 16 dB
1.8 Relative phase @ 0 - 95 dB		65°	
1.9 Amplitude balance		$\pm 0.5$ dB	$\pm 2.0$ dB
1.10 Phase balance		$\pm 1.0^\circ$	$\pm 4.0^\circ$
1.11 Switching time			10 ms
1.12 Attenuation accuracy @ 1 - 30 dB @ 31 - 60 dB @ 61 - 95 dB		$\pm 0.1$ dB $\pm 0.4$ dB $\pm 0.8$ dB	$\pm 0.8$ dB $\pm 1.5$ dB $\pm 2.0$ dB

#### 2 Connections:

2.1 Front side	RF-connections Power switch with integrated control lamp
2.2 Rear side	Control card Appliance plug with the integrated fuses F1 and F2 Ground connector Control interfaces

#### 3 General specifications:

3.1 Power supply	100 V - 240 V 50 Hz / 60 Hz
3.2 Internal voltage	+5 V DC, +28 V DC
3.3 Control displays	Control lamp in the power switch
3.4 Control interfaces	RS-232 LAN
3.5 Power consumption primarily	0.15 A max. @ 230 V
3.6 Voltage supply	Standard rubber connector
3.7 Operating temperature	0 °C - +50 °C
3.8 Reference temperature for specifications	+25 °C
3.9 Dimensions	19"-unit x 3 HU x 370 mm (dimensions without handles and connections)
3.10 Colour	Front side colourless anodized Rear side colourless anodized
3.11 Weight	8.2 kg

#### 4 Delivered parts:

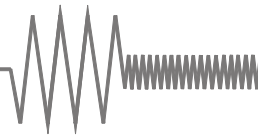
AIAD-2/2+  
Power cable  
CD with operating manual

#### 5 Comments:

Warranty	12 months
RoHS-compliant	Yes

#### 6 Recommended accessories:

Shielding box of the series  
MSB-02xx or MSB-01xx  
RF-cables  
Control software



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## Typical measurements:

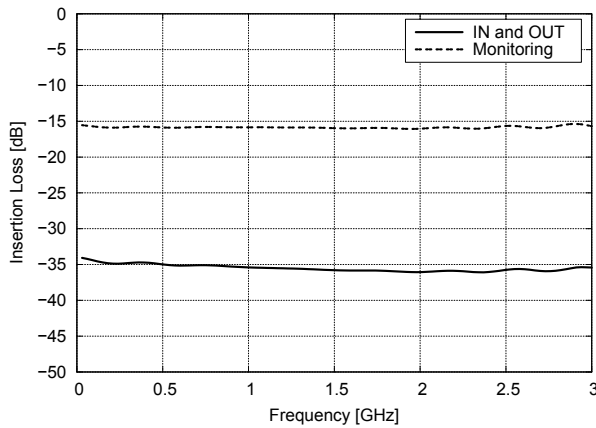


Fig. 1: Input port to output / mon. port insertion loss

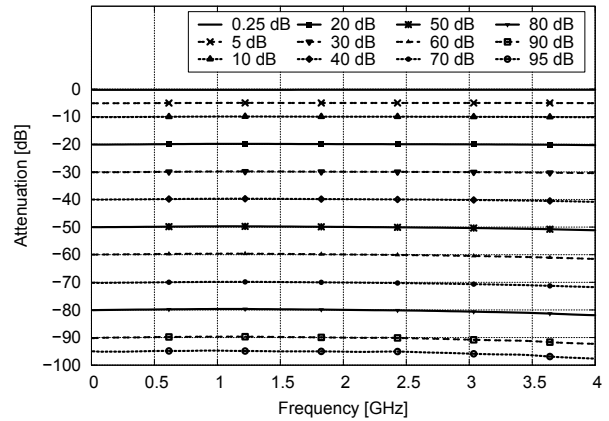


Fig. 2: Attenuation relative to insertion loss

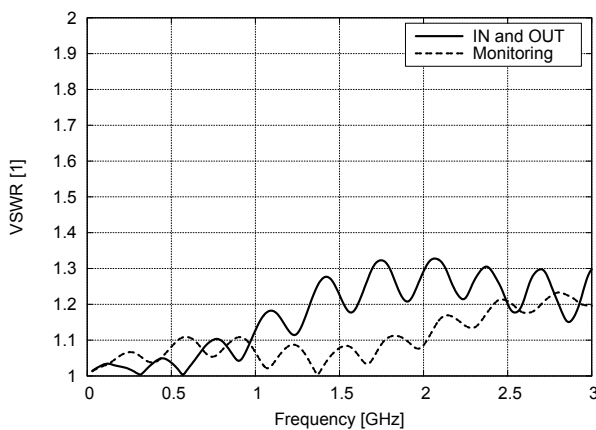


Fig. 3: VSWR for in-, output and monitoring ports

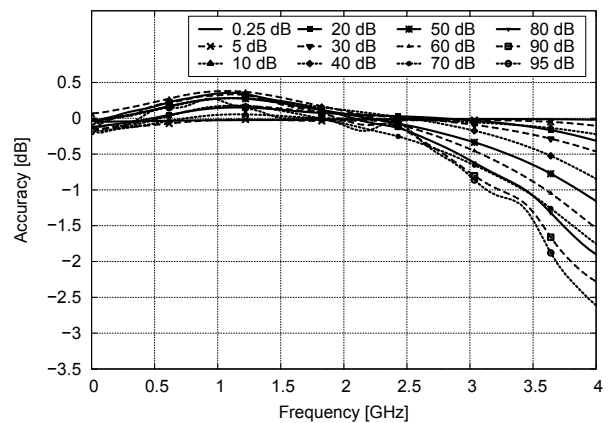


Fig. 4: Attenuation accuracy

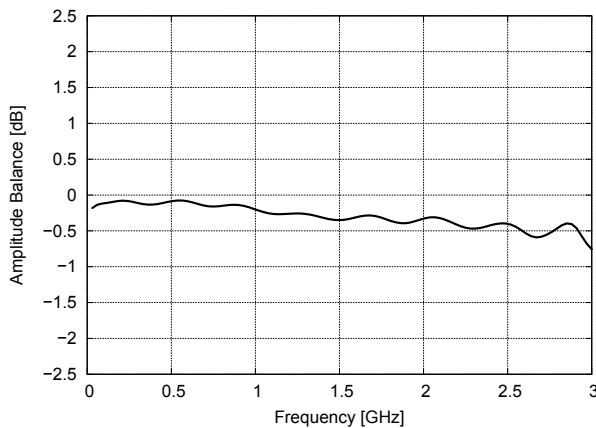


Fig. 5: Amplitude balance between ports

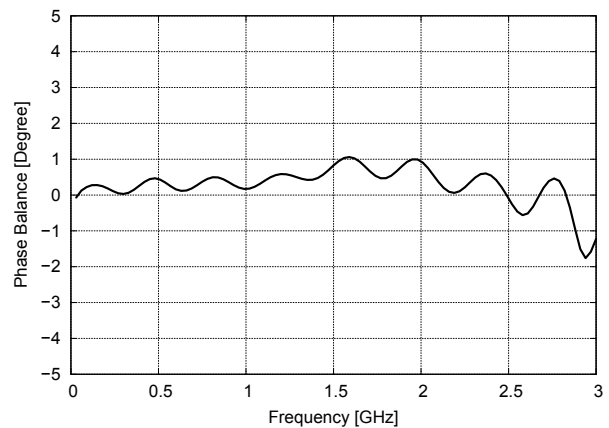
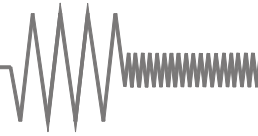


Fig. 6: Phase balance between ports



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### Views:

