

## Air Interface Adapter AIAD-8/2-4G

MTS-No.: 30076

### 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 LTE+ base stations or signal generators etc. over the MTS AIAD to mobile devices.

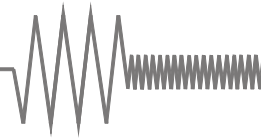
### Description

The Air Interface Adapter series AIAD is our most flexible solution for air interface emulation. With the AIAD it is possible to emulate the in- and outputs according to the demands of the customer. The design of the shown unit allows program-controlled attenuation of 8 input to 2 output signals at the same time. The function is carried out by dividers and attenuators.



### Characteristics

- ▶ 8 inputs leading through 95 dB attenuators to 2 outputs
- ▶ Frequency range from 400 MHz to 4000 MHz
- ▶ Attenuation range from 0 dB to 95 dB in 1 dB steps at each attenuator
- ▶ On request attenuation in 0.5 dB steps (up to 95 dB) or in 0.25 dB steps (up to 32 dB) or up to 122 dB (by other hardware)
- ▶ Switching time up to 10 ms
- ▶ Integrated power supply 100 V - 240 V AC
- ▶ Remote control by USB and LAN (other interfaces, colour display with touchpanel or web control on request)
- ▶ 19" rack mount case with 3 HU
- ▶ Windows control programs can be offered
- ▶ High quality materials and components for extended durability
- ▶ On request increment and decrement function of separate components with defined values
- ▶ On request Group+Block of separate components (with name / name and keyword available)
- ▶ Air Interface Adapters can be designed according to customers individual requirements



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### Configuration:

8 inputs leading through 95 dB attenuators to 2 outputs

### Technical data:

#### 1 RF-specifications:

1.1 Impedance	50 Ω		
1.2 Input power	+33 dBm max. @ the inputs +39 dBm max. @ the outputs		
1.3 Frequency range	400 MHz - 4000 MHz		
1.4 RF-connections	N female		
1.5 Attenuation	0 dB - 95 dB in 1 dB steps 0.5 / 0.25 dB on request		
	<b>min.</b>	<b>typ.</b>	<b>max.</b>
1.6 VSWR in / out @ 400 - 700 MHz @ 700 - 4000 MHz		1.6 1.3	2.3 1.8
1.7 Insertion loss (IL) @ 400 MHz @ 3600 MHz @ 4000 MHz		16 dB 21 dB 22 dB	17 dB 23 dB 24 dB
1.8 IL derating / 20 MHz		0.03 dB	
1.9 Isolation (see plot) @ 400 - 700 MHz @ 700 - 4000 MHz	(without attenuation)	19 dB 27 dB 27 dB	27 dB 35 dB
1.10 Attenuation accuracy @ 400 - 3000 MHz @ 1 - 30 dB @ 31 - 60 dB @ 61 - 95 dB  @ 3000 - 4000 MHz @ 1 - 30 dB @ 31 - 45 dB @ 46 - 60 dB @ 61 - 85 dB @ 86 - 95 dB	(negative means more attenuation)	±0.1 ±0.4 ±0.8  0/-0.3 0/-1.1 0/-1.1 0/-1.9 0/-1.9	±0.8 dB +1.5/-0.8 dB +2.5/-1.5 dB  +0.8 dB +0.8/-1.5 dB +0.8/-2.0 dB +1.5/-2.5 dB +1.5/-3.5 dB
1.11 Switching time		10 ms	

#### 2 Connections:

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

#### 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	USB LAN
3.5 Power consumption primarily	150 mA 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 310 mm (dimensions without handles and connections)
3.10 Colour	Front side colourless anodized Rear side colourless anodized
3.11 Weight	9.4 kg

#### 4 Delivered parts:

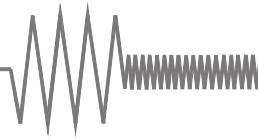
AIAD-8/2-4G  
Power cable  
CD with operating manual

#### 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:

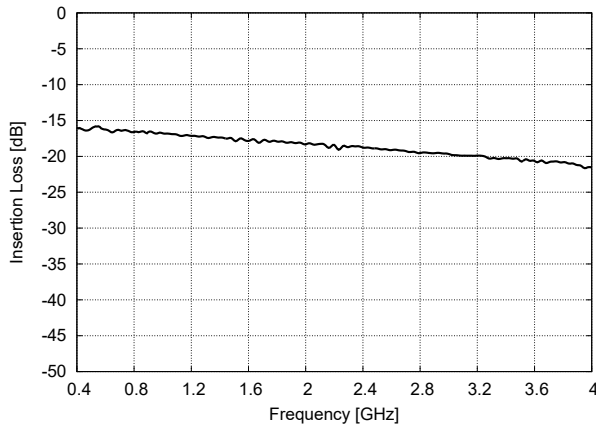


Fig. 1: Input port to output port insertion loss

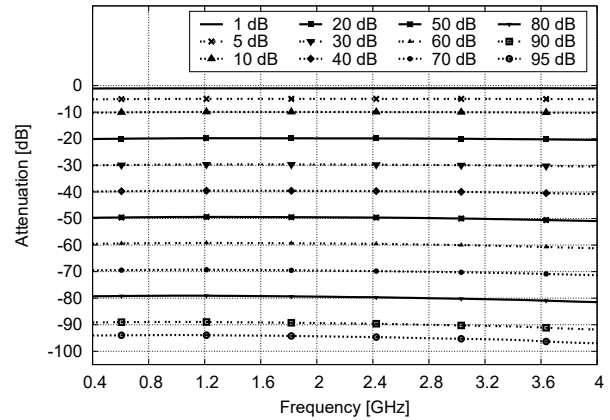


Fig. 2: Attenuation relative to insertion loss

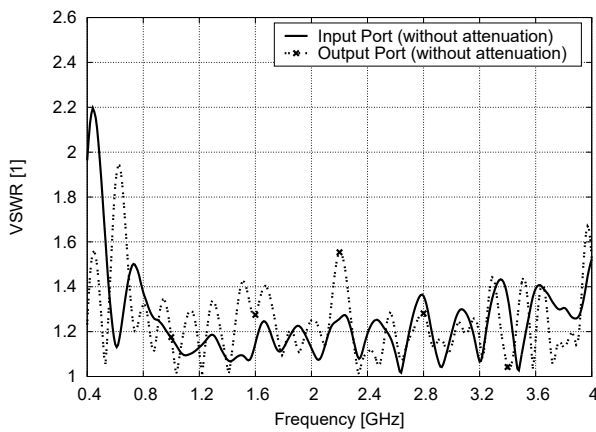


Fig. 3: VSWR for input and output ports

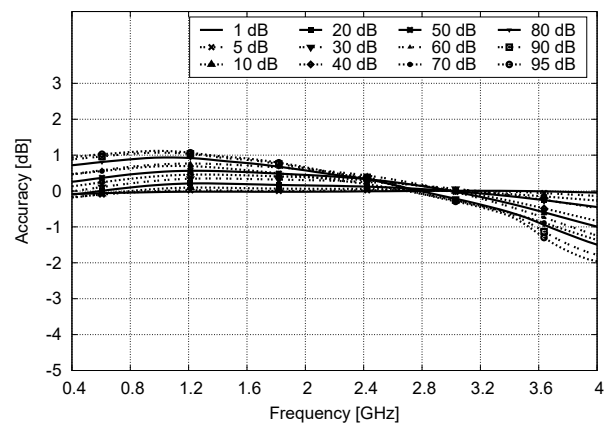


Fig. 4: Attenuation accuracy

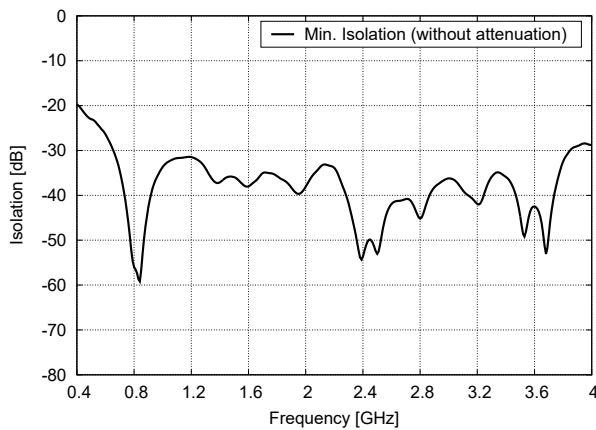


Fig. 5: Isolation between in- and output ports

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Views:

