

Air Interface Adapter AIAD-8x2/1-6G

MTS-No.: 28892

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.

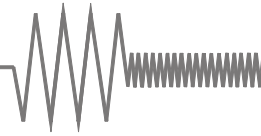
Description

The Air Interface Adapter series AIAD is our most flexible solution for 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 is divided into 8 groups. Every group allows program controlled attenuation of 2 input to 1 output signals at the same time. The function is carried out by dividers and attenuators.



Characteristics

- ▶ 8 groups each with 2 inputs leading through 95 dB attenuators to 1 output (16 inputs, 8 outputs)
- ▶ Frequency range from 500 MHz to 6000 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)
- ▶ Switching time up to 10 ms
- ▶ Integrated power supply 100 V - 240 V AC
- ▶ 1x Manual control (colour display with touchpanel)
- ▶ Remote control by RS-232 and LAN (other interfaces 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
- ▶ Increment and decrement function of separate components with defined values
- ▶ 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:

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Technical data:

1 RF-specifications:

1.1 Impedance	50 Ω		
1.2 Input power	+30 dBm max. @ the inputs		
1.3 Frequency range	500 MHz - 6000 MHz		
1.4 RF-connections	N female @ inputs TNC female @ outputs		
1.5 Attenuation @ in-out	0 dB - 95 dB in 1 dB steps 0.5 / 0.25 dB on request		
1.6 VSWR in		min.	typ.
@ 500 - 6000 MHz			1.4
@ 790 - 5850 MHz			1.2
VSWR out			
@ 500 - 6000 MHz			1.6
@ 790 - 5850 MHz			1.4
1.7 Insertion loss (IL)			
@ 500 MHz		6.5 dB	7.5 dB
@ 6000 MHz		12.0 dB	14.5 dB
1.8 IL derating / 20 MHz		0.03 dB	
1.9 Isolation (see plot)	(without attenuation)		
@ 500 - 790 MHz		20 dB	25 dB
@ 790 - 6000 MHz		28 dB	35 dB
1.10 Attenuation accuracy (negative means more attenuation)			
@ 50 - 3000 MHz			
@ 0 - 30 dB		±0.1	±0.8 dB
@ 31 - 60 dB		±0.4	+1.5/-0.8 dB
@ 61 - 95 dB		±0.8	+2.5/-1.5 dB
@ 3000 - 6000 MHz			
@ 0 - 30 dB		0/-0.7	+0.8/-1.5 dB
@ 31 - 45 dB		0/-2.6	+0.8/-3.0 dB
@ 46 - 60 dB		0/-3.0	+1.5/-4.5 dB
@ 61 - 85 dB		0/-4.0	+1.5/-6.0 dB
@ 86 - 95 dB		0/-5.2	+1.5/-9.0 dB
1.11 Switching time			10 ms

2 Connections:

2.1 Front side	RF-connections of the outputs Power switch with integrated control lamp Colour display with touchpanel
2.2 Rear side	RF-connections of the inputs 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	Colour display with touchpanel Control lamp in the power switch
3.4 Control interfaces	RS-232 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 370 mm (dimensions without handles and connections)
3.10 Colour	Front side colourless anodized Rear side colourless anodized
3.11 Weight	9.8 kg

4 Delivered parts:

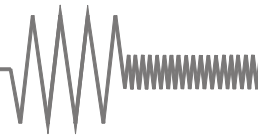
AIAD-8x2/1-6G
Power cable
CD with operating manual

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:

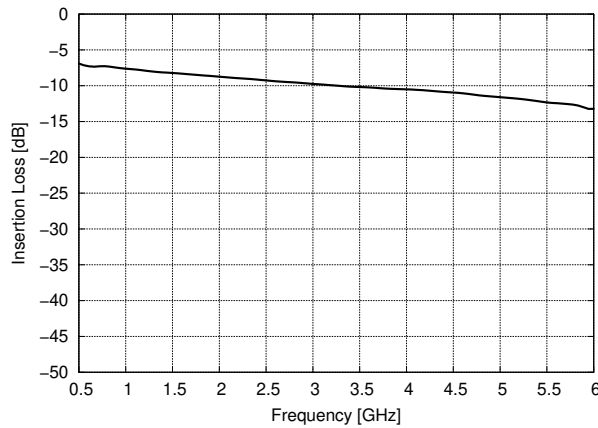


Fig. 1: Input port to output port insertion loss

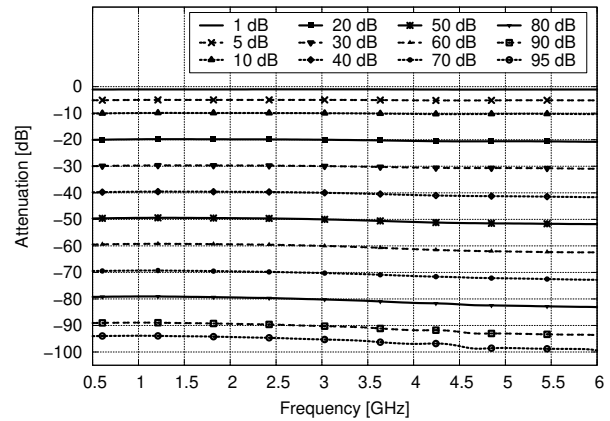


Fig. 2: Attenuation relative to insertion loss

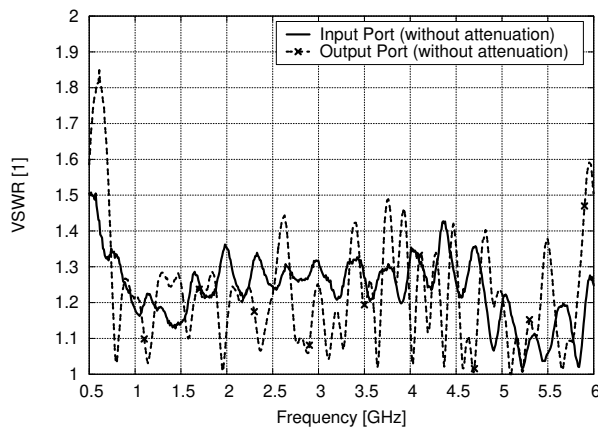


Fig. 3: VSWR for input and output ports

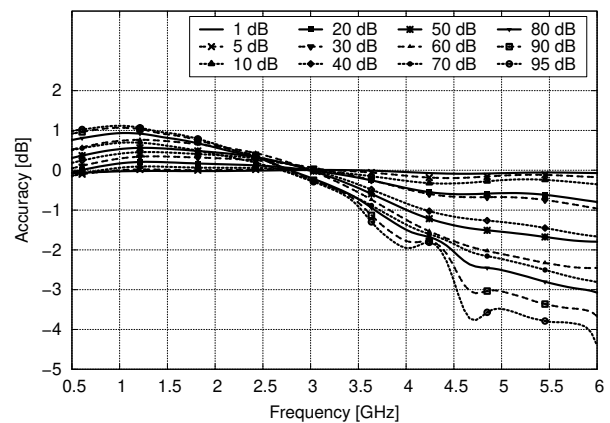


Fig. 4: Attenuation accuracy

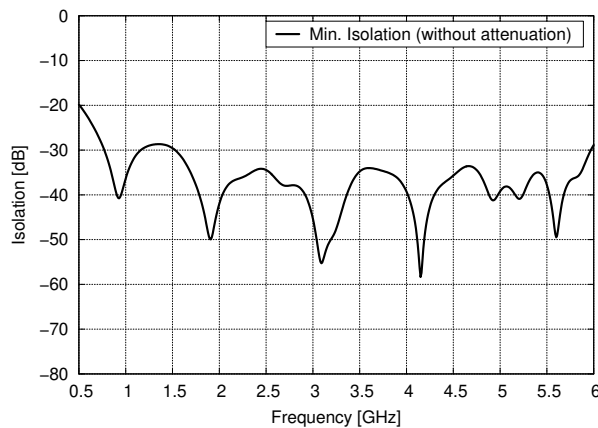
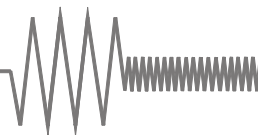


Fig. 5: Isolation between output ports



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Views:

