

Air Interface Adapter AIAD-8+-6G-190dB

MTS-No.: 27436

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.

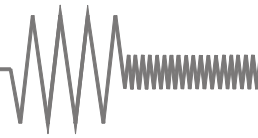
Description

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 allows program controlled attenuation of each port at the same time. The function is carried out by dividers, attenuators and combiners. Additionally two sources are directly combined at the ports.



Characteristics

- ▶ Ring system with 8 coupled in- outputs through 190 dB attenuators and 2 source connections per port (2x 8 ports)
- ▶ Frequency range from 500 MHz to 6000 MHz
- ▶ Attenuation range from 0 dB to 190 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 64 dB)
- ▶ 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)
- ▶ On Request Device Web Control available
- ▶ 19" rack mount case with 6 HU
- ▶ Windows control programs can be offered
- ▶ High quality materials and components for extended durability
- ▶ On Request user blocking 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:

Ring system with 8 coupled in- outputs through 190 dB attenuators and 2 source connections per port (2x 8 ports)

Technical data:

1 RF-specifications:

1.1 Impedance	50 Ω		
1.2 Input power	+30 dBm max. per port		
1.3 Frequency range	500 MHz - 6000 MHz		
1.4 RF-connections	N female		
1.5 Attenuation @ in-out	0 dB - 190 dB in 1 dB steps 0.5 / 0.25 dB on request		
	min.	typ.	max.
1.6 VSWR @ 790 - 5850 MHz		1.2	1.5
@ 500 - 6000 MHz		1.5	2.0
1.7 Insertion loss (IL) @ 500 MHz		33 dB	35 dB
@ 6000 MHz		55 dB	60 dB
1.8 IL derating / 20 MHz in-out		0.05 dB	
1.9 Isolation (see plot) UEx @ 790 - 5850 MHz	16 dB	22 dB	
@ 500 - 6000 MHz	11 dB	17 dB	
UEx to UEy (by other path @ >50 dB own att.) @ 790 - 5850 MHz	50 dB	75 dB	
@ 500 - 6000 MHz	40 dB	55 dB	
1.10 Switching time			10 ms
1.11 Attenuation accuracy @ 500 - 3000 MHz	(negative means more attenuation >95 dB calculate additiv tolerance)		
@ 1 - 30 dB		±0.1 dB	±0.8 dB
@ 31 - 60 dB		±0.4 dB	+1.5/-0.8 dB
@ 61 - 85 dB		±0.8 dB	+2.0/-1.5 dB
@ 86 - 95 dB		±0.8 dB	+2.5/-1.5 dB
@ 3000 - 6000 MHz			
@ 1 - 30 dB		-0.7 dB	+0.8/-1.5 dB
@ 31 - 60 dB		-2.6 dB	+0.8/-3.0 dB
@ 61 - 85 dB		-5.2 dB	+1.5/-6.0 dB
@ 86 - 95 dB		-5.2 dB	+1.5/-9.0 dB

2 Connections:

2.1 Front side	Power supply switch with integrated control lamp
2.2 Rear side	RF-connections Control card and 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	RS-232 LAN
3.5 Power consumption primarily	0.1 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 6 HU x 430 mm (dimensions without handles and connections)
3.10 Colour	Front side colourless anodized Rear side colourless anodized
3.11 Weight	20.6 kg

4 Delivered parts:

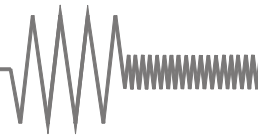
AIAD-8+-6G-190dB
Power cable
CD with operating manual

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:

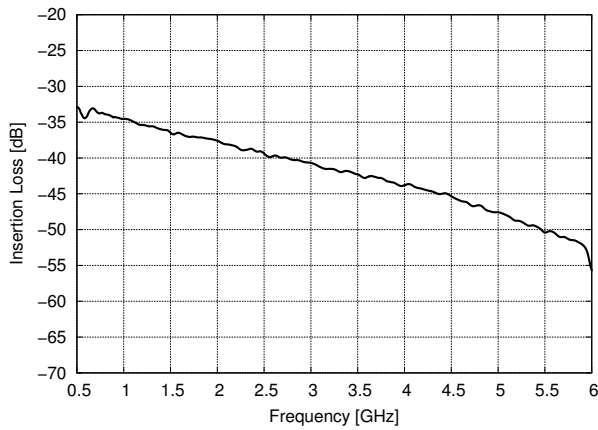


Fig. 1: UEx to UEy insertion loss

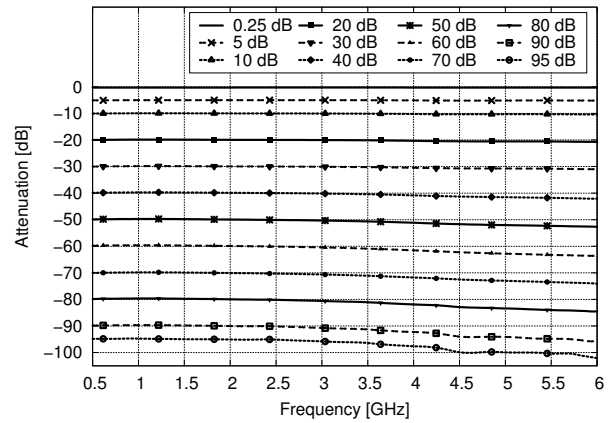


Fig. 2: Attenuation relative to insertion loss

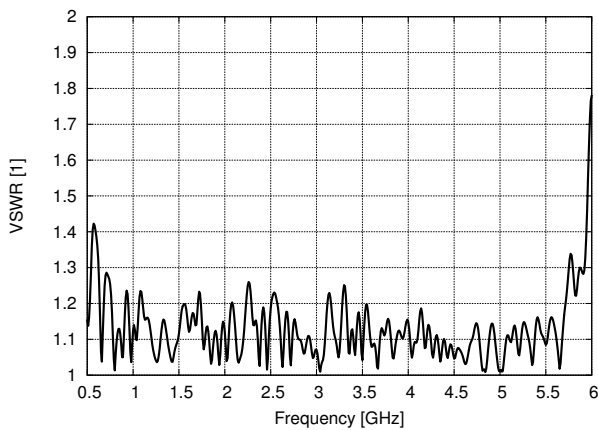


Fig. 3: VSWR at all ports

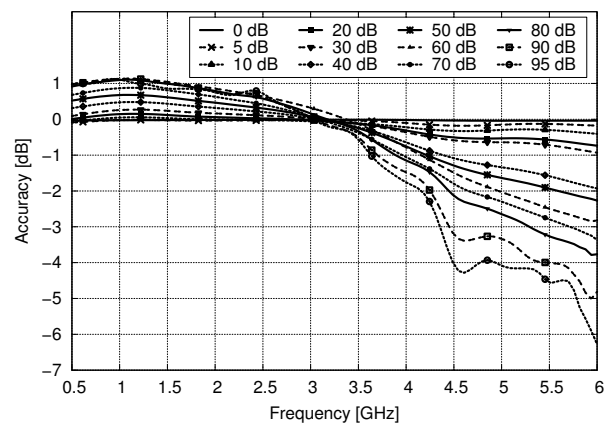


Fig. 4: Attenuation accuracy

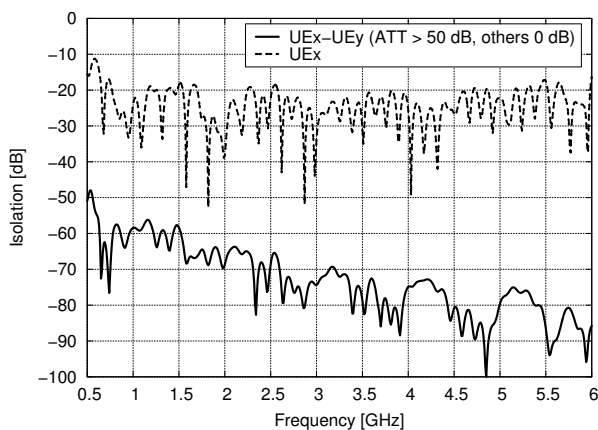
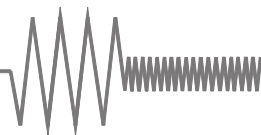


Fig. 5: Isolation between UE ports



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Views:

