

Air Interface Adapter AIAD-8+-S2

MTS-No.: 30775

Page 1 from 4

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 IN/OUT signals at the same time. The function is carried out by dividers and attenuators and combiners. Additionally connections for test signal are attached to each IN/OUT port.



Characteristics

- ▶ Ring system with 8 coupled IN/OUT ports through 95 dB attenuators
- ▶ Test connections for each IN/OUT port
- ▶ Frequency range from 30 MHz to 1000 MHz
- ▶ Attenuation range from 0 dB to 32 dB in 0.25 dB steps and from 32 dB to 95 dB in 0.5 dB steps at each attenuator
- ▶ On request attenuation up to 122 dB (by other hardware)
- ▶ On request additional information text (2 lines, up to 20 signs per line)
- ▶ Switching time up to 0.1 ms per transmitted binary sign (S A 1 5 ETX are five signs.)
- ▶ Integrated power supply 100 V - 240 V AC
- ▶ Manual control (colour display with touchpanel)
- ▶ Remote control by USB and LAN (other interfaces or web control on request)
- ▶ 19" rack mount case with 6 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

Air Interface Adapter AIAD-8+-S2

MTS-No.: 30775

Page 2 from 4

Configuration:

Ring system with 8 coupled IN/OUT ports through 95 dB attenuators, Test connections for each IN/OUT port

Technical data:

1 RF-specifications:

1.1 Impedance	50 Ω		
1.2 Input power	+30 dBm max. per IN/OUT +18 dBm per Test (output per Test is up to +21 dBm)		
1.3 Frequency range	30 MHz - 1000 MHz		
1.4 RF-connections @ IN/OUTs @ Tests	N female SMA female		
1.5 Attenuation @ IN/OUT to IN/OUT	0 dB - 32 dB in 0.25 dB steps and 32 dB - 95 dB in 0.5 dB steps		
1.6 VSWR @ IN/OUTs @ Tests	min. typ. max.	1.30 1.10	2.00 1.30
1.7 Insertion loss (IL) @ IN/OUT to IN/OUT @ IN/OUT to Tests		26.5 dB 12.0 dB	32.5 dB 15.0 dB
1.8 IL derating / 20 MHz		0.15 dB	
1.9 Isolation (see plot) (own att. >50 dB)	(without attenuation) 40.0 dB	45.0 dB	
1.10 Attenuation accuracy @ 50 - 1000 MHz @ 0.25 - 25 dB @ 25.25 - 30 dB @ 30.25 - 60 dB @ 60.5 - 85 dB @ 85.5 - 95 dB	(negative means more attenuation)	+0.3/0 +0.3/0 +0.7/0 +1.1/0 +1.5/0	+0.5/-0.4dB +0.6/-0.4 dB +1.0/-0.4 dB +1.5/-0.4 dB +2.0/-0.4 dB
1.11 Switching time per transmitted binary sign (S A 1 5 ETX are five signs.)		0.1 ms	

2 Connections:

2.1 Front side	RF-connections Power switch with integrated control lamp Colour display with touchpanel
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	Colour display with touchpanel Control lamp in the power switch
3.4 Control interfaces	USB LAN
3.5 Power consumption primarily	150 mA max. @ 230 V
3.6 Mains connection	Power cable CEE7/7 / IEC C13
3.7 Operating environment	Temperature: 0 °C - +50 °C Altitude: 2000 m max. Relative humidity: 85% max. up to 40 °C, non-condensing
3.8 Reference temperature for specifications	+25 °C
3.9 References	Designed for indoor in industrial and laboratory environments
3.10 Dimensions	19"-unit x 6 HU x 430 mm (dimensions without handles and connections)
3.11 Colour	Front side colourless anodized Rear side colourless anodized
3.12 Weight	15.3 kg

4 Delivered parts:

AIAD-8+-S2
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

Air Interface Adapter AIAD-8+-S2

MTS-No.: 30775

Page 3 from 4

Typical measurements:

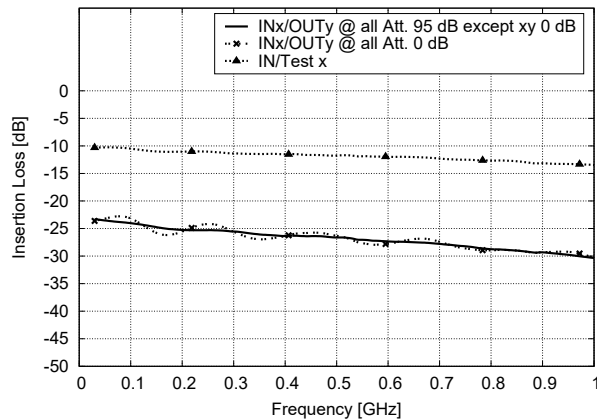


Fig. 1: IN/OUT port to Test port or IN/OUT port insertion loss

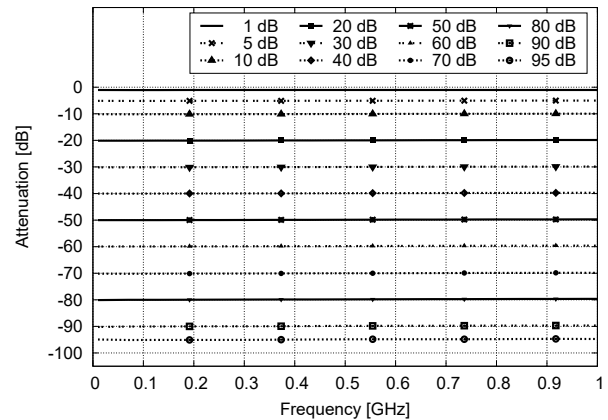


Fig. 2: Attenuation relative to insertion loss

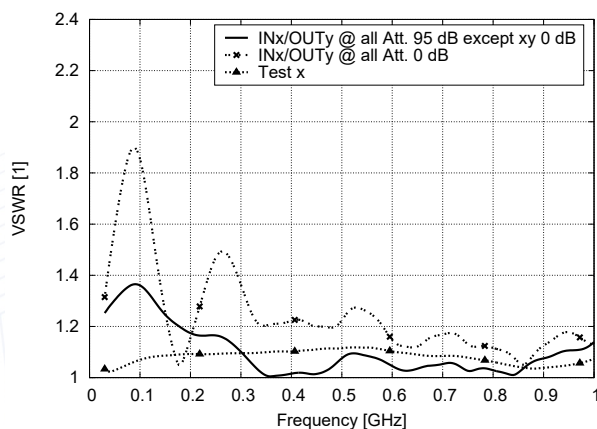


Fig. 3: VSWR for IN/OUT ports or Test ports

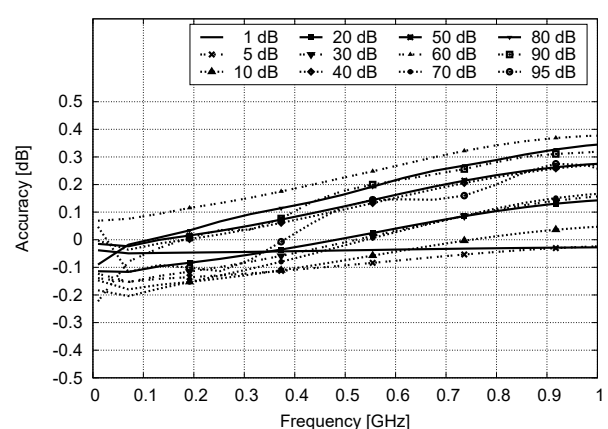


Fig. 4: Attenuation accuracy

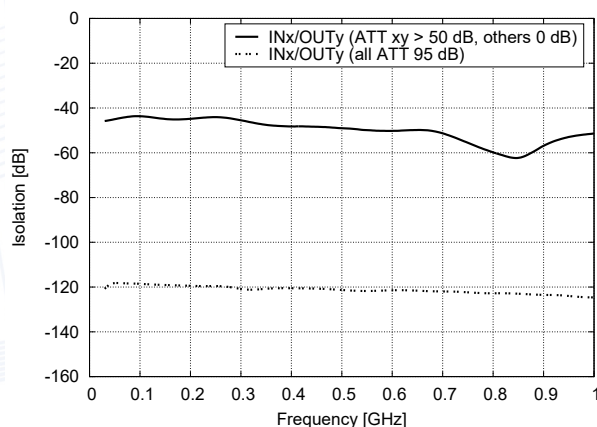


Fig. 5: Isolation between IN/OUT ports

Air Interface Adapter AIAD-8+-S2

MTS-No.: 30775

Page 4 from 4

Views:

