

## Air Interface Adapter AIAD-2/2/1xDL1+2/1

MTS-No.: 22113

### 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.

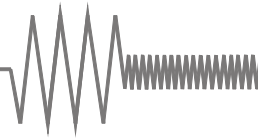
### Description

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 input signal to each output signal at the same time. The function is carried out by power dividers, programmable attenuators, output combiners and an additional delay line.



### Characteristics

- ▶ 2 inputs (BTS TX0 / BTS TX1) coupled to 2 outputs (UE RX0 / UE RX1) through 93 dB attenuators
- ▶ 4x additional test connectors at the BTS TX inputs, resp. the UE RX outputs
- ▶ 1x adjustable delay from 0 to 635 ps in 5 ps steps (only at input BTS TX0)
- ▶ 1 input (UE TX) coupled to 2 outputs (BTS RX0 / BTS RX1) through 93 dB attenuators
- ▶ Frequency range from 700 MHz to 2900 MHz
- ▶ Attenuation range from 0 dB to 93 dB in 1 dB steps at each attenuator
- ▶ Switching time up to 10 ms
- ▶ Integrated power supply 100 V - 240 V
- ▶ 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:

2 inputs coupled to 2 outputs through 93 dB attenuators with 4 additional test connectors, 1 of these inputs can be delayed up to 635 ps by 1 delay line; 1 input coupled to 2 outputs through 93 dB attenuators

### Technical data:

#### 1 RF-specifications:

1.1 Impedance	50 Ω
1.2 Input power	+37 dBm max. @ BTS TX0, BTS TX1 and UE TX +28 dBm max. @ UE RX0 and UE RX1 +24 dBm max. @ all other connections
1.3 Frequency range	700 MHz – 2900 MHz
1.4 RF-connections	N female
1.5 VSWR In	2,4 :1 max.
1.6 VSWR Out	2,4 :1 max.
1.7 Insertion loss (lower for paths with test connectors)	35 dB max. @ 0 dB attenuation 29 dB ±1dB @ 780 MHz and 0 dB attenuation
1.8 Isolation (each measured across the programmable attenuators at 0 dB)	65 db typ. / 55 dB min. from BTS TX0 to BTS TX1 50 dB typ. / 40 dB. min. from UE RX0 to UE RX1 36 dB typ. / 30 dB min. from BTS RX0 to BTS RX1
1.9 Linearity regarding insertion loss	± 3 dB
1.10 Attenuation	0 dB – 93 dB in 1 dB steps
1.11 Gradation	1 dB / 2 dB / 4 dB / 8 dB / 16 dB / 30 dB / 32 dB
1.12 Setting accuracy of attenuation	1 dB ±0,4 dB 2 dB ±0,8 dB 3 dB - 9 dB ±1,0 dB 10 dB - 29 dB ±1,5 dB 30 dB - 79 dB ±3,0 dB 80 dB - 89 dB -3,0 dB / +6,0 dB 90 dB - 93 dB ±6,0 dB
1.13 Adjustable delay Δt	635 ps max. in 5 ps steps
1.14 Setting accuracy of delay	±5 ps approximately

#### 2 Connections:

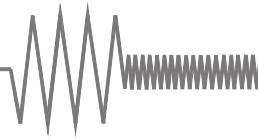
2.1 Front side	Power switch with integrated control lamp RF-connections
2.2 Rear side	Power supply, Control card Appliance plug with the integrated fuses F1 and F2 Ground connector Control interfaces

#### 3 General specifications:

3.1 Power supply	100 V - 240 V 50 Hz / 60 Hz
3.2 Internal voltage	+5 V DC, +24 V DC
3.3 Control displays	Control lamp in the power switch Control LED for +5 V DC and +24 V DC at the power supply unit
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 3 HU x 435 mm (dimensions without handles and connections)
3.10 Colour	Front side colourless anodized Rear side colourless anodized
3.11 Weight	10,2 kg

#### 4 Delivered parts:

AIAD-2/2/1xDL1+2/1  
Power cable  
CD with operating manual



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### Technical data:

#### 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

### Views:

