

# WSDU-1X8UR

Ultra-Wideband 8-Way Signal Distribution Unit 100 kHz ... 18 GHz

## Features

- ultra wideband
- high dynamic
- lossless signal distribution
- device health monitoring with SNMP function
- variants with AC or DC supply

## Applications

- military
- intelligence service
- antenna signal distributions
- radio monitoring
- direction finding
- R&D



## Scope

WSDU-1X8UR is an ultra-wideband multicoupler that distributes signals from one common input to 8 equivalent outputs. The frequency range extends a frequency range from 100 kHz to more than 18 GHz.

## Lossless 1 to 8 Signal Distribution

The RF input the signal is amplified by using innovative broadband low-noise amplifiers with a wide dynamic range. As a result, weak and strong signals are amplified equally linearly and without distortion. The distributed signal is available at every output without any losses in level. The hardware structure of the distribution offers best phase and amplitude balance performance.

All RF inputs and outputs have SMA female connectors.

## Variants for AC or DC Supply

WSDU-1X8UR is available with both, an AC and DC power supply variant, that offer a wide voltage supply range with integrated surge protections. Moreover, the DC-Supply variant offers a reverse polarity protection.

## Device Monitoring

WSDU-1X8UR device is equipped with a built-in device monitoring capability. The device health status can be read out via LAN and USB remote interface. The health status gives information about operating points of the internal wideband amplifier stages and the temperature of the RF module. Also, the device identification can be queried in form of ASCII strings.

The LAN remote interface offers SNMPv2 (simple network management protocol) trap function for an operation in complex environments.

The WSDU-1X8UR is able to identify failures and to inform the supervising system autonomously.

**RF Specification**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
impedance	$Z_{IN}/Z_{OUT}$		50		$\Omega$	
low frequency	$f_{MIN}$		100		kHz	
high frequency	$f_{MAX}$		18		GHz	
gain	$S_{21}$		3		dB	
input return loss	$S_{11}$		-13		dB	
output return loss	$S_{22}$		-13		dB	
reverse isolation	$S_{12}$		-90		dB	
output isolation	$S_{23}$		-13	-8	dB	$d = 1, f < 4\text{GHz}$
	$S_{23}$		-23	-17	dB	$d = 1, f \geq 4\text{ GHz}$
			-30		dB	$d > 1, f \geq 4\text{ GHz}$
1 dB compression	$P_{1dB}$		+6		dBm	
3 <sup>rd</sup> order intercept	OIP3		+12		dBm	
noise figure	NF		10	21	dB	$10\text{ MHz} \leq f < 0.5\text{ GHz}$
	NF		7	9	dB	$0.5\text{ GHz} \leq f < 3\text{ GHz}$
	NF		5		dB	$3\text{ GHz} \leq f \leq 15\text{ GHz}$
	NF		8		dB	$f > 15\text{ GHz}$
input power	$P_{in}$			+10	dBm	CW, no damage
maximum DC voltage	$U_{DC}$			20	V	all RF ports
ESD discharge resistor	$R_{ESD}$		4.7		k $\Omega$	all RF ports
RF connectors	NF	SMA female				

**Common Specification**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
AC supply variant						
voltage supply range	U <sub>AC</sub>	90	230	260	V	50 / 60 Hz AC
power consumption	P		9	50	W	
power socket	X <sub>AC</sub>	IEC-60320 C14				country specific mains cable
DC supply variant						
voltage supply range	U <sub>DC</sub>	10	24	28	V	
current consumption	I <sub>DC</sub>		190		mA	@ 24 V
power socket	X <sub>DC</sub>	3 pole XLR male				
Dimensions and weight						
dimensions	W x H x D	approx. 482 x 44 x 265			mm	19" 1 U, without connectors and handles
weight	m		3.4		kg	
Environment conditions						
operating temp. range	T <sub>o</sub>	+5		+45	°C	
storage temp. range	T <sub>s</sub>	-40		+70	°C	
Remote interfaces						
remote ports	LAN	10/100BaseT		TCP/IP		RJ45
	LAN	SNMPv2 trap function				
	USB	2.0 (high speed)				USB type B
Product conformity						
Electromagnetic compatibility	EU: in line with EMC directive (2014/30/EC)				applied harmonized standards: EN 61326-1 (for use in industrial environment), EN 61326-2-1, EN 55011 (class B), EN 61000-3-2, EN 61000-3-3	
Electrical safety	EU: in line with low voltage directive (2014/35/EC)				applied harmonized standard: EN 61010-1	
Ordering information	WSDU-1X8UR		P/N: 1501.6302.1		AC Supply, Remote Monitoring	
	WSDU-1X8UR		P/N: 1501.6302.2		DC Supply, Remote Monitoring	

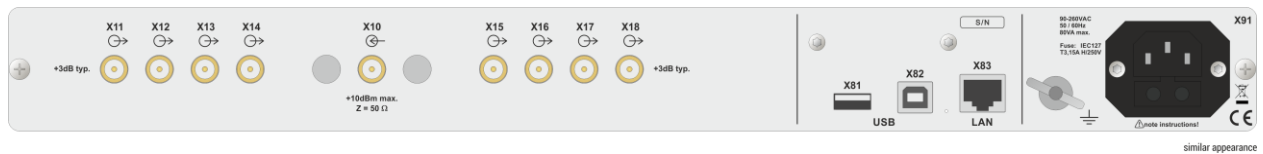


## Appearances

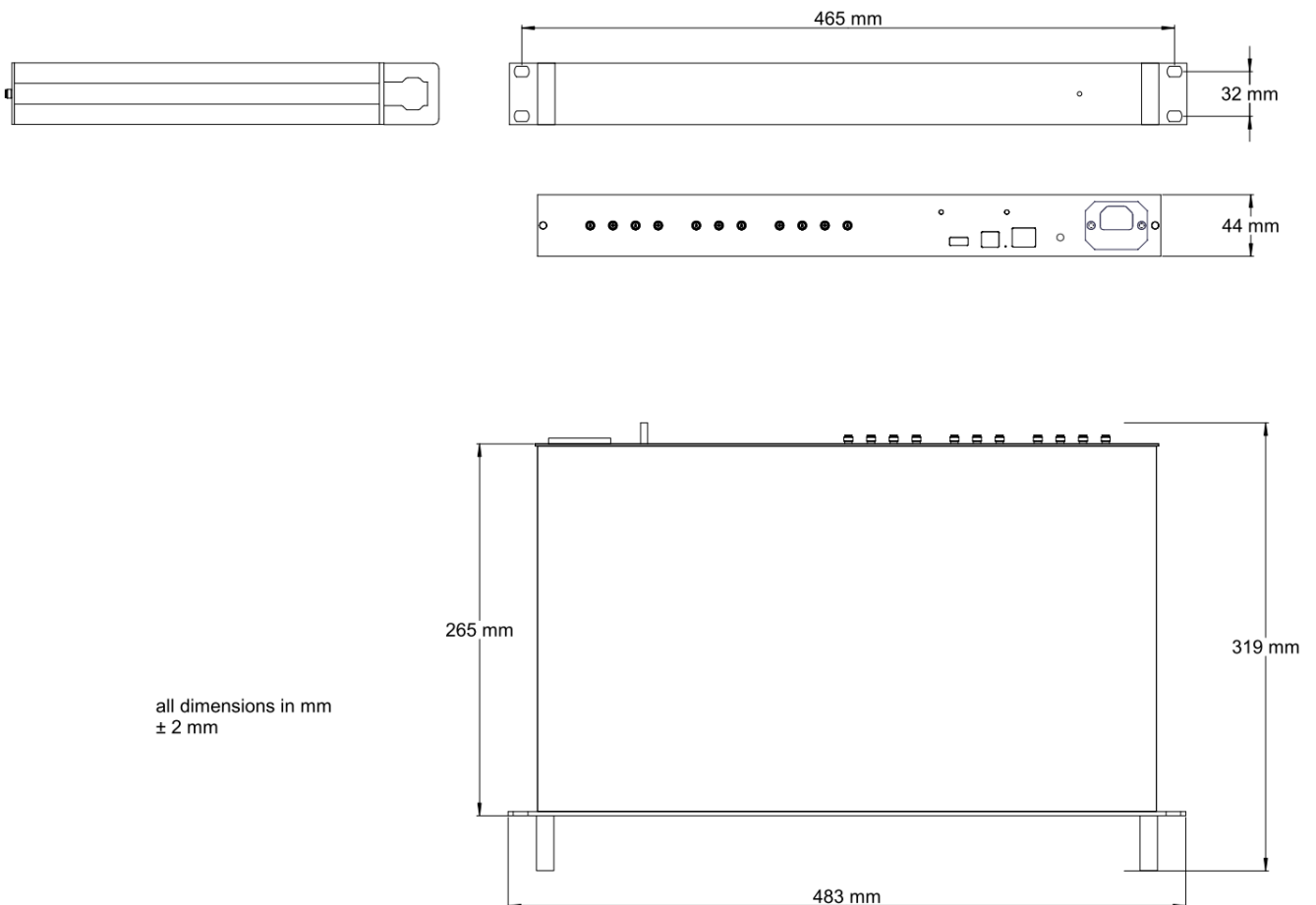
### Front View



### Rear View Variant with AC Supply and Remote Monitoring (P/N 2109.6002.1)



### Dimension



**Related Products**

Product	P/N	Description
WSDU-1X8LR	1107.6152	High Dynamic 8 Way Multicoupler for Broadcast Signals 100 kHz ... 4000 MHz AC or DC power supply
WSDU-2X4LR	1107.6252	High Dynamic 2 Section 4 Way Multicoupler for Broadcast Signals 100 kHz ... 4000 MHz AC or DC power supply
WSDU-1X8R	1107.6102	High Dynamic 8 Way Multicoupler 100 kHz ... 4000 MHz AC or DC power supply
WSDU-2X4R	1107.6202	High Dynamic 2 Section 4 Way Multicoupler 100 kHz ... 4000 MHz AC or DC power supply
WSDU-1X8AR	1807.6302	8 Way High Dynamic Signal Conditioning Multicoupler 100 kHz...4000 MHz AC or DC power supply
WSDU-1X8SR	1502.6102	High Dynamic 1X8 Shortwave Signal Distribution Unit 200 kHz ... 30 MHz AC or DC power supply Variant with LAN remote interface with SNMPv2 trap function available
WSDU-2X4SER	2306.6102	2-Section 4-Way Signal Distribution Unit Section A: 200 kHz ... 30 MHz Section B: 20... 8000 MHz AC or DC power supply Variant with LAN remote interface with SNMPv2 trap function available
WSDU-1X8ER	1501.6302	Extremely Wideband 1 to 8 Signal Distribution Unit 20 ... 8000 MHz AC or DC power supply Variant with LAN remote interface with SNMPv2 trap function available
WSDU-2X4ER	1501.6202	Extremely Wideband 2 Section 1X4 Signal Distribution Unit 20 MHz... 8000 MHz AC or DC power supply Variant with LAN remote interface with SNMPv2 trap function available
WSDU-1X8UR	2109.6002	Ultra-Wideband 8-Way Signal Distribution Unit 100 kHz ... 18 GHz AC or DC power supply LAN remote interface with SNMPv2 trap function