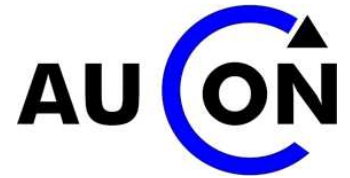
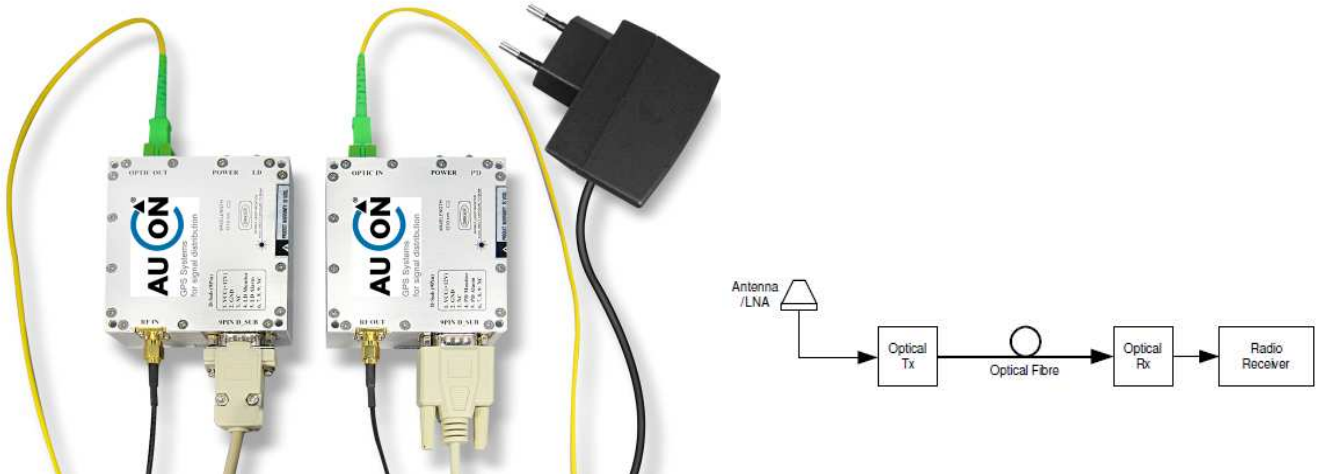


RF over fibre for GNSS signals



GPS Systems
for Signaldistribution



Fibre Transmission for GNSS signals

This fibre transmission system was developed especially for transmitting GNSS signals over large distances (>100 m).

Compared with coax cables the big advantage is, that there is nearly no signal loss in the system. That means that the input signal strength is nearly the same as the output signal strength. Another advantage is that the time loss is nearly 0. This is important if you need to bring a signal from receiving antenna up to a GNSS timing receiver.

The system could be configured for up to 10 000 m length between the transmitter and receiver. Other cable length on request.

Technical data:

Art.-No.:	3070001
Hardware Type	Receiver / Transmitter
GNSS frequencies :	GPS L1 (1575 MHz), L2 (1227 MHz), L2c, L5, L6, Glonass G1, G2, Galileo, Compass, Beidou (without S Band), IRNSS L1 and L5, Omnistar
RF input range:	-65 dBm to 0 dBm
System loss:	0,1 dB(RX and TX)
Cable loss:	~ 0,5 dB p. km
Laser wave length:	1310 nm

Power supply:

Voltage:	12 V DC / 230 V AC adapter
Consumption:	350 mA
Dimensions:	see page 2
Weight:	Receiver 220 g Transmitter 220 g

Environmental conditions:

Working temperature:	-20 to + 70° C
Humidity:	max. 90%

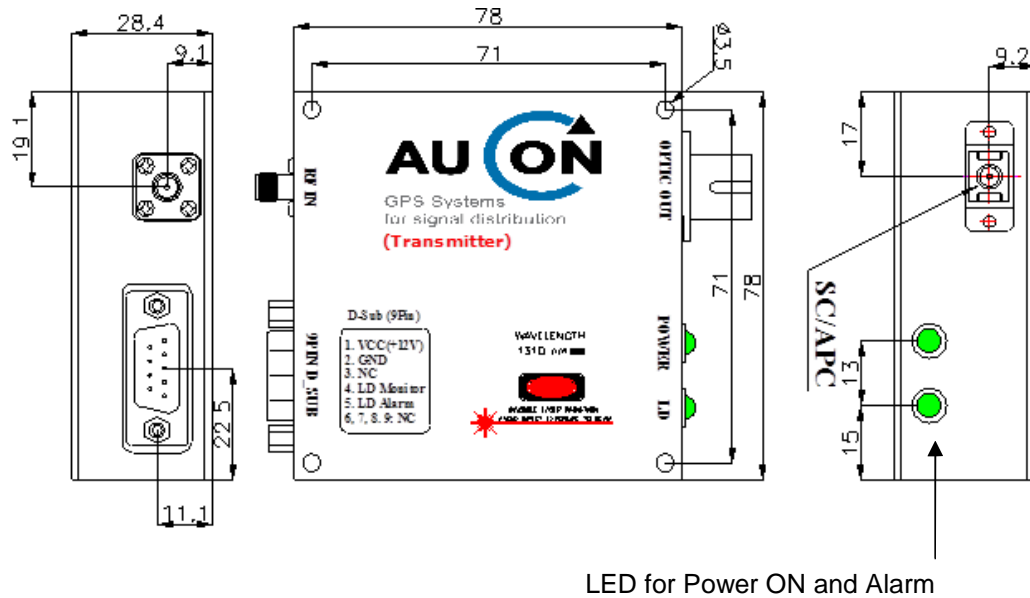
Suitable for following products: GPSRKL1, GPSRKL12, AS47-CS, A11 series, AS61, MetroE and others

Scope of delivery: Receiver, Transmitter, 2 pcs. of 230 V power supply, fibre optic cable with 100 m

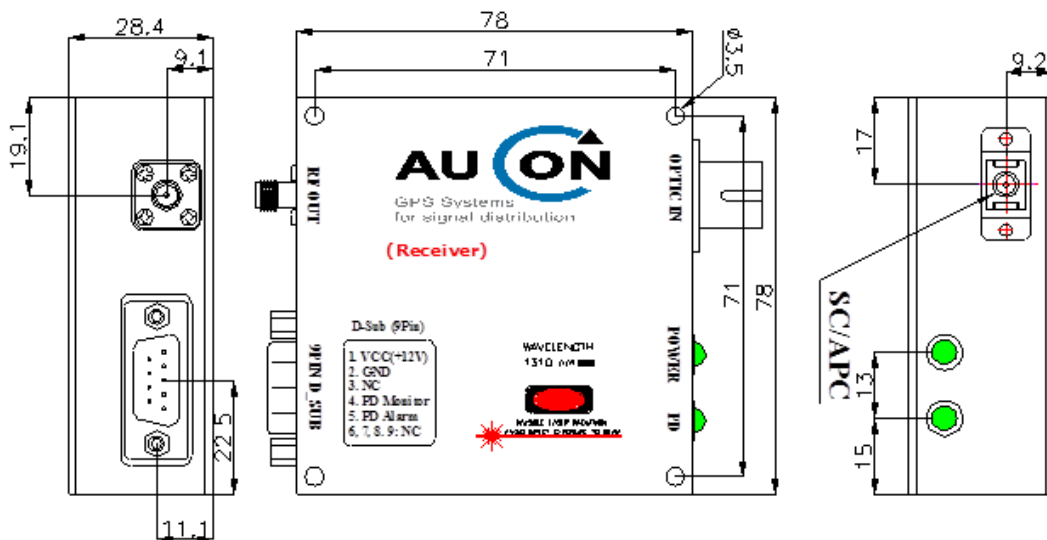
The system falls under the laser class 1. Receiver and transmitter are also available in 19" rack mount housings with 1 HE.

Dimensions

- **Transmitter:**



- **Receiver:**



Fibre optic cables are available in lengths from 100 to 10 000 meters.

Technical datas:

NO	PARAMETER	UNIT	SPECIFICATION	Remark
1	Frequency Range	MHz	1200 ~ 1600	GPS L1, L2BAND
2	RF Gain	dB	0 ± 2	@1 dB Optical Loss
3	Gain Flatness	dB	0 ± 2	@ 1200~1600 MHz
4	Output Noise Floor	dBm/Hz	-133 max.	@1 dB Optical Loss
5	VSWR	-	2:1 max.	S11
6	IMD	dBc	-50 max.	@ 0 dBm / 2 tones
7	1dB Input Comp. Level	dBm	12 min.	
8	Input Range	dBm	0 ~ -60dBm	@ Sensitivity
9	RF Directivity	dBc	-58 max..	-
10	Supply Voltage	Volt	12 typ.	-
11	Current Consumption	mA	350 max.	@ 12 V
12	Operating Temperature	°C	-20 ~ +70	@ Gain Variation:-5~+3
13	RF Connector	-	SMA Female	-

Optical data:

NO	PARAMETER		SPECIFICATION			UNIT	Remark
			Min.	Typ.	Max.		
1	Wavelength	Transmitter	1280	1310	1340	nm	DFB Type LD
		Receiver	1280	1310	1340		PD
2	Optic Output Power		2	4	6	dBm	Alarm: <-3dBm
3	Optic Input Power		-13	-	0	dBm	Alarm: <-15dBm
4	Allowed Back Reflection		-	-	40	dB	@ full specs
5	E/O Diff. Eff.		0.08	-	-	-	W/A
6	Optic Connector		SC/APC			-	-

Notes:

Please note that the signal strength must be at least -65 dBm at L1 (1575 MHz). For transmitting a signal from a standard GPS system with one active antenna and coax cable you need an further amplifier with 30-40 dB like the A11 or A11XLV. On the other side (RF Out) you normally need an attenuator with 20-30 dB before connecting the RF Out to an GPS receiver. Please check the datasheet of your GPS receiver about the maximum RF input to receiver.

If you want to connect a repeater or a sending antenna to the RF Out you also need to attenuate the signal with 10-15 dB to be conform to EU norm EN ETSI 302645.

Any questions? Do not hesitate to contact us under +49 (0)89 91 059 868 or send us an email to sales@aucon.de.