1+1 Automatic Changeover Logic

HIGH EFFICIENCY

MULTI-PLATFORM

MULTI INPUT

MULTI-STANDARD
DVB-T/T2 ATSC/ATSC 3.0
ISDB-Tb DTMB NTSC (analog)

WIDE BAND

AIR COOLED

GNSS
(GPS, GLONASS, BEIDU, GALILEO)

MONITORING
SNMP, WEB BASED GUI,
DRY CONTACTS

- ☐ Control Logic for apassive reserve.
- ☐ Capable of managing all changeover functions and give all the relevant measurements and information.
- ☐ Locally, a user-friendly mimic panel allows simple operation.
- ☐ Remote control via serial port, SNMP, Web pages , TLS-TLC.
- ☐ Equipped with dual power supply for high reliability.
- ☐ Equipped with 24V connector used as backup power in case of main power failure.
- ☐ Gives one single IP address to all the complete redundant transmitting system

1+1 control logic

Our Automatic 1+1 Changeover System can be implemented in any Dual Driver or any 1+1 Transmitter configuration.

It will use its internal relay in dual driver applications, while it will drive external RF switches of any primary brand in 1+1 transmitter configurations.

Thanks to our 1+1 Changeover System, SYES assures 100% continuity of service in a reliable manner, with smooth transition between transmitters.

The Changeover can operate in a completely automatic mode, assuring peace of mind in unattended or remote transmitter sites. It can be also operated manually, both locally or in remote.

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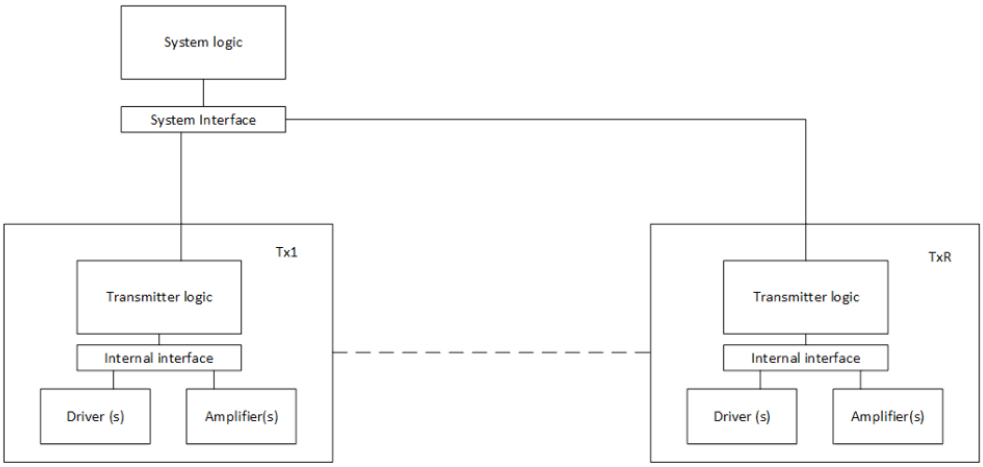
1+1 control logic

GENERAL	
Mains voltage	90-264Vac. (1ph +N) ± 10% or 22Vac of 48 Vdc
Mains frequency	47… 66 Hz
Power factor	>0,96% (0,98% typ.)
Remote serial control	SNMP Protocol (LAN 10-100 Base T) RS 485
Internal serial connection	RS 485
Parallel TLC/TLS connection	Dry contact
AC power supply	230 V AC ±15% single-phase, 47 … 63 Hz
DC power supply	+48V DC ± 20%
Consumption	15 VA / 13W
Weight	3 Kg
Working temperature	0° C at +45° C
Relative humidity	95%
Maximum height for use	4000 m.
Directive	2014/30/UE & 2014/35/UE
Safety STD.	EN 60215
EMC STD.	EN 55022; EN 55024

HIERARCHICAL DIAGRAM FOR TRANSMITTING SYSTEM MANAGEMENT



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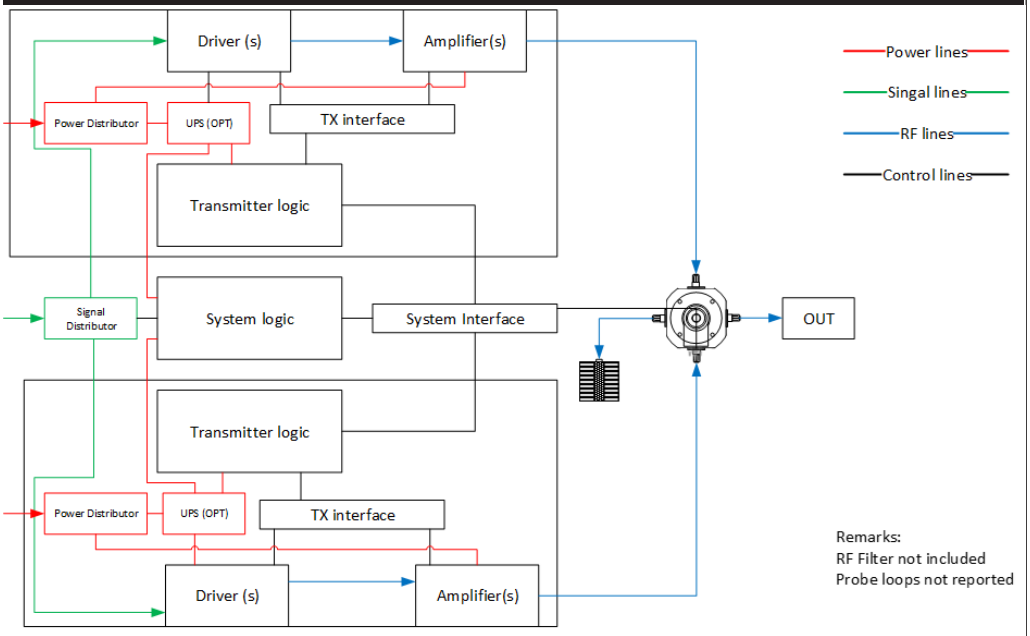
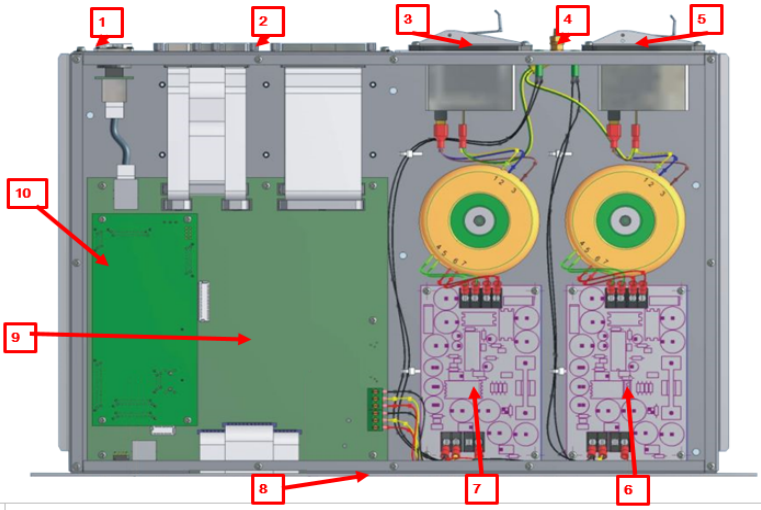
BLOCK DIAGRAM FOR 1 +1TRANSMITTING SYSTEM



INTERNAL LAYOUT



Rif.	Description
1	Ethernet port
2	Rear signal connections
3	AC socket with EMI filter , fuse and switch
4	Safety ground terminal
5	II AC socket with EMI filter , fuse and switch (option)
6	AC/DC power supply with insulation transformer
7	II AC/DC power supply with insulation transformer (option)
8	Front panel with LED and buttons
9	Main board
10	Proxy Board

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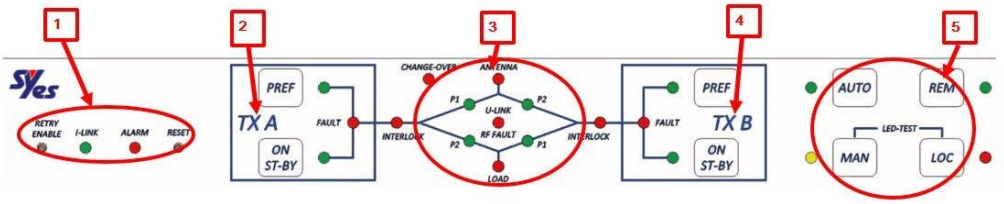
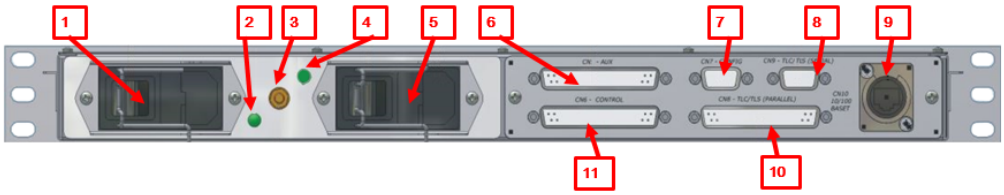
Front view



Rif.	Description
1	Main command and control: **I-Link** LED (for communication within TX A and TX B)**Alarm** LED; **Reset** button: **Retry Enable** button (force to retry to make preferential TX on line)
2	TX A setting and status **PREF** button (set TXA preferential) with LED; **ON/STD-BY** button with LED; **FAULT** LED
3	Change over relay status (**P1…P4** LED indicates active connection for TXA and TXB; other LED indicates fault on **change-over** relay, **U link**, **antenna**, **load** and **interlock**)
4	TX B setting and status **PREF** button (set TXB preferential) with LED; **ON/STD-BY** button with LED; **FAULT** LED
5	1+1control logic setting with LED: **AUTO**matic or **MAN**ual; **LOC**al **or REM**ote. Pushing **MAN** and **LOC** drives to unit auto-test

Rear view



Rif.	Description
1	AC mains socket with cable holder fuse and Emi filter
2	Power supply 1 status
3	Safety ground terminal
4	Power supply 2 status (optional)
5	AC mains socket with cable holder fuse and Emi filter (optional)
6	**AUX** connector (TLS and TLC analogue and digital custom defined, transmitter warnings and alarms, RF loop readings etc)
7	**CONFIG** connector (to load and save 1+1 logic configuration)
8	**TLS TLC (serial)** connector standard commands
9	**Ethernet** connector (RJ 45)
10	**TLS TLC (parallel)** standard commands and readings using dry contact
11	**CONTROL** connector: link to system interface to command transmitters relay, input matrix etc.

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