

# SDT 500 ARK-1 ATSC

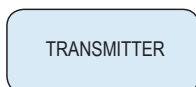
## Analog and Digital Transmitter 50W ps/15W rms



>SDT 500 ARK-1

### Main Features

- Compliant A153 ATSC-mh Standard
- UHF/VHF fully agile Transmitter
- Integrated GPS Receiver.
- Integrated SNMP management with events store.
- Integrated GBE interface.
- Output Power remotely adjustable via SNMP with high dynamics, in step of 0.1 dB.
- Soft-start Circuit.
- Adaptive digital linear pre-correction.
- Digital non linear pre-correction with automatic curves loading for each standard, channel and power levels.
- Wide Range Power Supply 90-264 V AC in fuse-free configuration (SW Standby Switch).
- 12 (with power limitations), 24, 48 V DC Optional.
- Typical MER > 36 dB at all power levels and in all channels.
- Quick-acting protection circuits against over power and direct/reflected power.
- Protection against reflected power with automatic fold-back.
- Compact Design: 19" x 1 unit, depth 400 mm



SDI > MOD > RF



ASI > MOD > RF



The SDT ARK-1 is an ATSC Digital transmitter that features Digital Linear and Not Linear Pre-correction. Moreover, it uses the very advanced SWDT® (Software Defined Transmitters) technology, typical of this series of products, which allows a complete control of the system through various ways: remotely, using a clean contact; via SNMP commands; via TCP/IP, using the Web graphic interface.

To enable the transmission of MH mode can be done simply setting up the PID of MHE packets.

An innovative firmware allows zero error signals processing thanks to 32 bit architecture.

Functional interfaces are available for total remote control of the apparatus by means of serial protocols or TCP/IP ports. Thanks

to the internal Web server the apparatus can be easily monitored and configured using a LAN connection and a standard Web browser. Moreover, the built-in SNMP server allows performing all types of automated remote control.

#### MODEL-SPECIFIC DATA

Model	Output band	Digital output power (rms) without filter ATSC/ATSC-MH	Nominal analog output power (p.s.) with dual mode option
SDT 500UB ARK-1	UHF	15 W	50 W
SDT 500TB ARK-1	VHF (III)	15 W	50 W
SDT 500 FB ARK-1	VHF (I)	15 W	50 W

*Specifications and characteristics are subject to change without notice.*

#### GENERAL

Working Class AB	SDT 500 ARK-1
Cooling	Forced air
Local control and monitoring	Extensive front panel control Local terminal on RS-232
Remote control and monitoring	Web based Java interface Telnet access via Ethernet SNMP
Operating temperature	-10°C to +45°C
Maximum relative humidity	90%, non condensing
Maximum operating altitude	2500 m a.s.l. (> 2500 m on request)
Mains power supply	90-260 V AC
Dimensions	1 RU (19" rack), 400 mm

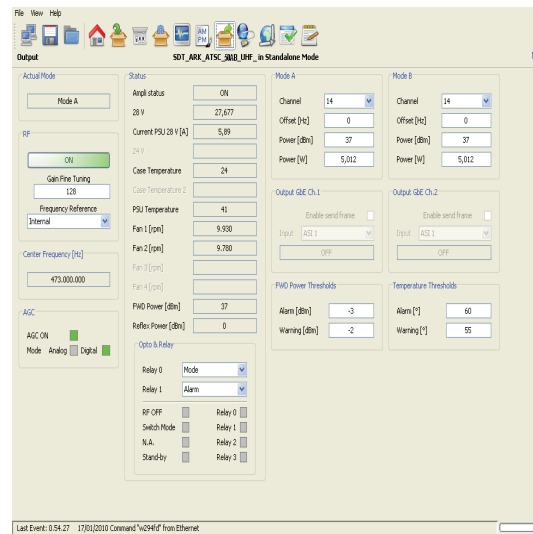


Front View



Rear View

Front Panel Connectors	
1. RF IN	RF Input Signal N (50 Ohm) type connector, female
2. GPS IN	TNC (75 Ohm) type connector, female.
3. ASI OUT HP	Digital Output High Priority (ASI signal Monitor)
4. ASI OUT LP	Digital Output High Priority (ASI signal Monitor)
5. ASI IN 1/SMPTE 310	Digital Input
6. ASI IN 2/SMPTE 310	Digital Input
7. SDI	Digital Input
8. SDI	Digital Input
9. TCP/IP + GBE	Integrated TCP/IP Giga Bit Ethernet interface (also suitable for MPEG over IP feeding). Multimeter 4 x 20
10. LCD Display	Navigation and operation push-buttons
11. Controls	



Java Interface Pages

SDT SERIES ARK-1 NTSC + ATSC

## MAIN TECHNICAL CHARACTERISTICS

### GENERAL

Available standards	ATSC
Operating frequency range	UHF Band (470 - 862 MHz)
Cooling	Forced Air
Main supply	wide range 90-264 VAC
MAX Power consumption	130W

### INPUT PARAMETERS

#### DIGITAL 1 (HP&LP) & DIGITAL 2(HP&LP)

Input Signal	MPEG-2 Transport Stream, ASI format
Input Level	800 mV (±10%)
Data rate	270 MB/s
Data rate error	±3ppm
Input connector	BNC
Input impedance	75 Ω

### GBE

MPEG over IP (pro mpeg cop 3) Transport Stream input.  
Full control and management via JAVA Interface and SNMP protocol.

### RF

Input Signal	VHF/UHF
Input connector	N female
Input impedance	75 Ω
LNB power supply from transmitter	

### OUTPUT PARAMETERS

#### GENERAL

RF OUTPUT Connector	N Female
Impedance	50 Ω
Load mismatch	2:1 Max. (with output isolator)
RF monitor connector	SMA
Impedance	50 Ω

#### ATSC MODULATOR

Input	4 x BNC 75 Ω: ASI, SMPTE-310M, SDI for dual mode option
Input data rate	Up to 19.39 Mbits/s
Channel bandwidth	6 MHz
Modulation	8VSB
Trellis coding	2/3
Symbol rate	10.762 Msymbol/sec.
Bandwidth efficiency	3 Bits/symbol
Precision offset	Integrated, 1 Hz steps
Frequency precision	1 ppm or internal GPS locked
Frequency reference input	10 MHz, BNC 50 Ω
Time reference input	1 PPS, BNC 50 Ω
Reed-Solomon encoder	207/187/10
SFN function	Included (proprietary)
Test functions	PRBS, CW
PCR restamping	Included for ASI input
Del. Null Packet mode	Included for ASI input



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