

# SDT ARK ECHO



# SDT ARK-ECHO

Digital Repeater On Channel with Superior Echo cancellation  
for mutistandard

From 15W rms up to 125W rms



**DVB-T**

**DVB-T2**

**DVB-H**



**a-t-s-c**  
MOBILE DTV

**ISDB-T**

**DTMB**





## ARK-ECHO – Digital Repeater On Channel with Superior Echo cancellation up to 5W rms



> SDT 500 ARK ECHO

### Descriptions

ARK-ECHO is a cutting-edge product completely designed and developed by Screen Service in an answer to market needs. ARK-ECHO provides a complete digital coverage solution with echo cancellation to make sure the area is not receiving dual signals by canceling system feedback between the transmit and receive antennas. The innovative software defined technology with features provides useful tools to manage your Single Frequency Network.

ARK-ECHO Digital signal processing algorithms offer a superior cancellation; it means that stable operation can be achieved even with a feedback (undesired) signal that is larger than the incoming (desired) signal.

ARK-ECHO offer one of the lowest latency of the industry (less than 10  $\mu$ S); a low time delay allows the receiver to deal with two different signals (main transmitter and ARK-ECHO) without allowing them to interfere with each other and degrade reception

The Screen Service's state of the art pre-correction plus the compact size (125W rms ATSC/ATSC-MH in 2RU) is designed to perfectly satisfy the critical need of a Broadcast Network to have full coverage and expanded indoor penetration; all these features makes the ARK-ECHO unique on its class.

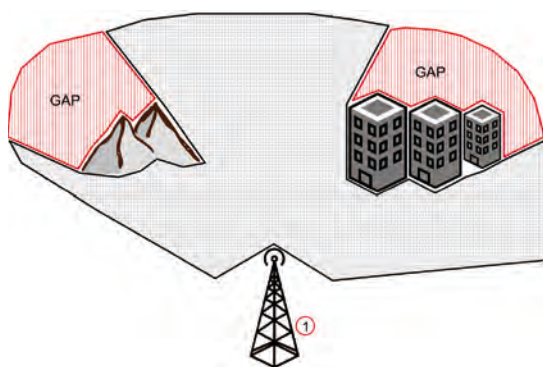


### Main Features

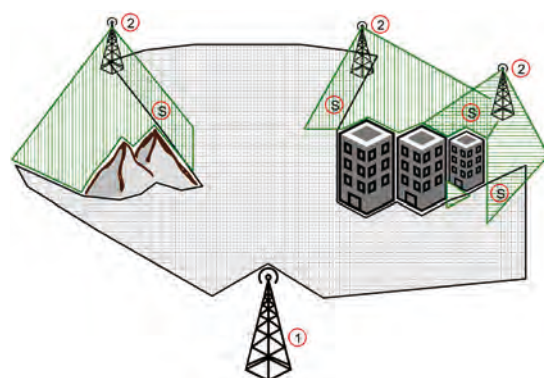
- Multistandard Digital Repeater On Channel
- Heterodyne Repeater
- Superior Echo Cancellation Algorithm
- Perfect for Gap Filler area in SFN Network Deployment
- AGC (Automatic Gain Control) for Power Limit
- Compact Size design 1RU or 2RU up to 125W rms (ATSC/ATSC-MH)
- User friendly JAVA user interface
- Multi-standard Capability (ATSC, ATSC-MH, DVB, ISDB-T, DTMB)
- Advanced O&M feature support
- Remote management capabilities included

### How it works?

The ARK-ECHO receive an off-air DTV signal to amplify it; down-convert it to an intermediate frequency (IF) for filtering and equalization; and up-convert it using its fully agile local oscillator on exactly the same frequency with exactly the same data as the received signal.



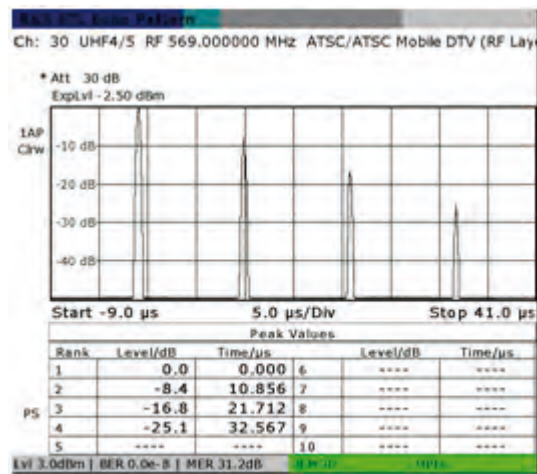
As can be seen gap areas do not receive signal (1) due to natural or artificial obstacles.



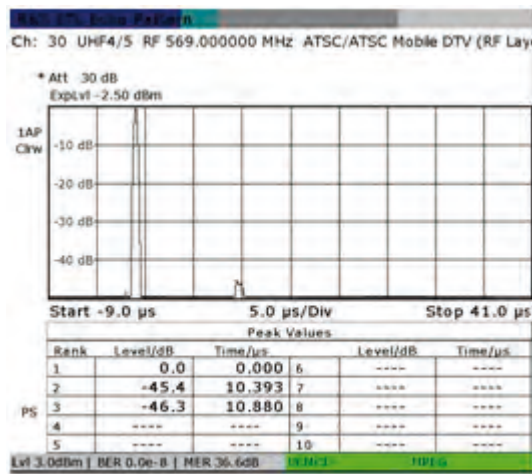
After we place the ARK-ECHO in the strategic positions (2) all the gap areas will be covered by the signal



This self explanatory snapshot shows how effective is the performance of echo cancellation algorithm in the ARK ECHO product.



Without echo suppressor



With echo suppressor

## Technical Specifications

Available standards	ATSC, ATSC-MH, DVB, ISDB-T, DTMB
Operating frequency range	UHF Band IV & V: 470 - 860 MHz
IF Frequency	36 MHz +/- 4
IF Bandwidth	6 - 7-8 MHz
Time delay	less than 10 us typ.
Echo cancellation window	20 us max (Equipment time delay NOT included)
Cooling	Forced Air
Main supply	110/220 V AC; Monophase
MAX Power consumption	150 VA @ 34 dBm
	200 VA @ 40 dBm
	250 VA @ 46 dBm
	750 VA @ 50 dBm

Dimensions (W x H x D) 483mm (19") x 1HU (2HU) x 400 mm (19 in x 1HU (2HU) x 15.74 in)

Weight 7Kg (15,43 Lbs) x 1HU or 15Kg (33,06 Lbs) x 2HU

Specifications and characteristics are subject to change without notice.

### MODEL-SPECIFIC DATA

Model	Output Band	Working class	Dimensions	Output connector	Cooling	Shoulders @ Fo ± 3.5 MHz	DVB W rms	ISDBT W rms	ATSC W rms	DTMB W rms
SDT500UB_ARK_EO	UHF	AB	1RU	N	Air	-36	12	12	15	12

## ARK-ECHO – Digital Repeater On Channel with Superior Echo cancellation up to 125W rms



> SDT 201UB ARK ECHO Compact

### Descriptions

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ARK-ECHO Digital signal processing algorithms offer a superior cancellation; it means that stable operation can be achieved even with a feedback (undesired) signal that is larger than the incoming (desired) signal.

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The Screen Service's state of the art pre-correction plus the compact size (125W rms ATSC/ATSC-MH in 2RU) is designed to perfectly satisfy the critical need of a Broadcast Network to have full coverage and expanded indoor penetration; all these features makes the ARK-ECHO unique on its class.

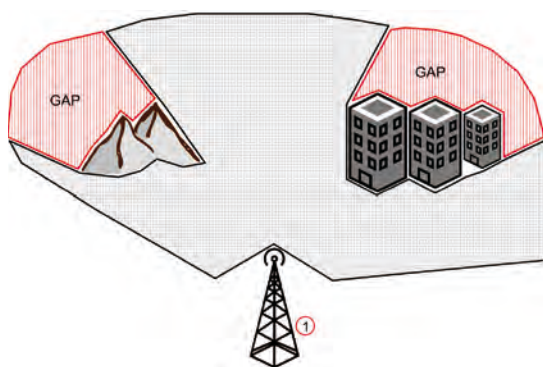


### Main Features

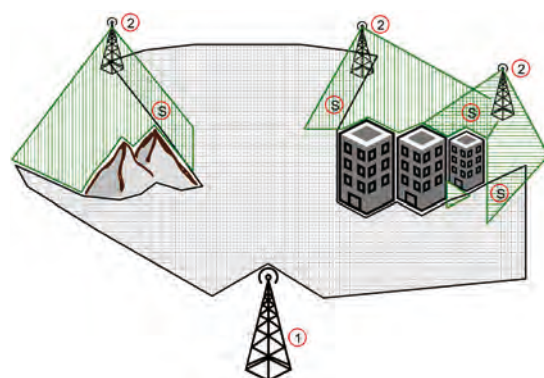
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- Heterodyne Repeater
- Superior Echo Cancellation Algorithm
- Perfect for Gap Filler area in SFN Network Deployment
- AGC (Automatic Gain Control) for Power Limit
- Compact Size design 1RU or 2RU up to 125W rms (ATSC/ATSC-MH)
- User friendly JAVA user interface
- Multi-standard Capability (ATSC, ATSC-MH, DVB, ISDB-T, DTMB)
- Advanced O&M feature support
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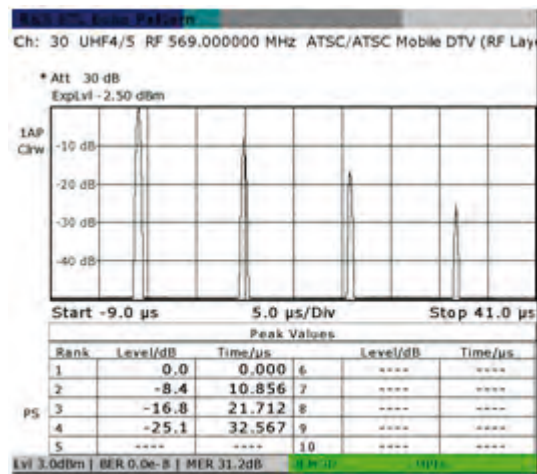
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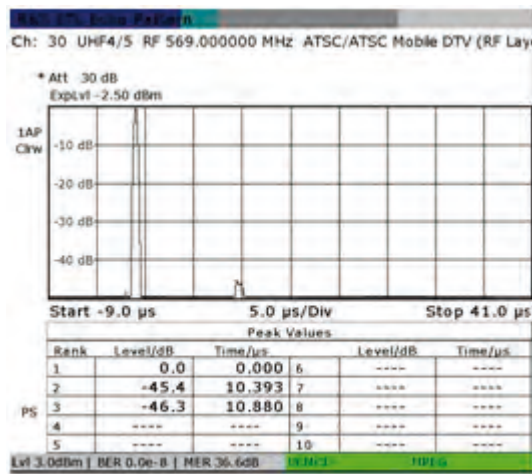
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SDT201UB_ARK_EO_C	UHF	AB	2RU	N	Air	-36	100	100	125	100