

# halo

## Digital SFN repeaters & MFN transposers

### TYPES

Air cooled

VHF

HALO AC3050

HALO AC3200

UHF

HALO AC4050

HALO AC4200

HALO digital SFN repeaters/transposers to fill the gaps and optimize digital network coverage.



The Elti@HALO family of digital SFN repeaters/transposer combine Elti's reputation for robust equipment with the latest digital technology available from digital area. The Elti@HALO family combining SFN repeater and MFN transposer functionality in the same box. Robust, fail-safe, designed as state-of-the-art echo canceller for SFN operation to guarantee optimized transmission and extremely low degradation in signal quality.

### The Elti Advantage

- According to EN 302 744 (DVB-T) and EN 302 304 (DVB-H), EN 302 755 (DVB-T2), TS 102 831 and TS 102 773 (T2-MI), ARIB STB-B31, TR-B14 (ISDB-T/Tb), A/53, A/110 (ATSC), DAB, DAB+: EN 300 401 v1.4.1
- LDMOS technology
- State-of-the-art Echo canceller, loop interference is completely removed
- High flexibility with dynamic transmitted power level
- Adoptable to channel characteristic changes with real time channel estimation
- No need for GPS receiver
- The same device for MFN transposer operation (software switchable)
- Plug and play installation
- Low signal quality degradation
- Remote management and control via LCD, TCP/IP, HTTP and SNMP interface
- Settings fully adjustable by software
- Compact and highly cost effective Elti@HALO family minimizing total cost of ownership

## Compact Version

HALO digital SFN repeaters are housed in a compact 19" 1U rack mount (50W rms) and 2U (200W rms) for UHF bands IV/V and VHF band III. The built-in state-of-the-art echo canceller guarantees optimized transmission and extremely low degradation in signal quality.

## Control and Monitoring

The integrated control unit provides full control over the assembly and additional options/features. Control software EDM (Elti Device Manager) with an user friendly LCD interface comes as standard for all Elti digital transmission devices. Device is possible to integrate into NMS system over Ethernet port.

## Specifications

Digital SFN repeater / MFN transposer	
Supported standards	<b>DVB-T/H/T2/T2-LITE:</b> EN 300 744, EN 302 304, EN 302 755 <b>ISDB-T/TB:</b> ARIB STB-B31, TR-B14 <b>ATSC:</b> A/53, A/110 <b>DAB, DAB+:</b> EN 300 401 v1.4.1
Input	SMA, 50Ω, 150-900 MHz
Output	N female, 50Ω, VHF band III 174-240 MHz, UHF band IV/V 470-862 MHz
Bandwidth	1,5 / 1,7 / 5 / 6 / 7 / 8 MHz
ECHO CANCELLER	
Sensitivity	-75 to -10 dBm
Gain loop	15 dB typical
Compensation window	7 μs and 14 μs
Echo compensation level	> 40 dB
Frequency response	± 0,1 dB
CONTROL AND MONITORING	
Local control and monitoring	Local operation with integrated LCD and/or computer
Remote control	Over Ethernet (web browser), SNMP, IEC 864-1 (optional)
Supported protocols	TCP/IP, HTTP, SNMP
GENERAL DATA	
Frequency range	VHF band III 174-240 MHz, UHF band IV/V 470-862 MHz, 50Ω
Frequency stability	1 x 10 <sup>-7</sup>
Output power	50W rms and 200W rms
Dimensions and weight	50W rms: 400 mm x 19" x 1U, 4,5 kg, 200W rms: 545 mm x 19" x 2U, 15 kg
Return loss	> 18 dB
Power stability	± 0,25 dB
Supply voltage and frequency	110/230 V ±15%, 47 to 63 Hz
Power factor	>0,95 (typical 0,98)
Cooling	Air cooling
Nominal operating temperature	In accordance with ETS 300 019-1-3 (class 3.2) -5°C to +50°C
Relative humidity	In accordance with ETS 300 019-1-3 (class 3.2) 95% RH @ 30°C, no condensation, [8%-100% for transportation and storage]
Maximum altitude	2.800m, higher on request
PROTECTION	
Output power, Reflected power, Over current, Over temperature, Over voltage, Lighting protection	
CONFORMITY WITH STANDARDS	
Low voltage directive	73/23/EEC
EMC directive	89/336/EEC
CE Marking directive	93/68/EEC