halo

Digital SFN repeaters & MFN transposers

TYPES

Air cooled
HALO AC3025
HALO AC3050
HALO AC3100

HALO AC4025
HALO AC4050
HALO AC4080
HALO AC4130

HALO digital SFN repeaters/transposers to fill the gaps and optimize DVB 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 DVB 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. Automatic mode detection allows the entire SFN network cell to be switched instantaneously.

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)
- 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 with automatic mode detection and synchronization
- 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

Exciter/Compact Version

The exciter is housed in a compact 19” 1U rack mount and with the output power amplifier providing up to 130W on UHF band and up to 100W on VHF band. 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	
Standards	DVB-T/H/T2, ISDB-T and ATSC
Input	N (f), 50 Ohm, 170 ÷ 862 MHz (agile tuning)
Sensitivity	-75 ÷ -15 dBm
Selectivity	> 60 dB ± 4.2 MHz
Return losses	> 15 dB
ECHO CANCELER	
Cancellation level	40 dB, typical
Cancellation window	20 µs
Selective cancellation window	1.6 µs (time shift from 2 to 820 µs)
Doppler cancellation	yes
Maximum echo/signal ratio	> +15 dB (over the main signal), typical
Total delay	< 10 µs
ECHO CANCELLER + HIGH PERFORMANCE CANCELLATION OPTION	
Cancellation level	65 dB, typical (over the main signal)
Maximum echo/signal ratio	< +35 dB (over the main signal), typical
Maximum echo level at input	-10 dBm
Max. delay compensation	200 µs (extendable)
GENERAL DATA	
Frequency range	UHF band IV/V (470 MHz to 862 MHz), VHF band III (170 MHz to 254 MHz)
Output power	UHF band IV/V (up to 130W), VHF band III (100W), N (f), 50 Ohm
Supply voltage	110/230V 50/60 Hz
Operating temperature range	-5°C ÷ 40°C
Max. relative humidity	90%, non condensing
Max. operating altitude	2.500m, higher on request
Control and monitoring	localy over LCD, localy/remote using Ethernet 10/100/100 RJ-45
Size	1U rack 19” x 460mm