

# Channelot 100



## DVB-T/H Micro-Transmission Station

- **Low cost, fully integrated transmitter-site solution**
- **All-in-one single box includes satellite and wire-line interfaces, GPS receiver, modulator and adaptively pre-corrected HPA**
- **Compact and low-power 2U 19"-rack enclosure**
- **Comprehensive remote management**



**Now with adaptive  
HPA pre-correction**

The Channelot 100 DVB-T/H Micro-Transmission Station is a single-box implementation of a full-featured DVB-T/H low-power transmission site. Channelot 100 includes in one compact 2U-height enclosure all the functions needed at the point of deployment of the low power transmitters that are becoming a key element to the large-scale deployment of mobile TV and digital TV networks.

### Function

Channelot 100 integrates all the functions needed at the low-power DVB-T/H transmission site:

- Satellite and wire-line telecom interfaces for terminating the content distribution network
- Built-in GPS receiver for SFN network synchronization
- Full-featured DVB-T/H modulator
- Built-in, up to 100W HPA, with higher power levels available through add-on modules – all adaptively pre-corrected
- Carrier-grade remote management

### Features and Benefits

- DVB-S2 / DVB-S satellite receiver.
- Wide selection of wired telecom network interfaces for integrated termination of PDH, SDH or packet-transport distribution networks.

- GPS receiver with a “holdover” function based on a high-stability local oscillator.
- Direct interface to an IEEE 1588 client for SFN synchronization over an IP distribution network
- Full-featured DVB-T/H modulator that supports SFN as well as MFN operation – including rate adaptation and PCR re-stamping.
- Built-in adaptively pre-corrected HPA that provides 10W, 25W, 50W or 100W of output power at an unmatched level of signal integrity. Higher power levels – up to 1 kW – are available through add-on modules – all adaptively pre-corrected
- Plug-in power supply modules for operation from AC or DC power, optionally available in a 1:1 load-sharing, fault-tolerant, hot-swappable configuration.
- Full suite of carrier-grade management and maintenance functions including remote visibility of unit status, remote configuration, comprehensive event reporting and logging, and software upgradeability in the field – all through web and SNMP interfaces.
- Using an optional all-passive interconnection box, two Channelot 100 stations can be operated in a 1:1 hot-redundant configuration without need for a separate controller.
- Housed in a 2 RU, 19” rack-mount chassis, Channelot 100 represents the ultimate in efficiency and space savings.



## Specifications

### Satellite Receiver

IF frequency	950-2150 MHz
Signal format	DVB-S2, DVB-S
Bit rate	4 – 90 Mbps

### Telecom Interface

Protocol	MPEG over UDP or RTP
Physical	100/1000 Ethernet over UTP 100/1000 Ethernet over fiber 1000 Ethernet over SDH Bridged Ethernet over E3/T3
FEC	Pro-MPEG CoP 3

### ASI Input Interface

Two ASI interfaces per EN 50083-9 Annex B, with auto-switchover

### GPS Receiver

Receiver	12 channels
Antenna power	5V, 30 mA DC

### Modulator

Format	DVB-T, DVB-H
FFT size	2K, 4K, 8K
Guard interval	1/32, 1/16, 1/8, 1/4
Modulation	QPSK, 16QAM, 64QAM
Convolutional code rate	1/2, 2/3, 3/4, 5/6, 7/8
Hierarchical modulation	$\alpha = 1, 2, 4$
Inner interleaver	Native or In-depth
TPS signaling	DVB-T or DVB-H
MFN operation	Rate adaptation PCR re-stamping
SFN operation	MIP processing GPS synchronization

### RF Output

Frequency range	470 – 862 MHz
Channel bandwidth	5, 6, 7, 8 MHz
Pre-correction	Linear Adaptive non-linear
Mask	-40 dB @ 4.2 MHz offset
MER	37 dB
Output power	10W, 25W, 50W, 100W Up to 1 kW with add-on modules

### Auxiliary Interfaces

Redundancy interface	Interconnecting two Channelot 100 stations for autonomous 1:1 hot redundancy
Logic inputs	For external alarm monitoring and reporting
Summary alarm	Dry contacts

### Management

Interface	Ethernet or WAN
Protocol	Web (HTTP) and SNMP
Configuration	Non-volatile memory-resident with back-up copy
Status	Readable remotely
Event notification	Web display and SNMP Traps
Software update	Remotely upgradeable in the field

### Power

Power supply	-48V DC 100 – 240V AC 1:1 load-sharing, fault tolerant, hot swappable option
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