Channelot 102

DVB-T2 Micro-Transmission Station

- **Low cost, fully integrated DVB-T2 transmitter-site solution**
- **All-in-one single box includes satellite and wire-line interfaces, GPS receiver, DVB-T2 modulator and adaptively pre-corrected HPA**
- **Compact and low-power 2U 19”-rack enclosure**
- **Comprehensive remote management**

The Channelot 102 DVB-T2 Micro-Transmission Station is a single-box implementation of a full-featured DVB-T2 low-power transmission site. Channelot 102 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 effective implementation of modern digital TV networks.

Function

Channelot 102 integrates all the functions needed at the DVB-T2 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-T2 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 net-works; CoP 3 packet-level error protection for IP transport.
- GPS receiver with a “holdover” function based on a high-stability local oscillator.
- SFN synchronization using IEEE 1588 signaling over IP.
- Full-featured DVB-T2 modulator that supports SFN as well as MFN operation
- 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
- 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 102 stations can be operated in a 1:1 hot-redundant configuration without the need for a separate controller.
- Housed in a 2 RU, 19” rack-mount chassis, Channelot 102 represents the ultimate in efficiency and space savings.

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Specifications

Satellite Receiver

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

Telecom Interface

Protocol	DVB T2-MI over IP
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
Synchronization	IEEE 1588

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-T2 Single PLP, Multiple PLP SISO, MISO
FFT size	1K, 2K, 4K, 8K, 16K, 32K – normal and extended
Guard interval	1/128, 1/32, 1/16, 19/256, 1/8, 19/128, 1/4
Modulation	QPSK, 16QAM, 64QAM, 256QAM – normal and rotated
Code rate	1/2, 3/5, 2/3, 3/4, 4/5, 5/6 – short (16k) and normal (64k) blocks
Network sync.	MFN, SFN

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 102 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

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