



ODU + ANTENNA

Main Features

- Designed for multiple Fixed or Mobile applications
- Quasi Non-Line-Of-Sight (NLOS)
- Robust DVB-T2 modulation
- Bandwidth: 6-7-8MHz
- Bit Rate up to 50Mbps
- Simplex (mono-directional) or Double Simplex (bi-directional) configurations
- Inputs: ASI – ASI over IP (Analog Optional)
- Outputs: selectable over a wide range of interfaces
- Easy setting /monitoring in Local or Remote modes.
- Front Panel Color Display available
- Full SNMP commands available
- Heavy Duty Tripode with a 2,5 meters telescopic pole, 360° azimuth/-60/+90° elevation adjustment

Product overview

- The OMNI LINK is a 1W RMS, COFDM DVB-T2 based, microwave link, assuring great robustness of operation and extreme signal quality even in non-line-of-sight alignment conditions.
- The OMNI LINK is very flexible and can be configured upon specific customer needs.
- Inputs can be Analogue Audio/Video (optional encoder), ASI or IP with automatic redundancy switch. At receiver side the user can select either ASI , IP or analogue output.
- The RF head is totally frequency agile within frequency sub-bands in the 2-11GHz range and is equipped with low-phase-noise local oscillators, assuring very high signal stability.
- The Modem and the Receiver are housed in a single 19" 1U rack chassis, and are both equipped with a very user-friendly LCD interface.
- A complete remote control of the Modem unit is possible by means of different cabled or wireless telecommunications networks. All parameters can be quickly and easily managed through a remote
- PC connection for a comfortable control and monitoring inside an OB Van or in any other network location by means web browser-based access.



IDU OMNI-LINK | Receiver



IDU OMNI-LINK | Transmitter



System Description

The OMNI LINK is a brand new equipment specifically designed for Mobile transportable systems but also available for fixed connectivity where LOS is an issue. It brings the legendary reliability and unsurpassed performances of Skylinks MW Radios together with the great Screen Service experience in DVB modulators out and straight in to the live events arena.

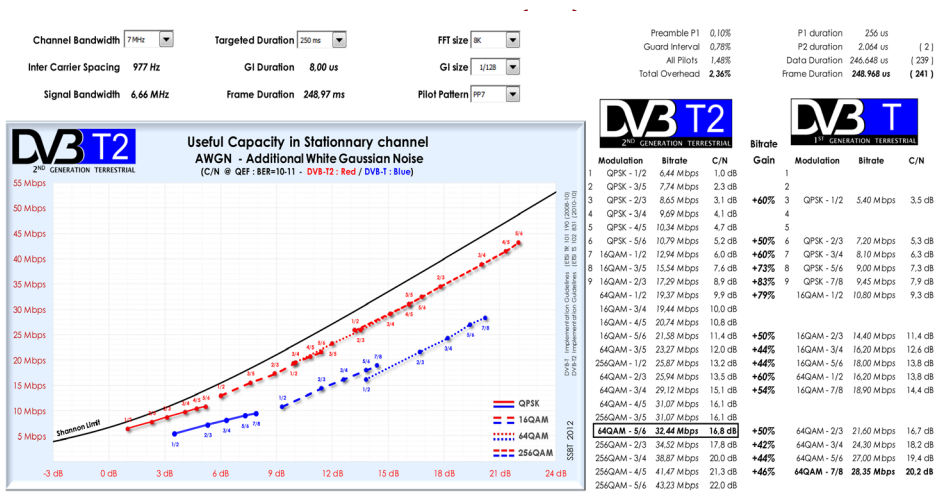
Very quick to deploy: even an experienced engineer can set it up in less than 15 minutes (it does not require accurate and time consuming setup).

The OMNI LINK is available in several system configurations:

1. TX on Tripode or OB Van + RX on Tripode
2. TX on Tripode or OB Van + fixed RX with Omnidirectional Antenna
3. TX on Tripode or OB Van + fixed RX with Panoramic Receiving Station (Directional Antenna with rotating System).

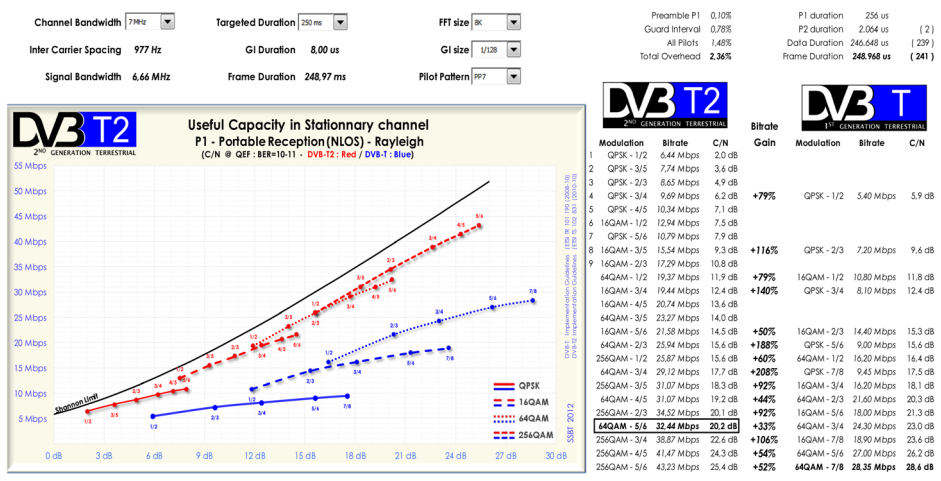
The mobile version can be provided with special bags and fly cases for easy transportation.

The optional add-on of Encoders offers different solutions for analog & digital audio + video signals inputs/outputs.



Comparison with normal DVB-T radio link available on the market (limited to 28Mbps)

Bit Rate value vs. BW and modulation scheme (NLOS)



Comparison with normal DVB-T radio link available on the market (limited to 28Mbps)



System Components – ODU

MAIN FEATURES

- High Linearity allowing highest order modulation schemes.
- Very low power consumption.
- Compact and Lightweight.
- Very low Phase Noise.
- Superior reliability – High MTBF.
- Fully Calibrated over the temperature range.
- Telemetry Interface.
- Antenna direct mount (optional N type connector)

FREQUENCIES

- Most popular/recommended 6,6-7,5GHz (e.g. Brazilian band 6.650-7410MHz). Other bands on demand 2-11GHz

ODU PARAMETERS

- TX output power: Max +30dBm at QPSK – 30dB dynamic range.
- RX Threshold: (at 64QAM/33Mbps) –80dBm
- Modulation: COFDM – DVB-T2
- CH BW 6 –7- 8MHz

The following Table shows indicative distances reachable for 33Mbps at 64QAM for an availability >99,99%:

Freq. (GHz)	Dish Diam. (m.)	Pw Output (dBm)	Distance (Km.)
2	0,6	+26	25
6 - 7	0,6	+24	30
10	0,6	+22	25

Examples on Line-of-Sight link conditions.

OTHER OPTIONS

- Omnidirectional and sectorial RX antenna
- Panoramic central receiving station.





System Components – IDU TX

Indoor Unit Modem

Description

The digital modem encloses in a 1-unit rack the best of what is available on the market regarding flexibility and performance. The OMNI-LINK equipped with different input/output data interfaces (DVB-ASI, ASI over IP) can tolerate heavy selective fading distortions; it is ideal for the transport of signals in broadcasting and other wireless applications.

- R1U chassis
- Standard system solutions for 1+0 mono-directional
- Inputs : 4 ASI or IP
- Modulations: from QPSK to 256QAM
- Capacity: up to 50 Mbps
- Local or Remote setting and operation

Options

- Encoder Inputs SDI o CVBS
- Low latency

Bi-directional (composed by 1 full-duplex ODU + 1 Modem and 1 Receiver each terminal)



System Components – IDU RX

Indoor DeMdem

Description

The OMNI-LINK RX receives a RF signal modulated with standard ETSI EN 302755 or ETSI EN 300744, demodulated and output it. Very high efficiency Forward Error Corrections (LDPC + BCH).

RX Outputs

- **SD-SDI:** N° Outputs: 2 Connector: BNC, R Input: 75 Ohm, V Input: 800 mVpp (500 to 1200 mVpp); Standard: SMPTE 259M, 292M
- **Audio:** N° Outputs: 2 (Left + Right) Connector: mini XLR
- **RGB-SD:** N° Outputs: 1x3 (R, G, B) Analog component HD; Connector: RCA
- **CVBS-SD:** N° Outputs: 1 Composite Video Blanking Sync; Connector: RCA
- **Y/Pb/Pr:** N° Outputs: 1x3 (Y Pb Pr) Analog component HD; Connector: RCA,
- **HDMI (HD/SD):** N° Outputs: 1 Connectors: HDMI Type A
- **ASI N° output: 3**
- TS Descrambled (TSD)
- Connector type: BNC
- R input: 75 ohm - V input: 800 mVpp (500 to 1200mVpp) - MPEG-2 TS ISO/IEC 13818-1
- CEI EN 50083-9
- **Video over IP:** Connector type: Ethernet RJ45; Standard SMPTE 2022