

DIGITAL TV MICROWAVE LINKS  
STL (FIXED) & MOBILE

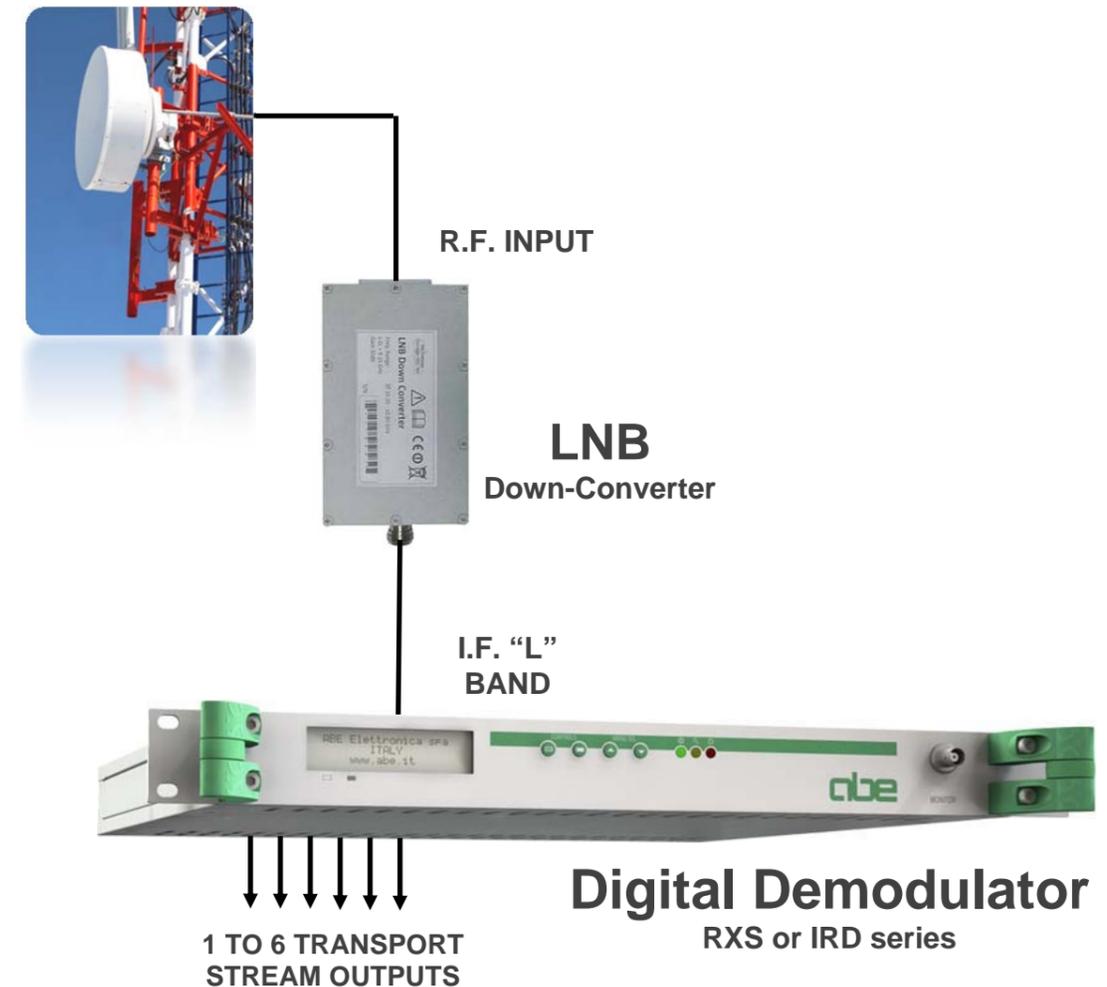
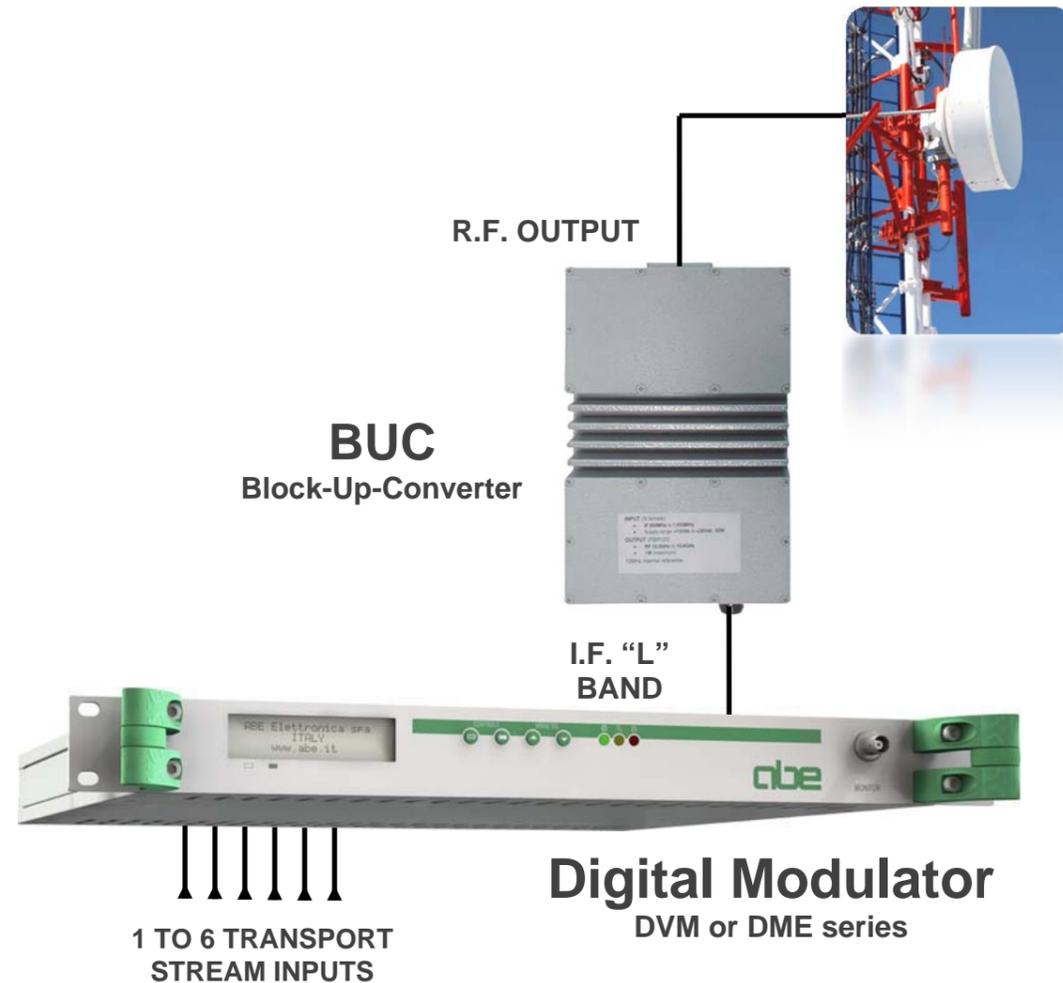
the high quality, professional and cost-effective solution

ABE SOLUTION FOR BACKHAULING  
AND CONTRIBUTION IN TELEVISION BROADCASTING:  
**KEY FEATURES AND MAIN BENEFITS**



# MICROWAVE LINKS “DML” SERIES

ABE SOLUTION FOR BACKHAULING AND CONTRIBUTION IN TELEVISION BROADCASTING



## KEY FEATURES

- Capable to carry up to #6 different MPEG Transport Streams
- Transparent mode to carry SFN Transport Streams
- High capacity: over 100Mbit/s total net bit rate in 28MHz RF bandwidth
- Frequency Agile in its range (typically 1GHz)
- Several frequency ranges available (6, 7, 8, 10, 13, 14 GHz – other on request)
- Fixed (STL) and mobile (with tripods) applications
- RF heads for outdoor and indoor applications
- Standard input/output interface: ASI - On request: GBEthernet for T.S. over IP
- Analog Video/Audio in/out interfaces (versions with embedded MPEG codecs)

## MAIN BENEFITS

- USE OF THE MOST ADVANCED STANDARD (DVB-S2) FOR BACKHAULING AND CONTRIBUTION IN TELEVISION BROADCASTING
  - NO proprietary modulation schemes and FEC codes (DVB-S2 modulation schemes up to 32APSK are employed)
  - NO proprietary aggregation systems - The aggregation of the Transport Streams (up to #6) is made employing the DVB-S2 MULTISTREAM mode
  - NO proprietary encryption: DVB-S2 Physical Layer scrambling implemented
- EFFICIENT USE OF THE ELECTROMAGNETIC SPECTRUM
  - No overhead for encapsulation to carry multiple Transport Streams
  - Very high efficiency Forward Error Correction Codes (LDPC + BCH)
  - No fixed capacity: parameters (bandwidth, FEC codes, etc.) are optimized in order to obtain the best performance according to the available bandwidth and needed capacity



Tripod mounted ODU  
(OutDoor Unit) for  
mobile operation

For technical specification and detailed description,  
please see the following documentation:

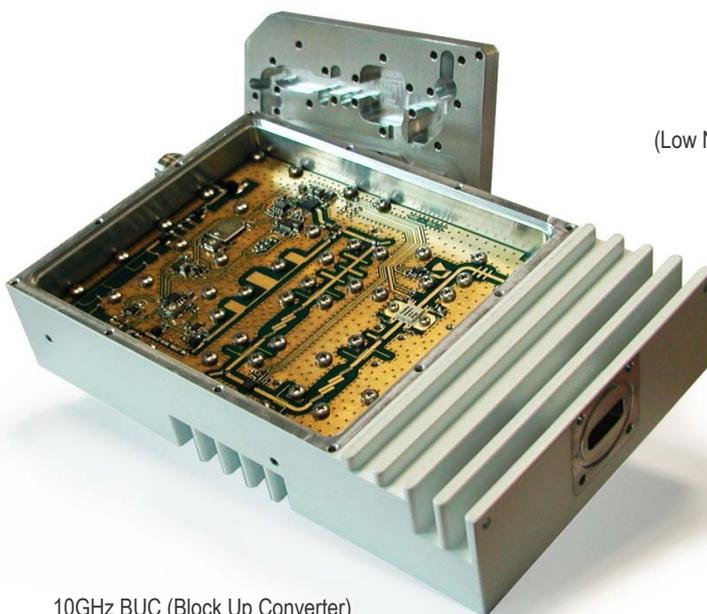
- DML series Microwave Links
- DME5000/S-DSNG-S2 Modulator
- RXS1000 Multistream Receiver

See also:

- IRD series receiver + decoder

#### LINK PERFORMANCES

Occupied bandwidth (channel):	According to symbol rate and roll-off factor settings (up to 40MHz)
Transport stream bit-rate (Link capacity):	According to modulation scheme, code rate, symbol rate, etc. (up to over 100Mbit/s)
Receiver minimum input signal:	According to modulation scheme, code rate and symbol rate (up to less than -90dBm)
Example 1:	With 14.8MS/s, 35% roll-off, 7/8 code rate, DVB-S QPSK modulation scheme, the net input bit-rate (Transport Stream bit-rate / Link information capacity) is 23.9Mbit/s, enough to accommodate four Video/Dual-Audio programs with excellent broadcast quality, in the same occupied bandwidth (around 20MHz) of an analog TV microwave link and with a receiver threshold of around -90dBm.
Example 2:	With 16MS/s, 25% roll-off, 3/4 code rate, DVB-S2 8PSK modulation scheme, the net input bit-rate (Transport Stream bit-rate / Link information capacity) is up to 34.8Mbit/s in the same occupied bandwidth (around 20MHz) of an analog TV microwave link and with a receiver threshold of around -90dBm.
Example 3:	With 23.3MS/s, 20% roll-off, 9/10 code rate, DVB-S2 32APSK modulation scheme, the net input bit-rate (Transport Stream bit-rate / Link information capacity) is up to 101.5Mbit/s in an occupied bandwidth of a standard Link (28MHz) with a receiver threshold of around -80dBm.



10GHz BUC (Block Up Converter)

7GHz LNB  
(Low Noise Block Down Converter)



All specifications contained in this document may be changed without prior notice.