# Gigaplex MVDDS Transmitter & Gapfiller

## Digital HDTV–Broadband Transmitter DVB-MC/S - MWS - MVDDS

Gigaplex Gapfiller for satellite and MVDDS Broadcast terrestrial coverage enhancement, comply with the **ITU & DVB** specifications. Designed for quick and low cost MVDDS Hypercable Digital Television & Internet deployment, Gigaplex MVDDS Transmiter is also a terrestrial satellite broadband Gapfiller repeater to provide a reliable service for the DVB-S DVB-S2.

Gigaplex Gapfiller is the beautiful solution when the satellite antenna size required is more than one meter and when in tropical areas daily rain fade occur, Gigaplex Gapfiller provide a reliable service with small size user antennas (Flat 20cm up to 50 cm). One Gigahertz up to 1000 TV channels can be re-broadcasted in HD standard (DVB-S MPEG4) by the Gigaplex Gapfiller according to DVB standards & ITU recommendations.

EIRP is 35 dBm in omni-directional mode and 42 dBm in sectorial mode, in Option high stability GPS reference clock can be provided.

*Gigaplex Gapfiler for MVDDS HDTV and satellite enhanced coverage and reliable service.*

## Key features

- Designed for quick on air MVDDS Hypercable and BWA Broadband Repeaters
- Easy to upgrade for the Triple Play wireless networks.
- DTV Broadcast, BWA and backbone applications
- Régular KU band (10,7-12,7 GHz). **Options:** C Band ( 3,4-4,2 GHz ). Q Band (40,5-43,5 GHz).
- Automatic redundancy if required.
- Provide a capacity of One Gigahertz.
- Industry's Most Compact solid state transmitter system.
- Digital Signal Processing for Optimum signal quality and channels transposition
- Very High Speed Internet with HyperGate option
- Compliant with the Sustainable Development
- Energy Saving, Sun and Wind Powered.
- Maximizing Investment Return.

Conforme au Développement Durable
Compliant with Sustainable Development

# Hypercable the Wireless Cable

## Product data sheet specifications

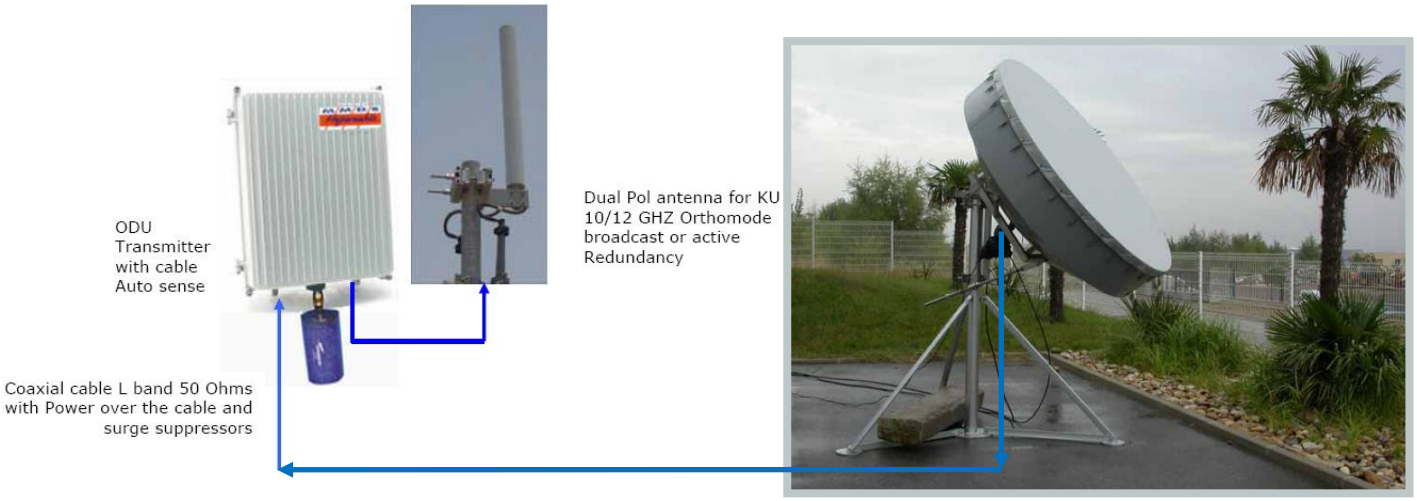
Each Hypercable Gigaplex Gapfiller is designed to ensure any migration to any DVB standard and any new wireless application. With our proprietary automatic gain control (AGC) and Phase Noise Reducer the Gigaplex delivers the maximum output power for very low main power consumption and the better phase noise quality for DVB-S-QPSK, DVB-S2-8PSK-16APSK-32APSK Broadcasting standards. Gigaplex family have been designed with a highly modular architecture to reduce running costs and makes the transmitters and the system easy to maintain in service.

- Fine output power tuning 0 dBm to 27 dBm. High Linearity, Compression point @ 1dB 27 dBm
- EIRP up to 43 dBm for broadcast service up to 50 km.
- Global AGC better than +- 01 dB in a 33 dB dynamical range
- Large family of transmit and receive antennas MISO and SIMO systems with space and angular diversity.

**OPTIONS**:
- GPS 10 MHz genlock
- 48 VDC powered for easy wind or solar energy system

*Hypercable Satellite Gapfiller repeater in the mountain. Powered by sun and windmill for satellite re-transmission in a very deep valley not line of sight to the satellite*

## Satellite Gapfiller Diagram




Radio TX ODU 27 dBm | Omni TX antenna 10 dB | Four sectorial TX 360° 4x17dB | High gain 90 & 120cm Inverted Gregorian 40dB | Energy by solar panels combined with wind mill | Furtive RX antenna 45- 75- 90-120-200 cm

**For further information, about Operators and Distributors franchising please contact M/M/D/S Hypercable**


**M/M/D/S *Hypercable*** ® S.A.R.L. - 81 rue des Carrières - ZA La Ronze 69440 - Taluyers - France
TEL: + 33 4 78 48 74 75 - Cell: +33 6 82 82 38 73 - Mail: info@hypercable.fr - Web: www.hypercable.fr
***Hypercable*** ® **The Wireless Broadband** ®

# MVDDS Gigaplex

## MVDDS KU BAND - SPECIFICATION FOR GIGAPLEX 2702KU series.

| Item | Parameter | Value |
|---|---|---|
| 1 | RF Input Frequency Range | Model A: 950-1950MHz. |
| 2 | Input source power supply | Bias-Tee to apply power +15vdc to input. Internal isolating switch or jumper. |
| 3 | LO Frequency. | Model A: 9.75GHz.<br>Model B: 10.75GHz. |
| 4 | LO Stability over temp. range | Internal frequency reference:<br>Stability $<1x10^{-10}$ per second.<br>Temp: $<+/-5x10^{-8}$ (0 to $+60^{0}$ C).<br>Ageing: $<+/-5x10^{-9per}$ day.<br>or as per ext. freq. ref. i/p. |
| 5 | RF Output Frequency Range | Model A: 10.7-11.7GHz.<br>Model B: 11.7-12.7GHz. |
| 6 | Automatic Gain Control (AGC) | AGC: Output signal power to be held at +27dBm +0-3dBm for input signal power range of -10dBm to -40dBm.. |
| 7 | Phase Lock Alarm Output | Lock +5vdc. Alarm 0vdc. |
| 8 | External 10MHz Freq. Ref input | 0dBm approx. with auto select. |
| 9 | Ext. 10MHz input connector | Sealed TNC type |
| 10 | Input/Output Impedance | 50 ohm. |
| 11 | Return Loss | Typically better than 15dB. |
| 12 | Input Connector (L-band) | Sealed N-type. |
| 13 | Noise figure | Typically 10dB for low signal level. |
| 14 | Output Connector (Ku-band) | Sealed SMA-type. |
| 15 | Output Power at –1dB Compression. | Typically +27dBm min at 25ºC. |
| 16 | Conversion Gain | Variable 35dB-65dB depending upon input signal power. |
| 17 | Gain Flatness | +/-0.5dB/40MHz segment, over band. |
| 18 | Image Rejection | 40dB min. |
| 19 | LO Leakage at Input. | -50dBm min |
| 20 | Phase Noise (with int. ref.)min. | -75dBc/Hz @ 100Hz offset.<br>-92dBc/Hz @ 1KHz offset.<br>-100dBc/Hz @ 10KHz offset.<br>-107dBc/Hz @ 100KHz offset.<br>-125dBc/Hz @ 1MHz offset. |
| 21 | DC Power Supply. | +24+/-4vdc at 1 amp approx. Internal fuse protected. Internal power conditioner for module/LNB supplies. |
| 22 | Power supply/Lock Alarm Connector | Sealed male 5-pin type. |
| 23 | Operating Temperature Range | -25ºC to +60ºC from 30 minutes after switch-on. |
| 24 | Environmental | Weatherproof sealed IP65 including an Andrew type SD003 dehydrator with replaceable cartridge. |
| 25 | Mechanical construction | In special metal alloy box painted grey. Fitted clamp to mount on pole |
| 26 | Dimensions excl. clamp & connectors | 40-60mm diameter. Connectors on lower face. |