



## FEATURES

- Transparent mode to deliver transport streams in SFN networks
- PCR restamper for correct timing reconstruction
- Non-volatile memory for system configuration
- Easy configuration through backlit LCD display, function keys or USB port and high level commands
- Embedded remultiplexer for the DVB-S/S2 TS reconstruction
- Low power consumption
- Excellent noise figure
- High stability synthesized oscillators
- Remote control interface

### Options:

- Battery power supply
- Outdoor waterproof unit
- SNMP

## DESCRIPTION

The DKL PLATINUM SERIES high-performance digital microwave link is fully compliant with the DVB-S and DVB-S2 DTV standards and capable of Multi Frequency Network (MFN) and Single Frequency Network (SFN) operations. It features superior performance, tested reliability, great flexibility, and simple installation. The system is available with different output powers in several frequency ranges between 1.5 and 14.5 GHz, and is suitable for use as an individual point-to-point link or as part of a complete distribution network.

The transmitter, housed in a 3HE cabinet, integrates the plug-in digital modulator (ASI input) with the other transmission modules. The modulator can operate in either DVB-S or DVB-S2 mode (selectable). The FEC and the symbol rate setting can easily be programmed using the backlit display or via the USB port on the front panel. The receiver, housed in a 1HE rack cabinet, is composed of a downconverter, an IRD for DVB-S/S2 standards, and a TS adaptation board for SFN compatibility. An optional external 1HE demodulator is required for analog audio-video outputs. For SFN operation, the DKL PLATINUM link recognizes the MIP packet insertion. The modulator provides the packet signature and the receiver extracts it for appropriate use.

The system is available in both indoor and outdoor versions. In the outdoor configuration, RF modules are fixed in waterproof tin cases which can be mounted behind the parabolic antennas. The external head is connected to the internal cabinet by a single coaxial cable that passes the RF signal and power supply. Compatible solid-state amplifiers are available for particularly difficult connections requiring additional power.

| <b>DVB-S</b>                     |  |
|----------------------------------|--|
| Modulation type                  | QPSK (DVB-S EN 300 421)  |
| Information capacity             | Up to 51.60 Mbps in 38.4 MHz bandwidth   |
| TS format                        | Burst or continuous mode   |
| ASI input length                 | 188 byte or 204 byte (with automatic adaptation)   |
| Symbol rate                      | Up to 32 MBaud   |
| Outer coder                      | Reed Solomon encoder 188 / 204   |
| Inner coder                      | Punctured convolutional  |
| Code rate (FEC)                  | 1/2, 2/3, 3/4, 5/6, 7/8  |
| <b>DVB-S2</b>                    |  |
| Modulation type                  | QPSK, 8PSK, 16APSK, 32APSK (DVB-S2 EN 302 307)   |
| Information capacity - QPSK      | Up to 57.23 Mbps in 38.4 MHz bandwidth   |
| Information capacity - 8PSK      | Up to 85.73 Mbps in 38.4 MHz bandwidth   |
| Information capacity - 16APSK    | Up to 114.15 Mbps in 38.4 MHz bandwidth  |
| Information capacity - 32APSK    | Up to 142.49 Mbps in 38.4 MHz bandwidth  |
| Roll-off factor                  | 20 %, 25 %, 35 %   |
| TS format                        | Continuous mode  |
| Symbol rate                      | Up to 32 MBaud   |
| Outer coder                      | BCH  |
| Inner coder                      | LDPC   |
| Code rate                        | FEC = 1/2, 1/3, 1/4, 2/3, 2/5, 3/4, 3/5, 4/5, 5/6, 8/9, 9/10   |
| <b>TRANSMITTER</b>               |  |
| Data input                       | ASI, BNC female, 75 Ω  |
| IF frequency                     | 70 MHz, 2 x SMB connectors   |
| IF level                         | 0 dBm  |
| Bandwidth (MHz)                  | (1+(Roll-off Factor)) x Symbol Rate  |
| Modulator visual signalling LEDs | Data presence, 188/204 mode, data input overflow, system ok  |
| Communication port               | USB, RS-232  |
| RF output impedance              | 50 Ω   |
| Local oscillators                | Low noise PLL controlled   |
| <b>RECEIVER</b>                  |  |
| RF input impedance               | 50 Ω   |
| Receiver input level             | From -85 to -35 dBm  |
| Gain                             | > 30 dB, 35 dB typical   |
| Noise figure                     | < 5 dB   |
| Outputs                          | 2 x ASI, BNC female, 75 Ω<br>L band, BNC female, 75 Ω (for external IRD option)  |
| Local oscillators                | Low noise PLL controlled   |
| <b>EXTERNAL IRD (optional)</b>   |  |
| Inputs                           | L band, F female, 75 Ω<br>ASI, BNC female, 75 Ω  |
| Outputs                          | 2 x ASI, BNC female, 75 Ω<br>2 x analog video, BNC female, 75 Ω<br>2 x analog audio, XLR male<br>2 x analog audio, RCA |
| <b>GENERAL</b>                   |  |
| Power supply                     | 240 VAC ± 15 % (110 VAC optional)  |
| Operating temperature            | -5 °C to +45 °C  |
| Relative humidity                | 95 %, non-condensing   |
| Cooling                          | Natural convection and DC fan  |
| Dimensions (W x H x D)           | Transmitter: 438 x 132 x 418 mm<br>Receiver: 483 x 44 x 521 mm   |
| Size                             | Transmitter: 19" 3HE / Receiver: 19" 1HE   |
| Weight                           | Transmitter: 12 Kg / Receiver: 3 Kg  |

| MODEL       | FREQUENCY RANGE | CONNECTOR | TRANSMITTER OUTPUT POWER | AMPLIFIER    |              |                   |
|-------------|-----------------|-----------|--------------------------|--------------|--------------|-------------------|
|             |                 |           |                          | OUTPUT POWER | DRIVER POWER | POWER CONSUMPTION |
| DKL-1/2-P   | 1.5 - 2.7 GHz   | N         | 1W - 5W - 10W            | 20W - 40W    | 1W - 5W      | 90W - 150W        |
| DKL-3/4-P   | 3.4 - 4 GHz     | N         | 3W - 10W                 | 10W - 20W    | 0.1W - 1W    | 65W - 80W         |
| DKL-4/4-P   | 4 - 4.6 GHz     | N         | 3W - 10W                 | 10W - 20W    | 0.1W - 1W    | 65W - 135W        |
| DKL-4/5-P   | 4.6 - 5.2 GHz   | N         | 3W - 10W                 | 10W - 20W    | 0.1W - 1W    | 65W - 135W        |
| DKL-5/7-P   | 6.4 - 7.2 GHz   | WR137     | 1W - 3W                  | 10W          | 0.25W        | 90W               |
| DKL-8/8-P   | 8 - 8.6 GHz     | WR112     | 0.2W - 1W - 3W           | 6W           | 1.5W         | 65W               |
| DKL-10/11-P | 10 - 11 GHz     | WR75      | 0.2W - 1W - 3W           | 10W - 20W    | 0.2W         | 110W - 130W       |
| DKL-12/15-P | 14 - 14.5 GHz   | WR75      | 0.2W - 0.8W              | 3W - 6W      | 0.2W         | 30W - 60W         |