**EL940**

**Satellite IP Receiver**

**Elevation Product Family**

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**Description**

The EL940 is a high performance professional satellite IP receiver designed for the reception of IP traffic transmitted over satellite in compliance with the DVB-S, DVB-DSNG or DVB-S2 standards. The EL940 connects directly to terrestrial IP network infrastructures via a single auto-switching Gigabit Ethernet interface. The receiver demodulates, restores and filters the data received from the satellite at rates of up to 154Mbit/s.

The EL940 comes with a single, fixed hardware configuration optimized for applications that require a low initial investment without compromising on performance. It is ideally suited for point-to-multipoint applications, such as content distribution.

The PC architecture and the Linux operating system of the EL940 allows to integrate data processing software, such as Newtec’s Tellitec IP software, directly on the unit (this integration may modify the performance of the device).

**Key features**

- DVB-S2 and DVB-DSNG/S compliant
- QPSK, 8PSK, 16APSK and 32APSK
- Multistream and VCM support
- Compatible with MPE and XPE encapsulation
- IP reception up to 154 Mbit/s
- Auto-switching GbE interface
- Linux-based PC architecture
- LNB control

**Main advantages**

- Cost-effective design for a low initial investment
- Full compatibility with the DVB-S/S2 standard for a guaranteed interoperability
- Highest service availability due to stable operation and robust build
- Advanced features for a maximum data throughput and operational flexibility
- Ideally suited for star topology
- Possible integration with data processing software

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**Applications**

The IP receiver can be used in both bidirectional applications and in unidirectional applications.

- Content distribution: digital cinema, digital signage
- Primary distribution of IPTV
- IP trunking
- Corporate networking
- DSNG IP Applications

**Related products**

EL170 Satellite IP modulator
EL178 High Speed Satellite IP modulator
EL470 Satellite IP modem
EL478 High Speed Satellite IP modem
EL970 Satellite IP demodulator
EL978 High Speed IP Satellite Demodulator
EL8x0 Protocol Enhancement Proxy appliances

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**Related Documents**

White paper optimization of satellite capacity
Care Pack Brochure
Reference cases

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Input interface

**L-band input (dual input)**
- Connector: 2 x F-type (F), 75 ohms
- Return loss: > 7 dB
- Level: -65/-25 dBm
- Frequency: 950 - 2150 MHz
- Adjacent signal: < (Co+7) dBm/Hz where Co = signal level density

**LNB power and control**
- Max. current: 350 mA (on selected L-band input)
- Voltage: 11.5-14 V (vertical polarization), 16-19 V (horizontal polarization) & additional 22 kHz ± 4 kHz (band selection according to universal LNB for ASTRA satellites) & DiSEqC command transmission (DVB-S only)

Demodulation

**Baud rate range**
- DVB-S/DSNG: 1-45 Mbaud
- DVB-S2 Q/8PSK, 16APSK: 0.256 -45 Mbaud
- DVB-S2 32APSK: 1 - 30 Mbaud (with option AL-15)

Supported modulation and coding types
- DVB-S/DSNG:
  - Outer/Inner FEC: Reed Solomon /Viterbi
  - MDCODs:
    - QPSK: 1/2, 2/3, 3/4, 5/6, 7/8
    - BPSK: 2/3, 5/6, 8/9
    - 16QAM: 3/4, 7/8
- DVB-S2:
  - Outer/Inner FEC: BCH/ LDPC
  - MDCODs:
    - QPSK: 1/4, 1/3, 2/5, 1/2, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
    - BPSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10
    - 16APSK: 3/4, 5/6, 8/9, 9/10
  - Support of DVB-S2 Variable Coding and Modulation (VCM) mode

Performance

**Supported frame length**
- DVB-S/DSNG: 188 byte
- DVB-S2 Short Frames: 16200 bit
- DVB-S2 Normal Frames: 64800 bit

Data Processing

- Maximum rate: 154 Mbit/s or 200,000 packets per second
- Supported data encapsulation protocol:
  - Multi Protocol Encapsulation (MPE) (EN 301 192 V1.2.1).
  - Extended Performance Encapsulation (XPE) - Newtec’s highly efficient encapsulation protocol for the encapsulation of Ethernet/IP frames in DVB-S2 Base-Band frames
- Data filtering: - 1 stream in DVB-S2 Multistream - up to 256 configurable PID filters - one air MAC address filter

Output interface

**Ethernet interface**
- Auto-switching 10/100/1000 Base-T Ethernet interface

Generic

**Monitor & Control**
- Web based GUI
- Management via IP interface over Ethernet (UDP and TCP supported)
- Key monitor parameters available locally on front panel
- Device setup available through the front panel
- Real time clock
- Persistent memory for configuration storage

Physical

- Very compact: 1RU, width: 19”, depth: 15.3”, 6kg
- Power supply: 90-130 & 180-260 Vac, 60VA
- Temperature: - Operational: 5 to 35°C - Storage: -40 to +70°C
- Humidity: 5% to 85% non-condensing
- CE label

Ordering information

**EL940 IP SATELLITE RECEIVER**
- Order n°
  - Default configuration
    - DVB-S/DVB-S2 IP receiver with GbE interface, MPE & XPE decapsulator, Multistream, VCM, L-band (950 - 2150 MHz) input, SNMP Modulation & Baud rate: DVB-S/DSNG/DVB-S2 Q/8PSK-16APSK-16QAM 45Mbaud
    - EL940
  - Configuration options
    - Category: Max. 1 option per category
      - Modulation & Baud rate: QPSK-8PSK-16APSK-16QAM 45Mbaud, 32APSK 30Mbaud
      - Default
    - Additional options
      - Category: Max. 1 option per category
        - Rack mount assembly sliding rails: GM-01
        - AL-16
  - Services
    - Assistance: Care Pack Basic, Care Pack Extended
      - GA-06
      - GA-07

*upgradeable via license key