



## ULC-T Line Card

The universal transmit line card, ULC-T, features DVB-S2 up to 54MHz or DVB-S2X up to 125MHz carrier bandwidth with Adaptive Coding and Modulation (ACM) on the outbound channel. In conjunction with a multi-channel demodulator line card (e.g. ULC-R), the ULC-T is ideally suited for broadband applications such as Internet and VPN access to enterprise networks, along with real-time VoIP and videoconferencing on both the ST Engineering iDirect Evolution® and Velocity® platforms. The ULC-T linecard also supports BPSK spread-spectrum waveforms enabling robust low data rate communications in IoT satellite services network.

### Network Configuration

Network Technology	DVB-S2 , DVB-S2X, IoT
Modem	One Modulator (Transmit one downstream carrier)
Modulation	DVB-S2: QPSK, 8PSK, 16APSK, 32APSK; 5%, 10%, 15%, and 20% Roll-off factors DVB-S2X: QPSK, 8PSK, 16APSK, 32APSK, 64APSK, 128APSK, 256APSK; 5%, 10%, 15%, and 20% Roll-off factors IoT: BPSK, 35% Roll-off factor
FEC	DVB-S2: LDPC 1/4 - 8/9 DVB-S2X: LDPC 1/4 - 7/9 IoT: Turbo 1/3
Symbol Rate	DVB-S2: 1 to 45 Msps DVB-S2X: 5 to 119 Msps*, with max 125 MHz occupied bandwidth IoT: 0.11 to 3.125 Mcps Chip Rate; Spread Factors: 5 to 64

#### Interoperability

Compatible with Series 15100 Universal Hub (5IF/20 Slot)  
DVB-S2 requires Evolution 3.4 / Velocity 1.1 software or above  
DVB-S2X requires Evolution 4.1 or above  
IoT mode requires IoT software configuration on ULC-T

All specifications are software dependent.

\* Specifications are modem dependent.

**EVOLUTION**

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### Interfaces

#### SatCom Interfaces

TxIF: Type-F, 950–2000 MHz, +5/-35 dBm power

#### Data Interfaces

GigE LAN A: Data & Control; GigE LAN B: Data & Control. Link Aggregation.  
Console: RS232 over RJ-45

#### Timing Interface

Locked to customer supplied PPS/10 MHz through backplane

#### Other Features

Linear pre-distortion

### Mechanical & Environmental

Redundancy	Software controlled, hot-swappable, and auto-failover
Weight	0.83 kg (1.48 lbs)
Operating Temperature	0° to +45°C (+32° to +113°F)
Humidity	0–95% non condensing
Input Voltage	24V; 65W (max)