ULC-R Line Card

The universal receive line card, ULC-R, features multi-channel Adaptive TDMA demodulation for inbound traffic with an aggregate symbol/chip rate of up to 29 Msps/Mcps. In conjunction with a modulator line card (e.g. ULC-T), the ULC-R supports efficient inbound FEC with 2D 16-State coding, making it ideally suited for voice, video and data applications in enterprise and mobility networks on both the ST Engineering iDirect Evolution and Velocity platforms. The ULC-R line card can also be configured alternatively to support a proprietary BPSK spread spectrum waveform to enable low data rate communication in conjunction with the iDirect portfolio of Fixed/Dynamic IoT Terminals available in either Ku-Band/Ka-Band variants.

Network Configuration

Network Technology	Adaptive TDMA (ATDMA), IoT**
Modem	ATDMA: Demod up to 16 channels IoT**: Demod up to 1 channel
Modulation	ATDMA: SS-BPSK (SF:2/4/8), BPSK, QPSK, 8PSK, 16 QAM*, 5% & 20% Roll-off factor* IoT**: BPSK, 35% Roll-off factor
FEC	ATDMA: 2D 16-State 1/3-9/10* IoT**: Turbo 1/3
Carrier Parameters	ATDMA: Symbol Rates: 128 ksps to 29* Msps Chip Rates: 1 Mcps to 29 Mcps Maximum Aggregate symbol/chip rate: 29 Msps/Mcps IoT**: Chip Rates: 110 Kcps - 3125 Kcps; Spread factors 5 to 64

Interoperability

Compatible with Series 15100 Universal Hub (5IF/20 Slot)
ATDMA Modulation and Carrier Parameter availability based on software release.
*Requires suitable Evolution software. Note Velocity software supports up to 8PSK, 7.5 Msps/Mcps max, 20% Roll-off and code rates 1/2 to 6/7
**IoT mode requires IoT software configuration on ULC-R

EVOLUTION

VELOCITY

IOT

Interfaces

SatCom Interfaces

RxIF In: Type-F, 950–2000 MHz, -5dBm (max) composite, -130+10*log(Fsym)dBm (min) single carrier
RxIF Out: Type-F (Monitor)

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

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)