

## ST1PRO

An IP over satellite transmitter with full support of DVB-S2, integrates both encapsulator and modulator, with optional NCR timing insertion. The ST1PRO supports advanced modulation modes of the DVBS2 up to 32APSK. The ST1PRO delivers more performance at lower cost and significantly reduces long-term operating costs. Leading the market with its price performance, the ST1 enables new business models and revenue sources.



## Product Highlights

- Cost effective solution for IP over DVB-S2 transmission
- Full support of DVB-S2
  - GSE queue handling for VCM and ACM operation
  - MODCODs from QPSK to 32APSK
- Normal and short frames
- From 100Ksps to 60Msps
- 220Mbps throughput
- MPE and GSE methods
- AYECKA hardware accelerator provides extremely low jitter and latency
- Integrated GIGE Switch for easy integration with customer network
- Supports jumbo frames, pause frames and VLAN routing.
- Separate or combined management and traffic LAN interfaces
- Full L-band frequency range: 950 to 2150 MHz
- BUC powering – DC + 10MHz controllable

## Applications

- Data broadcast and multicast over satellite
- DSNG contribution
- Radio over satellite broadcast
- HD surveillance video delivery over satellite
- Cellular and wireless local loop backhauling

## Product Specifications

### DVB-S2 Modulator

<b>Standard</b>	Fully compliant with ETSI EN 302 307
<b>DVB-S2 Modes</b>	CCM, VCM and ACM modes
<b>Modulation</b>	QPSK, 8PSK, 16APSK, 32APSK
<b>Symbol rates</b>	100Ksps to 60Msps
<b>Throughput</b>	Up to 220Mbps
<b>Roll off factors</b>	0.05,0.1,0.15,0.2,0.25,0.35
<b>Coding</b>	LDPC and BCH according to DVBS2
<b>Code rates</b>	$\frac{1}{4}$ , $\frac{1}{3}$ , $\frac{3}{5}$ , $\frac{2}{3}$ , $\frac{3}{4}$ , $\frac{4}{5}$ , $\frac{5}{6}$ , $\frac{8}{9}$ , $\frac{9}{10}$
<b>Framing</b>	Short and Normal
<b>DVBS2 Pilots</b>	On / Off
<b>Frequency range</b>	950 – 2150 MHz
<b>Signal level</b>	0 to -40 dBm,
<b>RF connector</b>	Type F, 75Ohm / SMA 50 Ohms
<b>Spurious level</b>	<-55dBc/4KHz
<b>Phase Noise</b>	Better than IESS-316
<b>Reference Clock</b>	10MHz internal, stability $\pm$ 1ppm
<b>External Clock</b>	By configuration
<b>Return loss</b>	>10dB
<b>TX power off</b>	>50dB
<b>Flatness</b>	$\pm$ 0.5dB over any 36MHz band $\pm$ 2dB over the full band

### IP encapsulation

<b>MPE</b>	According to ETSI 301192
<b>GSE</b>	Based on ETSI TS 102 606 and
<b>Encapsulation Table</b>	256 Entries

### Traffic Interface

<b>Interface</b>	10/100/1000 BaseT
<b>Network</b>	L2/L3

### Control & Monitor

<b>Serial port</b>	Serial over USB CLI
<b>IP</b>	Telnet and SNMP
<b>Upgrade</b>	SW and FW field upgradeable

### Standards compliance

<b>Safety</b>	CE
<b>EMI/EMC</b>	FCC part 15, Class A
<b>Upgrade</b>	SW and FW field upgradeable

### Physical Characteristics

<b>Dimensions</b>	Rack mount – 1U 19", 31cm deep
<b>Power</b>	110/220VAC, 50/60Hz 12W
<b>BUC power</b>	24V/6A
<b>Weight</b>	1.5Kg

### Environmental Conditions

<b>Operating temperature</b>	0° to 50° C.
<b>Storage</b>	-25° to +85° C.
<b>Temperature</b>	
<b>Humidity</b>	5% to 95% non-condensing