



## Advanced DVB-S2 to DVB-S trans-modulator

### Why DVB-S2 ?

DVB-S2 is the second-generation standard for satellite broadcasting, which has been widely adopted by the broadcasting industry. The new standard benefits from recent developments in channel coding (LDPC codes) combined with a variety of modulation formats (QPSK, 8PSK and 16APSK). This more efficient technology yields increased transmission capacity along with an approximately 30% improvement in space segment utilization.

DVB-S2 provide **VCM** and **ACM** mode to optimize channel utilization by variable coding per packet.

### The DVB-S2 Migration challenge

Companies which have invested in **DVB-S** based VSATs are facing a situation where that technology may become obsolete due to the onslaught of the new DVB-S2 technology. The new-generation DVB-S2 technology offers several advantages over DVB-S, the main ones are **30% savings** in bandwidth and support for multi stream. From a technical perspective, existing DVB-S VSATs can continue to provide most of the services like Return channel and Routing, It is the receiver that has to be upgraded.

### The TM1 Pro Solution

Thanks to the Ayecka TM1-Pro, operators of existing DVB-S based VSAT networks can now easily migrate to DVB-S2 and take advantage of savings in operational costs. Rather than replacing the VSAT itself, a simple and cost-effective upgrade can solve the DVB-S2 compliance requirement.

The new TM1-Pro trans-modulation solution from Ayecka enables a smooth, quick, economical migration path to improve existing VSAT assets.

Minimal logistic efforts are required to implement the TM1-Pro upgrade, and the **ROI payback is estimated at 5-7 months**.

The Ayecka TM1-Pro is a unique trans-modulation device designed as a practical and trouble-free way to migrate existing VSAT and one way networks to DVB-S2. The TM1-Pro is an indoor unit easily installed by the end user between the LNB and the VSAT.

The TM1 operates as a transparent and integral upgrade to the network. The TM1 makes it simple and cost effective to migrate to the more efficient DVB-S2 standard, thus protecting the current investment in the VSAT network.

## TM1 Pro Specifications

<b>Receiver DVB-S2 mode</b>	
	QPSK, 8PSK, 16APSK
	up to 120 Mbps
	0.2, 0.25, 0.35
	LDPC and BCH decoder as for DVB-S2 requirements
	1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
	DVB-S2 framing
	CCM, ACM and VCM
<b>Receiver RF</b>	
	950-2150MHz
	-35 to -65 dBm
	1 to 45 Msps
	Type F, 75 Ohms
<b>SNMP MIB</b>	
	TM1 Pro MIB
	Ayecka Patent Pending Message Injection technology
<b>Receiver DVB-S mode</b>	
	QPSK
	up to 72.7 Mbps
	0.35
	Convolution with Reed Solomon
	1/2, 2/3, 3/4, 5/6, 6/7, 7/8
<b>Control &amp; Monitor</b>	
	Dsub9 Female
	CLI
	RS232, 8,n,1, 9600
	Power on/signal detect/TX state
<b>Power</b>	
	6VDC, 5W
<b>Environmental Conditions</b>	
	0° to 50° C.
	-25° to +85° C
<b>Humidity</b>	5% to 95% non-condensing
<b>Transmit</b>	
	1GHz
	27Msps
	5/6, 3/5 or 7/8
	-55 dBm +/- 5 dB
	DVB-S
	Type F, 75 Ohms
<b>Physical Characteristics</b>	
	3 cm x 8 cm x 14 cm (HxWxD)
	0.5 Kg
<b>Standard Compliance</b>	
	TUV/CTUVus; CE
	FCC part 15, Class B, EN 55022, EN 55024, EN61000, AS/NZS CISPR 22