

## Headend Systems

# Titan™ S2 DVB-S2 Digital Satellite Receiver

### Description

The Titan™ S2 Receiver is part of the ever increasing series of modules for the highly flexible Galaxy™ rack system. This rack allows users to add functionality, independently of the wiring of the system, because of its separate connector plug-in modules. The unit is extremely compact and provides top performance in digital satellite reception for headends in all kinds of digital video applications such as HFC, xDSL, MMDS, DVB-T etc. Additionally, the unit fits into Scientific Atlanta's management solution, ROSA®.

The Titan S2 Receiver is Scientific Atlanta's answer to the need to reduce cost and size in today's digital headends while achieving high quality. One Galaxy chassis can contain up to 10 receivers or a combination of other Galaxy cards. When combined with the Indus™ MKII TS Descrambler, an extremely dense acquisition system can be delivered for digital turn-around solutions.

The Titan S2 adds DVB-S2 receiving capability to the range of applications that fit into the Galaxy platform, hence enabling bandwidth savings of up to 30% as compared to traditional DVB-S transmission. This makes the Titan S2 extremely suitable for HDTV reception.



### Features

- Digital satellite receiver compatible with DVB-S/S2
- DVB-S2 license upgrade capability (securing current investments in DVB-S only Titan S2 units)
- L-band input from 950 to 2150 MHz
- Supports channel bit rates up to 90 Mbps
- Support for QPSK (DVB-S/S2) and 8PSK (DVB-S2)
- Supports MCPC and SCPC transmission
- Performance logging according to ITU-T G.826
- Enhanced signal monitoring (SNR, input signal level, BER etc.)
- Dual ASI output
- Compact design allows 10 (or 5 with LNB) Titan modules in 3RU Galaxy rack
- Full remote control and diagnostics through a user friendly html Graphical User Interface
- Integrated with the ROSA management system
- SNMP manageable
- Software programmable relay contact
- Optional LNB power supply for polarization and high/low band switching

## Specifications

<b>Electrical Specifications</b>	
DVB-S mode	
Modulation format	QPSK (according to ETS 300 421)
Symbol rate	2 to 45 Mbaud
FEC code rates (auto detect)	1/2, 2/3, 3/4, 5/6, 7/8
DVB-S2 mode	
Modulation format (auto detect)	QPSK and 8PSK (according to ETS 302 307)
Symbol rate	5 to 30 Mbaud
FEC code rates (auto detect) QPSK	1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
FEC code rates (auto detect) 8PSK	3/5, 2/3, 3/4, 5/6, 8/9, 9/10
FEC frame	Normal
Roll off	20%, 25%, 35%
Coding	CCM
Transport stream mode	Single
<b>RF Input</b>	
Connector (on paddle board)	F-type (75 $\Omega$ ) or N-type (50 $\Omega$ )
Frequency	950 to 2150 MHz
Signal level	-65 to -25 dBm
<b>ASI Output</b>	
Number of outputs	2
Connector (on paddle board)	BNC
Impedance	75 $\Omega$
Interface type	Asynchronous Serial Interface (according to EN 50083-9)
Packet format	188 byte packets
Bit rate	Max. 81 Mbit/s
Syntax	Single or multi-program transport (according to ISO/IEC 13818)
<b>Relay Contact</b>	
Connector (on Galaxy Chassis)	2 x 25 pins female Sub D
Contacts	1 contact (3-pins) per card (COM, NO & NC)
Contact type	Relay
Alarms	Software configurable (with ROSA)

<b>Remote Control</b>	
Connector (on paddle board)	RJ-45
Interface Type	10/100 Base-T
Standard	IEEE 802.3
Protocols	TCP/IP, SNMP V2c, HTTP, FTP
User Interface	Embedded HTML User Interface

<b>Control Functions</b>	
<b>Settings / Configuration</b>	
Settings of all relevant tuning parameters and LNB control	
IP address configuration	
Save and recall user settings	
Clock setting (NTP synchronization)	
<b>Status and Alarm</b>	
Input signal loss	
FEC sync	
Carrier-to-noise ratio and margin	
Signal level	
BER before RS/BCH	
Errored seconds	
Severely errored seconds	
BCH uncorrected error count	

## Specifications (continued)

Environmental Specifications	
Temperature within specs	+50°F to +104°F (10°C to 40°C)
Operating temperature	+32°F to +113°F (0°C to 45°C)
Storage temperature	-4°F to +158°F (-20°C to 70°C)
Power supply (nominal)	-48 VDC
Power consumption (nominal)	
DVB-S mode	
Without LNB option	9 W
With LNB option	17 W
DVB-S2 mode	
Without LNB option	10 W
With LNB option	18 W

Mechanical Specifications	
Height	3.94 in. / 100 mm
Width	1.18 in. / 30 mm
Depth	7.87 in. / 200 mm
Weight	Approx. 0.57 lbs / 0.26 kg
Module width	6 HP (1 slot in Galaxy rack) 12 HP (2 slot in Galaxy rack) in case of LNB powered device

## Ordering Information

Titan S2	Part Number
Titan S2 Digital Satellite Receiver – DVB-S	4025748
Titan S2 Digital Satellite Receiver – DVB-S, with LNB	4025750
Titan S2 Digital Satellite Receiver – DVB-S/S2	4025749
Titan S2 Digital Satellite Receiver – DVB-S/S2, with LNB	4025751
Paddles for Titan S2	
Connector Card, type 16, F-75 Ohm connector Input, 2 x BNC Output, RJ45	4017889
Options Titan S2	
DVB-S2 license kit	4019118



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