PRODUCT

Argos-3 PMT-K

Platform messaging transceiver

The PMT is designed to communicate as a modem with the Argos satellite constellation. New capabilities include two-way communication, transmission of greater data volume and high data rate. It also operates as an Argos-2 transmitter.

- Optimized data transmission
- Interactive data collection mode

BETTER TRANSMISSION MANAGEMENT

- Reception of information broadcasts (Argos constellation status, orbital parameters, UTC time…)
- Satellite pass prediction and rendez-vous with satellites
- Power saving, increased efficiency, longer lifetime

GREATER VOLUME OF DATA

- 10 times more data in low data rate
- 100 times more data in high data rate

HIGH DATA RATE

- 4800 bps high data rate channel with satellite acknowledgement

SECURED DATA COLLECTION

- Message reception acknowledged by satellite
- Argos-2 basic transmission as a back-up

PLATFORM REMOTE CONTROL

- Platform tuning: change of data acquisition mission…
- PMT tuning: transmission power, frequency, repetition rate…

INCREASED FLEXIBILITY & SIMPLICITY

- Up to 8 Kbytes of data can be relayed to the PMT for transmission
- Management of message coding and transmission protocol
- A wide range of operating modes, including Argos-2 mode

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TECHNICAL CHARACTERISTICS

Transmission power	Low data rate: 0.5, 1 or 2W - High data rate: 5W
Carrier frequency on Argos-3	Low data rate: 401.630MHz to 401.680MHz (1kHz step) High data rate: 401.595MHz
Frequency stability	Short term: less than 1 x 10-9 /100ms Medium term: less than 5 x 10-9 /20min
Receiver frequency	465.9875MHz±15kHz
Received power	-128dBm/200 bps -125dBm/400 bps
Required power supply voltages	+7V to + 14V (at 1W Low data rate Argos-2) +13V to 14V (at 5W High data rate Argos-3)
Power consumption	Standby: less than 0.1mA Upon transmission: Low data rate: less than 620mA/7V High data rate: less than 1200mA/14V Upon reception: Less than 85mA/7V
Temperature	Operating temperature: -20 to + 50°C Storage temperature: -40 to +70°C
User interface	Serial interface (open collector) + control signal (TX, RX, GND) 9600 bps + control signal
RF connector	SMA female connector (TX,RX for common use)
Dimensions (H x W x L)	25 mm x 80 mm x 60 mm
Weight	About 160g

* Technical characteristics are subject to change without prior notice

Main operating modes

		Transmission mode	
Transmitter status	Receiver status	Argos-2	Argos-3
ON during satellite pass	ON	Optimized	Interactive
ON during satellite pass	ON	Optimized	Optimized
ON during satellite pass	ON	----------	Interactive
ON during satellite pass	ON	Random	Random
Always ON	ON	Random	Random
Always ON	OFF	Random	Random

- RANDOM TRANSMISSION MODE:
  Platform transmits messages redundantly and randomly.
- OPTIMIZED TRANSMISSION MODE:
  Messages are sent a fixed number of times during satellite passes.
  This number is adjustable via downlink messaging.
  Recommended for small volumes of data.
- INTERACTIVE TRANSMISSION MODE:
  The platform requests an interactive session with the satellite and each message is acknowledged by the satellite.
  Recommended for large volumes of data.

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