

VHAL 2

GPS Localization & Data Collection Through ARGOS II or SCD



Key features

Built-In GPS

ARGOS and SCD compatible

High stability frequency

Programmable Satellite Pass Planning

Low size and low weight

Low power consumption

Operational even with mismatched antenna

Extended operating temperature

Built-in data acquisition functions

High Performance Transmitter for ARGOS and SCD

- Low noise, High stability Synthesizer
- Programmable Satellite Pass Planning
- Programmable ID Code length
- Very Low Power consumption
- Programmable Frequency within the ARGOS II and SCD band
- Operational even with mismatched antennas
- Programmable Output Power
- Transmit on 1, 2 or 3 addresses
- High Efficiency low peak current
- Programmable Transmission Delay
- Programmable Transmit / Receive sequence

Built-in GPS

- L1 Frequency C/A Code
- 12 independent tracking channels

Built-in Data Acquisition Functions

- 4 Analog Input channels
- 1 Counter Input
- Internal Temperature measurement
- Emitted Power measurement



General features	
Part Number: P/N	05N60752 Standard VHAL-2
Part Number: P/N	05N60753 Black and Ruggedized VHAL-2
Frequency Stability	< 10 ⁻⁹ on the operating range
Programmable Frequency	401.6 – 401.7 MHz
Programmable Output Power	0.5, 1 or 2 Watts
Programmable ID Code length	20 or 28 bits
Programmable Transmission delay	0 – 255 days
GPS Accuracy	Position: 3 m (CEP), 6 m 2dRMS Velocity: 0.2 m/s (50%) Time: 20 ns RMS (static timing mode)
GPS Sensitivity	Sensitivity: -150 dBm (tracking)
GPS Acquisition Time	Reacquisition time: 100 ms typical (signal reacquisition)
4 Analog Input channels	0 – 3.3 VDC (10 bits resolution)
1 Counter Input channel (3.3 VDC Digital Input)	0 – 10 Hz (32 bits resolution)
Internal Temperature measurement	-40°C to +60°C (10 bits resolution)
Internal Power measurement (at antenna connector)	0 – 2 Watts (10 bits resolution)
Antenna Connector interfaces	MCX 50 Ohms for AGOS or SCD MCX 50 Ohms for GPS
Input-Output Connector interface	MOLEX 12 pins
Power Connector interface	MOLEX 10 pins

Electrical characteristics	
Voltage	7 – 14 Volts @ 2 Watts 5 – 14 Volts @ < 0.5 Watt
Consumed Power in sleep mode	< 50 µA
Consumed Power in warm-up mode	< 5 mA
Consumed Power @ 2 Watts or 33 dBm	< 650 mA
Consumed Power @ 1 Watt or 30 dBm	< 450 mA
Consumed Power @ 0.5 Watts or 27 dBm	< 350 mA

Mechanical characteristics	
Size	1.89 in x 2.75 in x 0.51 in 48 mm x 70 mm x 15 mm
Weight	60 g
Storage Temperature	-55°C to +75°C
Operating Temperature	-40°C to +60°C

Accessories	
Programming Kit	Please Contact ELTA
Fixation Kit	Please Contact ELTA
Antenna λ/4 401MHz SMA-M	P/N : 99N6037
Antenna λ/2 for Mast mounting N-f	P/N : 27710
GPS Antenna	Please Contact ELTA
1 meter antenna cable with MCX / SMA male connectors	Please Contact ELTA
1 meter antenna cable with MCX male / N female connectors	Please Contact ELTA



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Electronics for Harsh Environments