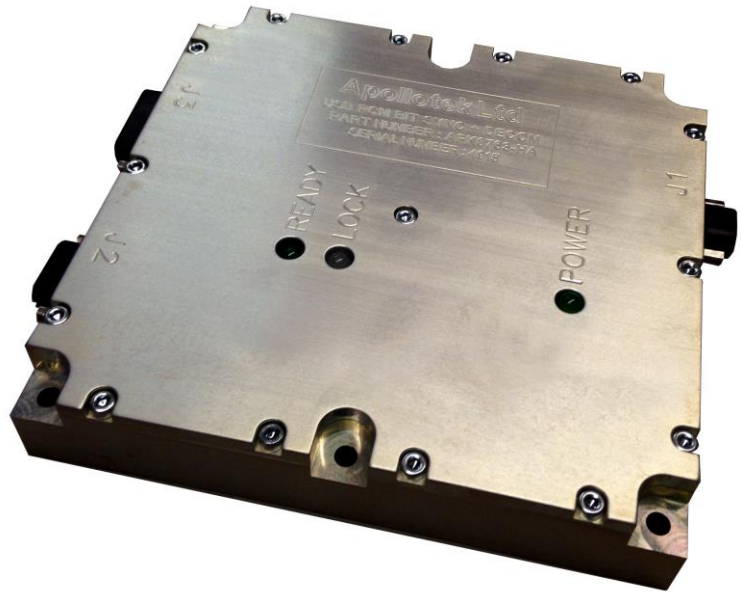


**Features:**

- Ruggedised Airborne Bit Synchroniser and Decommulator
- Provides clock and data recovery from perturbed serial PCM data over a Bit Rate range from 100 BPS to greater than 20 MBPS
- Processes all standard PCM Codes including RNRZ, NRZ and Bi-Ø codes
- Supports IRIG 106 Frame Formats
- Buffered RS422 Data and Clock Outputs
- IRIG B Time Code Reader
- Wide operating temperature range
- Aircraft flight proven Rugged Construction
- Powered from Aircraft +28 VDC
- Set Up through a USB Port connection to a Windows PC
- Lock and Status Indicators
- PCM Code and Frame Format stored in non-volatile memory
- Supports SFID, FAC & FCC
- Supplied with single stream GDSmate software providing:
  - Raw Data Archiving to Disk
  - Graphical Data Displays
  - Tabular Data Displays
  - Engineering Unit Conversions
  - Post Processing File Outputs



The Apollotek APK8763-HA Bit Synchroniser and Decommulator is part of the Apollotek range of USB signal recovery and decommutation products which are designed for Test and Evaluation and Flight Test Instrumentation applications. The Unit is assembled into an aerospace grade aluminium housing machined from solid and designed to be installed in an aircraft, including helicopters.

The APK8763-HA USB Bit Synchroniser and Decommulator combines the functions of the APK8762 USB Bit Synchroniser unit and the APK8760 USB Decommulator into a single unit.

The APK8763-HA uses proprietary Apollotek developed analogue and digital signal processing techniques to extract clock and synchronised data from a perturbed baseband serial PCM data stream and to provide PCM Decommutation with data transfer to a host PC through a high speed serial USB port. The APK8763-HA unit can also be powered through the host PC USB Port.

Bit Synchroniser initialisation and stream lock status monitoring is provided on the unit through LED displays and also through the USB port under control of the Apollotek GDSmate Telemetry Environment Software package.

The APK8767-HA is a similar packaged product which incorporates a PCM/FM and SOQPSK Telemetry Receiver with the Bit Synchroniser and Decommulator in a single unit.

**BIT SYNCHRONISER and DECOMMUTATOR SPECIFICATIONS****Electrical and Performance Specification**

Data Rates	250 bps to > 20 Mbps for NRZ-L Codes
Input PCM Codes	NRZ-L/M/S, RNRZ-L BIØ-L/M/S DM-M/S RZ
Input Signal Amplitude	0.4 V to 10 V (peak-to-peak)
Input Signal Offset	Twice the peak-to-peak value (within a 10 V window)
Loop Bandwidth Equivalence	0. 01% to 25% of bit rate (software selectable)
Tracking Range	> 15% (software selectable)
Bit Error Rate	Approaching 1dB of ideal performance curve
Output Data	RS422 data and clock (for external decoding). Decoded data can also be connected back into the unit through the RS422 input connector to support external decryption  Decommuted IRIG 106 PCM data can be transferred to host PC through high speed USB port

**System Interface Specification**

Interface Type	USB 2 Bus. Backwards compatible with USB 1 ports
Power Requirements	Within USB Bus Port limits
Input and Output Signal Connectors	Microminiature connectors for all functions
Software	Set-Up and controlled using the Apollotek GDSmate Telemetry Environment Software package (see separate data sheet)

**Mechanical Specification**

Overall Size	110 mm long by 112 mm wide and 22 mm high excluding connectors
Manufacturing Processes	Surface mount internal PCB technology  Enclosure machined from solid aerospace grade aluminium to provide very rugged packaging

**Operational Environmental Specification**

Temperature	-10 ° Centigrade to +70 ° Centigrade
Humidity	0 to 90% non-condensing

**Non-operating**

Temperature	-25 ° Centigrade to +90 ° Centigrade
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