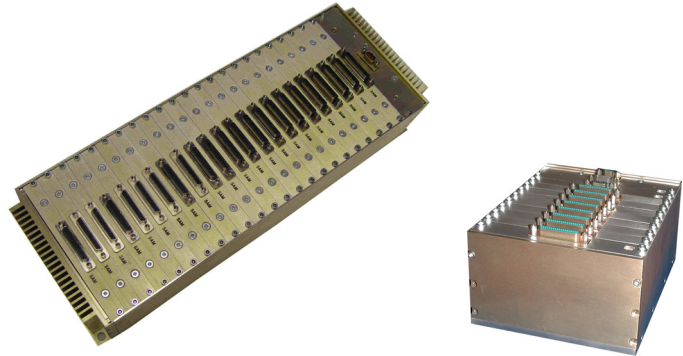


PCM Encoder Features:

- Programmable System PCM Bit Rates up to 20 MBPS
- Stand Alone and Distributed Master / Multiple Slave Configurations
- IRIG 106 Compliant
- Modular Construction
- Available in various chassis sizes from 4 to 32 slots
- Designed for severe environments
- Configured from a family of Input Modules matched to common Transducer types and measurement requirements
- Analogue, Digital, Frequency and Storage Modules available
- Integral Solid State Recorder Modules with USB download port can be installed in the encoder chassis
- Programmable Constant Current and Constant Voltage Transducer Excitation is provided on selected Modules
- Programmable Gain
- Programmable Offset
- Programmable Cut Off Filters
- Pre-modulation filter for RF Telemetry applications
- Compatible with Apollotek Telemetry Transmitters
- The Encoder is programmed through a PC USB Port
- Compatible with the Apollotek GDSmate Telemetry Environment Software package



The ApolloDas 8600 Series is a new generation of flight qualified Modular PCM Encoders comprising a range of Signal Conditioning Modules, Control Modules and Power Supply modules.

Maximum use is made of modern circuit design and construction techniques to provide a high performance, compact and cost effective solution for Aircraft, Missile and UAV Flight Testing and Ejection Seat Trials Instrumentation applications.

Stand alone and distributed configurations are designed and manufactured by Apollotek.

Application specific packaging is an Apollotek speciality.

The Mechanical design of the ApolloDas 8600 series provides a proven and extremely rugged and compact module design. Each module is individually retained into the module housing which is constructed from precision machined parts.

The signal conditioning modules are interconnected to the control module through an intelligent rugged backplane assembly.

The Encoder is programmed using a high level GUI interface.

All programmable functions of the ApolloDas 8600 are performed through a bi-directional high speed serial interface port. Programmed signal conditioning and format data is stored in non-volatile memory.

The Apollotek GDSmate Telemetry Environment Software package and Apollotek 8000 Series Groundstations are ideal companions for this ApolloDas 8600 family of Airborne Instrumentation.

ApolloDas 8600 SIGNAL CONDITIONING MODULES:

All ApolloDas 8600 Sequential Sampling Signal Conditioning Modules have one Analogue to Digital Converter per module to provide a versatile, high speed and low noise programmable PCM Encoder configuration. Simultaneous Sampling Modules such as the SAM-X have one Analogue to Digital Converter per channel. The following standard Signal Conditioning Modules are available in several configurations. This range of ApolloDas 8600 Signal Conditioners is continually being expanded and updated. Please consult the factory for Signal Conditioning requirements not listed below.

- **SGM-X 8 Channel Strain Gauge Module**
Provides per channel Constant Voltage Excitation
Supports ¼, ½ and full bridge configurations
Per Channel Programmable Gain and offset.
Per Module Programmable 12-pole Filters
- **SAM-X 6 Channel Simultaneous Sampling Module**
A Multi-Function General Purpose Module which supports multiple Bridge configurations, provides transducer excitation, per channel gain and offset and per channel binary related Programmable 12-pole filters
- **RTD-X 8 Channel RTD Module**
Supports ¼, ½ and full bridge configurations
Per Channel Programmable Gain and offset.
Per Module Programmable 12-pole Filters
- **VMM-X 8 Channel Vibration Transducer Module**
Provides per channel Constant Current Excitation
Per Channel Programmable Gain
Per Module Programmable 12-pole Filters
- **LAC-X 8 Channel Linear Acceleration Module**
Provides per module Constant Voltage Excitation
Per Channel Programmable Gain
Per Module Programmable 12-pole Filters
- **ACM-X 8 Channel Acoustic Noise Module**
Provides per module Constant Voltage Excitation
Per Channel Programmable Gain
Per Module Programmable 12-pole Filters
Sample rates up to 100 KHz per channel
- **TCM-X 18 Channel Thermocouple Module**
Provides internal Electronic Cold Junction Compensation
Gain matched to Thermocouple Type. Temperature Measurement Span can be user specified.
Thermocouple wire termination on board the module.
Internal chassis temperature is available as a parameter
- **SVM-X 16 Channel Single Ended Voltage Module**
Accepts bi-polar Voltage Inputs
Provides per module Transducer Excitation
Fixed Gain per Analogue Channel
Programmable 12-pole Filters per Analogue channel
- **DDM-X 8 Channel Differential Voltage Module with 12 Digital Inputs**
Programmable Gain per Analogue Channel
Programmable 8-pole Filters per Analogue channel
Selectable threshold for Digital Inputs
- **DIM-X 24 Single Ended Digital Input Module**
24 digital inputs with programmable switching threshold
- **PEZ-X Transducer Matched 8 Channel Module**
Specifically configured to interface to the Endevco 8514-10 transducer. Provides excitation and signal conditioning. Provides programmable gain and input offset
- **PES-X 4 Channel Charge Amplifier Module**
4 channel charge amplifier module provides excitation and interface specific to the B&K Type 4504-A shock and vibration transducer. Other Charge transducers can be supported
- **FPM-X Two Channel Frequency / Period Module**
Provides two channels of binary counting data which can also be gated to operate as a period counter
- **VCM-X Single Channel Video Compression Module**
Provides a single channel analogue PAL or NTSC input port and applies user programmable MPEG2, MPEG4, JPEG, Motion JPEG or H.263 digitisation and video compression prior to insertion in the PCM Datastream. Also available as stand alone video compression systems
- **SRM-X Dual Channel Synchro / Resolver Module**
Provides an electronic interface to standard 11 – 26 V Synchro and Resolver angular position transducers
- **ABM-X Four Channel ARINC 429 Bus Monitor Module**
Provides an interface to High & Low speed ARINC 429 buses and decodes the data from programmed labels
- **SUM-X Four Channel Serial Input Module**
Provides interfaces for four synchronous serial RS422 or RS232 inputs at baud rates up to 115 KBPS
- **SBM-X Four Channel Serial Input Module**
Provides interfaces for four asynchronous serial RS422 or RS232 inputs at baud rates up to 115 KBPS and provides FIFO buffering and status
- **SBM-PSI Four Channel Serial Input Module**
Module provides intelligent interface to the PSI 9010 Pressure Scanner. Scannivalve option available
- **TCR-X Time Code Reader Module**
Provides an IRIG-B time code reader and time word insertion into the PCM Frame. Optionally Includes a 19K2 baud serial GPS interface. An Integrated GPS Reader Option is also available
- **SSM-XXX Solid State Memory Module**
Provides up to 512 MBytes of generic non-volatile Flash Memory per module. More than one module can be accommodated in an ApolloDas 8600 chassis. Data download is provided through a USB port to a host PC
- **SSC-8 Solid State Memory Cartridge**
SSC-8 Solid State Memory Cartridge
Provides an 8 GByte Removable Solid State Memory Module

ApolloDas 8600 STANDARD ENVIRONMENTAL SPECIFICATIONS

The ApolloDas 8600 has been proven for use in aircraft and missile applications under the most severe operational scenarios. These tests have been performed in the UK using British MoD Test Specifications. Apollotek is aware that most international users are more aware of USA Environmental Test Specifications. In general, the UK tests are more severe than the standard equivalent USA Test Specifications which are referenced below. Application specific environmental testing can be quoted and performed by Apollotek as required.

Operating Temperature Range:	-40 ^o Centigrade to +75 ^o Centigrade
Vibration:	Tested to levels equivalent to MIL-STD-810E; Method 514, Procedure I, Category 5 - Jet aircraft. Random 10 to 2000 Hz and sine 5 to 2000 Hz at 10 g's RMS in three orthogonal axes
Shock:	Tested to levels equivalent to MIL-STD-810E; Method 516.4, Procedure I - Functional shock test for flight test equipment. 20 g's for 9 to 11 ms in both directions along three orthogonal axes
Acceleration:	Tested to levels equivalent to MIL-STD-810E; Method 513.4 Procedure 1 at up to 20g.
Altitude:	Tested to levels equivalent to MIL-STD-810E; Method 520, Procedure II - Flight test Support. Operation from 40°C to +70°C at 70,000 ft.
Salt Fog:	Tested to levels equivalent to MIL-STD-810E; Method 509.3. Expose 48 hours at 35°C Humidity RTCA / DO-160C; Section 6, Category A. Expose 48 hours at 95% minimum humidity
Humidity:	Tested to levels equivalent to RTCNDO-160C; Section 6, Category A. Expose 48 hours at 95% minimum humidity
Power:	Tested to levels equivalent to MIL-STD-704E; Paragraph 5.3.
EMI/RFI:	Tested to levels equivalent to MIL-STD-461C; Requirements CE03, CE07, CS01, CS02, CS06, RE02, RS02

All specifications are subject to change without notice