

**Features:**

- USB 2 connection to Host PC
- Powered from Host PC
- TTL Data and Clock Inputs
- RS422 Data and Clock Inputs
- IRIG B Time Code Reader
- Greater than 10 MBPS Bit Rate Operation for real time archiving to disk without data loss – Host PC performance dependent
- Lock and Status Indicators
- Frame Format stored in non-volatile memory when powered down
- Displays Lock Status of Stored Frame Format when externally powered and not connected to a USB Host
- Wide operating temperature range
- Rugged Construction
- Supports IRIG 106 Frame Formats
- Supports SFID, FAC & FCC
- Supplied with single stream host PC GDSmate software providing:
  - Control of Raw Data Archiving to Disk
  - Graphical Data Displays
  - Tabular Data Displays
  - Engineering Unit Conversions
  - Data Export in common file formats



The Apollotek 8761 USB 2 Series of miniature rugged PCM Decommutators provide Decommutation of clocked serial PCM data streams and provides data transfer to a host PC.

The dimensions of the USB Decommutator are 105 mm long by 55 mm wide and 21 mm high.

The USB Decommutator plugs into a standard USB 2 port and is powered through the USB port of the host PC. The unit will transfer data at the highest speed at which the Host PC USB port can accept the data. This includes full speed USB data transfer

The USB Decommutator accepts TTL or RS422 data and clock signals from the PCM Data source.

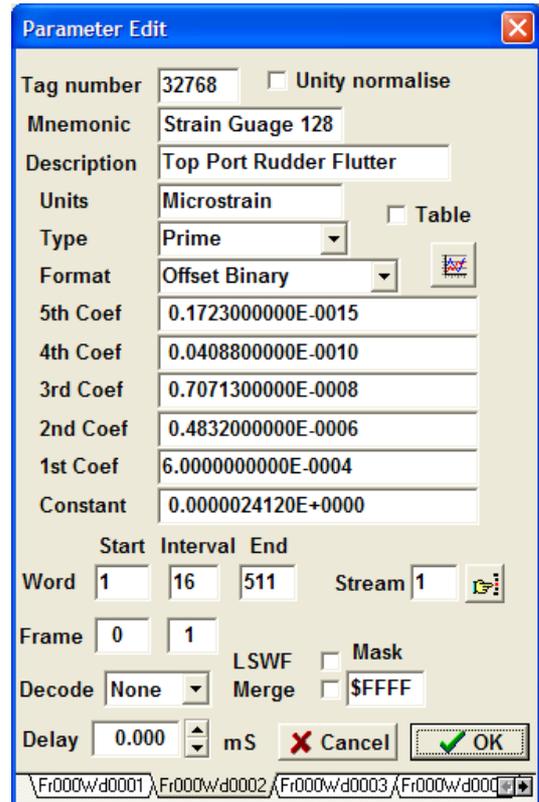
An IRIG B Time Code Reader function is provided for microsecond resolution time stamping of the decommuted frames of PCM Data.

The USB Decommutator is compatible with the Apollotek GDSmate Telemetry Environment software package. A USB GDSmate Licence and software on CD is provided with the APK8761.

The 8761 USB Decommutator product is part of the Apollotek Telemetry product line which also includes a comprehensive range of other USB products including combinations of Receivers, Bit Synchronisers, Decommutators and Simulators.

### USB Decommulator Software

- The Apollotek GDSmate Software supplied with the APK8761 is the USB single stream PCM Decommulation version of the product which includes graphical and tabular data displays, data archiving and file export facilities.
- The User Parameter Database is developed interactively through a Parameter Edit form. Each Parameter can be allocated a unique Mnemonic and Description.
- The User can apply up to 5<sup>th</sup> order linearising and calibration coefficients to each decommutated parameter. A Maths Processor editor provides additional processing functions.
- A PCM Frame Format form is used to set up the Decommulator Frame synchronisation strategy.
- The selected default time stamp source can be derived from an external amplitude modulated 1 KHz IRIG B Time Code or the internal host computer time.
- Secondary Forms are presented for other programmable variables including the definition of variable word length formats.
- An Interactive colour keyed graphical presentation of the Frame Map for PCM or Message Map for Serial Bus data streams is provided. The user can point and click on a parameter in the frame map and get immediately to the Parameter Editor.
- The standard Single Stream USB Decommulator Software licence can be upgraded to the full version of GDSmate to provide multiple user operation and simultaneous processing of multiple data streams on a single computer or as part of a networked Server / Client installation.



Parameter Edit

Tag number: 32768  Unity normalise

Mnemonic: Strain Guage 128

Description: Top Port Rudder Flutter

Units: Microstrain  Table

Type: Prime

Format: Offset Binary

5th Coef: 0.1723000000E-0015

4th Coef: 0.0408800000E-0010

3rd Coef: 0.7071300000E-0008

2nd Coef: 0.4832000000E-0006

1st Coef: 6.0000000000E-0004

Constant: 0.0000024120E+0000

Start Interval End

Word: 1 16 511 Stream: 1

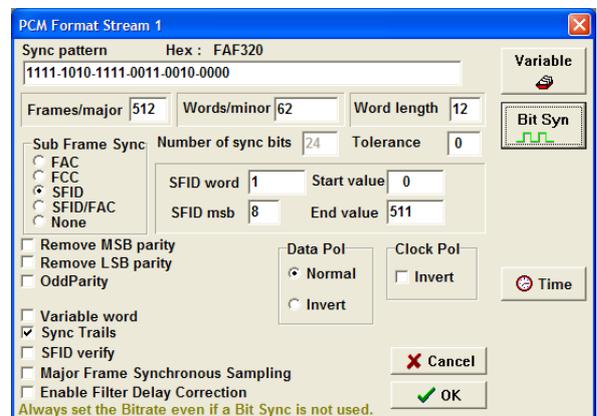
Frame: 0 1

Decode: None LSWF Merge Mask \$FFFF

Delay: 0.000 mS

Buttons: Cancel OK

Footer: \Fr000w\d0001 \Fr000w\d0002 \Fr000w\d0003 \Fr000w\d0004



PCM Format Stream 1

Sync pattern Hex: FAF320

1111-1010-1111-0011-0010-0000

Frames/major: 512 Words/minor: 62 Word length: 12

Sub Frame Sync:  FAC  FCC  SFID  SFID/FAC  None

Number of sync bits: 24 Tolerance: 0

SFID word: 1 Start value: 0

SFID msb: 8 End value: 511

Remove MSB parity  Remove LSB parity  OddParity

Data Pol:  Normal  Invert

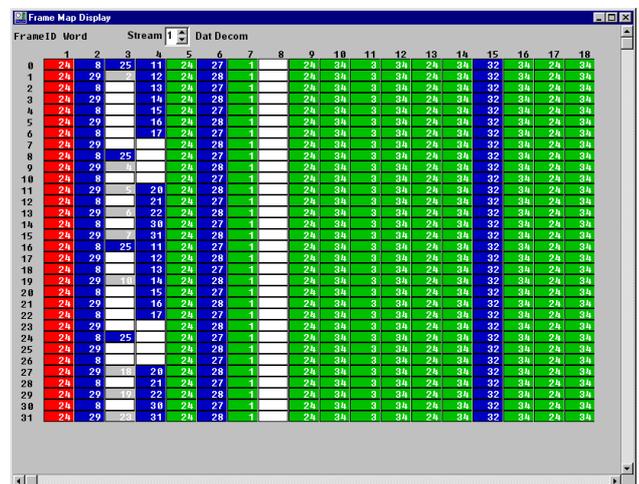
Clock Pol:  Invert

Variable word  Sync Trails  SFID verify

Major Frame Synchronous Sampling  Enable Filter Delay Correction

Buttons: Cancel OK

Note: Always set the Bitrate even if a Bit Sync is not used.



Frame Map Display

FrameID	Word	Stream	Dat	Decom														
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	24	8	25	11	24	27	1	24	34	3	34	24	32	34	24	34	24	34
2	24	8	12	24	28	1	24	34	3	34	24	32	34	24	34	24	34	
3	24	8	13	24	27	1	24	34	3	34	24	32	34	24	34	24	34	
4	24	8	14	24	28	1	24	34	3	34	24	32	34	24	34	24	34	
5	24	8	15	24	27	1	24	34	3	34	24	32	34	24	34	24	34	
6	24	8	16	24	28	1	24	34	3	34	24	32	34	24	34	24	34	
7	24	8	17	24	27	1	24	34	3	34	24	32	34	24	34	24	34	
8	24	8	18	24	28	1	24	34	3	34	24	32	34	24	34	24	34	
9	24	8	19	24	27	1	24	34	3	34	24	32	34	24	34	24	34	
10	24	8	20	24	28	1	24	34	3	34	24	32	34	24	34	24	34	
11	24	8	21	24	27	1	24	34	3	34	24	32	34	24	34	24	34	
12	24	8	22	24	28	1	24	34	3	34	24	32	34	24	34	24	34	
13	24	8	23	24	27	1	24	34	3	34	24	32	34	24	34	24	34	
14	24	8	24	24	28	1	24	34	3	34	24	32	34	24	34	24	34	
15	24	8	25	24	27	1	24	34	3	34	24	32	34	24	34	24	34	
16	24	8	26	24	28	1	24	34	3	34	24	32	34	24	34	24	34	
17	24	8	27	24	27	1	24	34	3	34	24	32	34	24	34	24	34	
18	24	8	28	24	28	1	24	34	3	34	24	32	34	24	34	24	34	
19	24	8	29	24	27	1	24	34	3	34	24	32	34	24	34	24	34	
20	24	8	30	24	28	1	24	34	3	34	24	32	34	24	34	24	34	
21	24	8	31	24	27	1	24	34	3	34	24	32	34	24	34	24	34	
22	24	8	32	24	28	1	24	34	3	34	24	32	34	24	34	24	34	
23	24	8	33	24	27	1	24	34	3	34	24	32	34	24	34	24	34	
24	24	8	34	24	28	1	24	34	3	34	24	32	34	24	34	24	34	
25	24	8	35	24	27	1	24	34	3	34	24	32	34	24	34	24	34	
26	24	8	36	24	28	1	24	34	3	34	24	32	34	24	34	24	34	
27	24	8	37	24	27	1	24	34	3	34	24	32	34	24	34	24	34	
28	24	8	38	24	28	1	24	34	3	34	24	32	34	24	34	24	34	
29	24	8	39	24	27	1	24	34	3	34	24	32	34	24	34	24	34	
30	24	8	40	24	28	1	24	34	3	34	24	32	34	24	34	24	34	
31	24	8	41	24	27	1	24	34	3	34	24	32	34	24	34	24	34	