

# DTS Bit Synchronizer Portfolio Comparison Guide

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Selecting the right bit synchronizer depends on channel count, data rate, form factor, and integration requirements. Delta Telemetry Systems offers bit sync solutions from GDP Space Systems and Acroamatics designed for lab, range, flight test, and embedded telemetry environments.

The comparison below highlights key capabilities to help determine which bit sync platform best fits your system architecture.


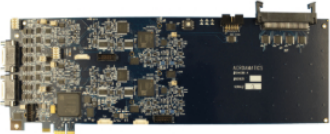

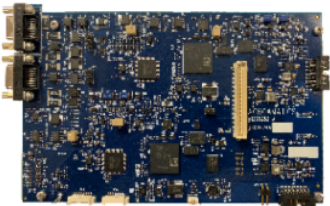
## Bit Synchronizer Portfolio Capability Comparison

Feature	<u>Single/Dual PCM Bit Synchronizer</u> Model 2430D	<u>Dual/Quad PCM Bit Synchronizer</u> Model 2265	<u>Digital I/O Bit Synchronizer</u> Model 270	<u>Dual/Quad PCM Bit Sync/ BSS Data Quality Encapsulator</u> Model 2265EC	<u>Advanced Dual PCIe PCM Bit Sync</u> Model 1631AP	<u>Dual Stream PCM Decom &amp; Bit Sync</u> Model 1632AP / <b>674DM</b>
<b>Company</b>	Acroamatics	GDP	GDP	GDP	Acroamatics	Acroamatics
<b>Form Factor</b>	Rackmount	Rackmount	Rackmount	Rackmount	PCIe Card	PCIe Decom / Mezzanine Bit Sync
<b>Channels</b>	2	2 / 4	8 / 16	2 / 4	2	2
<b>Data Rate</b>	8 bps to 44 Mbps	5 bps to 40 Mbps	5 bps to 20 Mbps	5 bps to 40 Mbps	8 bps – 40 Mbps	8 bps – 40 Mbps
<b>Supported Independent Input &amp; Output PCM Codes</b>	NRZ-L/M/S, BiØ-L/M/S, DBiØ-M/S, DM-M/S, MDM-M/S	NRZ-L/M/S, BiØ-L/M/S, DBiØ-M/S, DM-M/S, MDM-M/S, RZ	NRZ-L/M/S, BiØ-L/M/S, DM-M/S, MDM-M/S	NRZ-L/M/S, BiØ-L/M/S, DM-M/S, MDM-M/S	NRZ-L/M/S, BiØ-L/M/S, DBiØ-M/S, DM-M/S, MDM-M/S, RZ	NRZ-L/M/S, BiØ-L/M/S, DBiØ-M/S, DM-M/S, MDM-M/S, RZ
<b>Derandomizer</b>	Program selectable: RNRZ 9/11/15/17/23, forward/reverse	Program selectable: RNRZ 9/11/15/17/23, forward/reverse	IRIG 106 RNRZ (15) forward/reverse	IRIG 106 RNRZ (15) forward/reverse	Program selectable: RNRZ 9/11/15/17/23, forward/reverse	Program selectable: RNRZ 9/11/15/17/23, forward/reverse
<b>Input/ Output Support</b>	Differential & Single-ended Bi-polar Input / RS-422, TTL, and bi-polar (tape) Outputs	Analog, TTL & RS422 Inputs/ TTL, RS422 & Bipolar Outputs	Two selectable digital inputs & 2 Digital Outputs per Channel; Each (1) RS-422, (1) TTL	Analog Inputs / TTL & Optional RS422 Outputs	Differential & Single-ended Input / RS-422 and TTL Outputs	Differential & Single-ended Input / RS-422 and TTL Outputs
<b>Loop Bandwidth</b>	0.1% to 3.2%, program	0.01% to 1.6% (Extended LBW)	Programmable from 0.05% to	0.01% to 1.6% (Extended LBW)	0.1% to 3.2%, program	0.1% to 3.2%, program

<b>Control</b>	selectable in 0.1% increments	Range Optional)	1.6%	Range Optional)	selectable in 0.1% increments	selectable in 0.1% increments
<b>FEC / Viterbi Support</b>	YES R = 1/2; K=7	YES R = 1/2, 1/3, 2/3 & 7/8; K=7	NO R = 1/2; K=7	YES R = 1/2; K=7	YES R = 1/2; K=7	YES R = 1/2; K=7
<b>QOSK Support</b>	NO	OPSK/OQPSK/ SOQPSK	NO	OPSK/OQPSK/ SOQPSK	NO	NO
<b>Error Checking / Built-in BERT</b>	YES	YES	NO	YES	YES	YES
<b>Data Quality / Status Monitoring</b>	BERT/PRN BER Link Test Mode Frame Sync PCM BER Monitor Frame Lock/Loss Monitor Viterbi Error Monitor/Stats	BERT/PRN BER Link Test Mode Frame Sync PCM BER Monitor Frame Lock/Loss, Monitor Eb/No Signal Quality Analog Out Viterbi Error Monitor/Stats	Frame Sync /Bit Sync lock/loss monitor	BERT/PRN BER Link Test Mode Frame Sync PCM BER Monitor Frame Lock/Loss, Monitor Eb/No Signal Quality Analog Out Viterbi Error Monitor/Stats	BERT/PRN BER Link Test Mode Frame Sync PCM BER Monitor Frame Lock/Loss Monitor Viterbi Error Monitor/Stats	BERT/PRN BER Link Test Mode Frame Sync PCM BER Monitor Frame Lock/Loss Monitor Viterbi Error Monitor/Stats
<b>Typical Use / Integrated In</b>	Rackmount range and telemetry acquisition facility	Rackmount range and telemetry acquisition facility	High-density serial range data communications	<b>Best Source Selector (BSS)</b> Bit Sync Data Quality Encapsulation (DQE)	Multi-stream integrator PCIe chassis applications	Integrated Decom/Bit Sync Processing Applications

## “Which Bit Sync?” Decision Guide

Your Need	Best Fit	Why
Compact rackmount bit sync for mobile and fixed range acquisition and lab use	<u><a href="#">Acro Model 2430D</a></u> 	Recently updated rackmount unit designed for dual-stream fixed and mobile telemetry acquisition and post-test processing application
Flexible rackmount bit sync for general lab, range, or flight test telemetry	<u><a href="#">GDP Model 2265</a></u> 	Field-proven rackmount bit sync available in dual, or quad channel configurations for a wide range of telemetry applications.
High channel density for centralized telemetry processing systems	<u><a href="#">GDP Model 270</a></u> 	Integrated Bit Sync/Decom PCIe card base solution. Available in turn-key system and card-level integrator product solutions.

<p>Best Source Selector (BSS) or data quality encapsulator applications</p>	<p><b><u>GDP Model 2265EC</u></b></p> 	<p>Designed specifically for range telemetry front-end use to enable legacy range receivers to drive DQE/DQM correlating BSS systems</p>
<p>Standard PCIe chassis compatible card-based Windows/RHEL solution</p>	<p><b><u>Acro Model 1631AP</u></b></p> 	<p>PCIe card providing dual-channel bit sync capability with all features of our rackmount bit sync systems</p>
<p>Integrated decom and bit sync processing in a PCIe architecture, supporting Windows and RHEL OS applications</p>	<p>Acro <b><u>Model 1632AP/674DM</u></b></p> 	<p>Compact mezzanine module designed for use with Acroamatics PCIe decom or as a standalone customer-integrated module</p>
<p>Standard PCIe chassis-compatible card-based Windows/RHEL solution</p>	<p><b><u>Acro Model 674DM</u></b></p> 	<p>Standalone proprietary mezzanine-based dual-stream Bit Sync solution</p>

Choosing the right bit synchronizer is critical to maintaining data integrity across the telemetry chain. Whether your application requires a rackmount system, embedded PCIe processing, or a compact mezzanine module, Delta Telemetry Systems offers proven solutions from GDP Space Systems and Acroamatics designed for reliable performance in demanding environments.

Explore the full range of bit synchronizers to find the solution that best fits your system architecture.

 [View all of our \*\*Bit Sync products\*\*.](#)

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