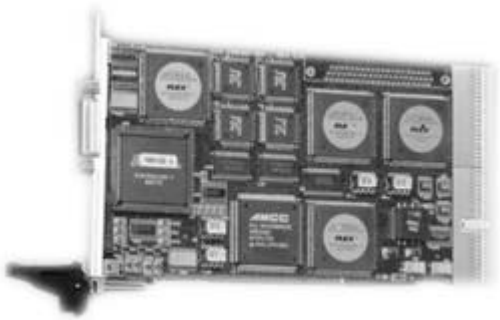
Multi-stream Compact PCI Frame Synchronizer/Decommutator
CPCIxx-400

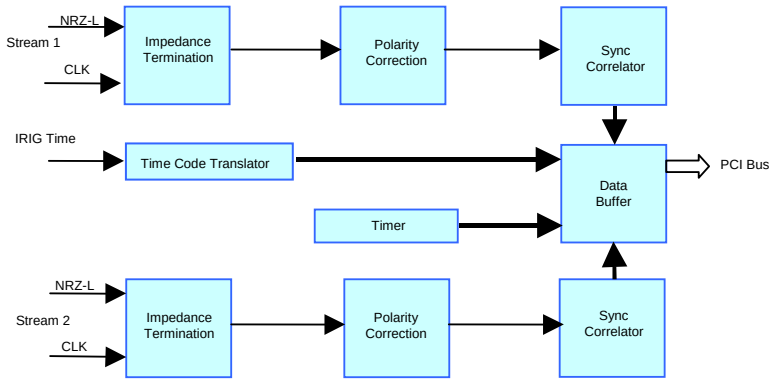
Features

- **3U Compact PCI Data Decommutation**
- **Data Rates from 1 bps to 30 Mbps**
- **Support for Multiple PCM Streams**
- **Accepts TTL or RS-422 Inputs**
- **IRIG A, B, & G Time Input**
- **Full IRIG Class II Decommutation**
- **Onboard Minor Frame Time Tag**
- **Supports IRIG Chapter 8 1553 Data**



Introduction

The Multi-stream CPCI Frame Sync/Decom provides full IRIG Class II PCM decommutation and IRIG Chapter 8 1553 data processing in a low-cost, 3U Compact PCI form factor. The CPCI board occupies a single card slot within any standard compact PCI enclosure, and it connects directly to the high-speed CPCI computer bus. The Frame Sync/Decom accepts input rates up to 30 Mbps. Data and clock inputs are accepted at RS-422 or TTL voltage levels. The single-slot module simultaneously supports, with options, two PCM streams and IRIG time input. It eliminates time skewing between the two PCM channels that can occur with two independent PCI interfaces. Decommutated data words, their associated tags, and time stamps are made available via high-speed block transfers over the CPCI bus.



Standard computer hardware is then used for further data processing and display, data archival to disk or tape, and data transfer over local networks. In occupying only a single card slot, the CPCI module minimizes the hardware necessary for decommutation and storage of multiple PCM data and time inputs. The CPCI module can be installed in standard rack-mount, desktop, or portable CPCI computer configurations.

Input Data	PCM Data & Clock	Support for two simultaneous independent PCM inputs (NRZ-L, M, or S data & clock) with option
	Polarity	Auto, normal and inverse, programmable
	Clock Input Phase	0° or 180°, programmable
	Impedance	Low (75 ohms) and High (10K ohms), programmable
	Levels	TTL and RS-422 differential, programmable
	Rate	1 bps to 30 Mbps
	Time Input Source	External or internal, programmable
	External Time	IRIG A, B, G modulated carrier input; ¼x , ½x, 1x, 2x, 4x (IRIG A and B) rate; LED indicator of signal presence
	Internal Time	On-board timer seeded from any source internal to computer; e.g., computer clock, GPS receiver, etc.
Processing	Sync Pattern Length	4 to 64 bits, programmable
	Sync Pattern Errors	0 to 16 bits, programmable
	Sync Word Mask	Any bits masked, programmable
	Sync Strategy	1 to 16 pattern matches (lock and drop) programmable
	Sync Modes	Normal, JAM sync, burst, flow-through and self-test, programmable
	Bit Slip	0, ±1, ±2, ±3 bits; programmable
	Data Word Length	4 to 32 bits, programmable
	Orientation	MSB/LSB orientation, programmable
	Commutation	Super-, sub-, irregular; programmable
	Time	Independent time tag of each minor frame, each PCM input
	Minor Frame Length	Up to 65,536 words/ minor frame, programmable
	Major Frame	Subframe decommutation handled by computer processor
	Major Frame Length*	33,554,432 bits, maximum major frame size; up to 4096 minor frames / major frame, programmable
	Major Frame Sync*	SFID, FCC, URC, or unique frame sync
	SFID ID Word*	1 to 16 bits, programmable
	SFID Counter*	Any word within minor frame, programmable
	Direction/Start*	Up or down, 0 or 1, programmable
	Frame Format Ident.*	Any word within minor frame, programmable; up to 16 different formats supported
	Chapter 8 1553 Data*	One or two composite streams of 1 to 8 embedded 1553 Mil-bus data sources simultaneously processed*
		Diagnostic and filter capabilities*
Output	CPCI Bus	One output onto CPCI bus
	Sync Status	TTL logic line (w/ground) indicating status of decoms; on-board status LEDs: minor frame lock, clock presence
Electrical and Environmental	From Factor	3U compact PCI card slot with D-type connector
	Temperature	0° to 50 °C (operating), -20 °C to 80 °C (storage)
	Humidity	20% to 95% noncondensing
	Power	+5V @ 1.30 amps
Ordering Codes	CPCI30-400T	Enhanced Compact PCI Frame Sync/Decom (30); 30 Mbps, 2 streams, with IRIG Time Code Translator
Accessories	Software	Windows application & driver software available BNC cable assemble included with board
	Cable	
	Documentation	Technical reference manual; installation and programming information

** Requires set-up software*

Tel 301.737.1555 ■ Email telemetry.info@wyleLabs.com ■ Fax 301.737.1564 ■ Web www.wyletds.com