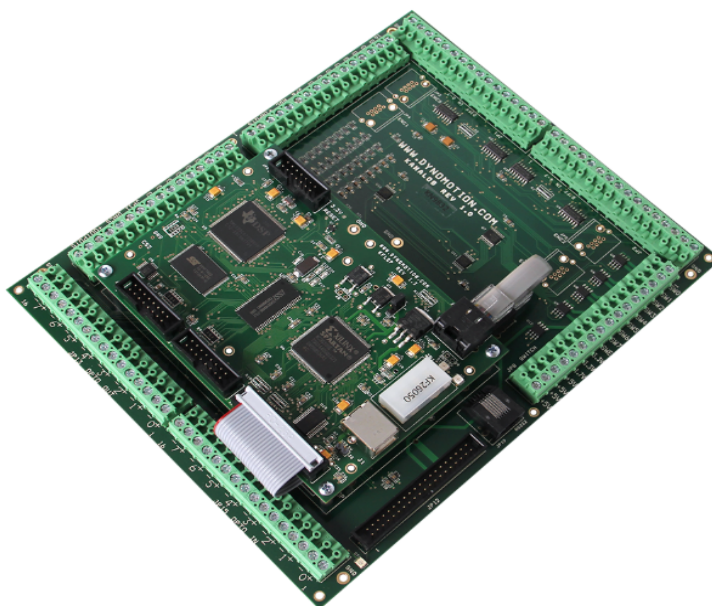


Kanalog Expansion Board for KFLOP



Description

Kanalog is an expansion board for KFLOP that adds six types of powerful I/O - enough to control a complete system such as a mill or router, in many cases. It's these capabilities that make Kanalog the most popular expansion board for KFLOP.

After examining a number of typical CNC control applications, Kanalog was designed to meet the requirements that were encountered the most. Many systems with obsolete controls can be retrofitted with the state-of-the-art trajectory control and user interface provided by the KFLOP+Kanalog combo with minimal cost while taking advantage of existing amplifiers and motors.

In addition, Kanalog was designed specifically to interface to analog servo drives with $\pm 10V$ analog input commands for either torque or velocity. It provides an interface for differential encoder inputs, optical inputs (typically home/limits), optical outputs (typically amplifier enablers, spindle control, coolant, etc...). Relay Outputs, and Digital IO.

Kanalog easily connects to the KFLOP, only two simple connectors and four screws are required to mount the KFLOP onto the Kanalog expansion board.

Once connected, Kanalog uses the +5V it receives from KFLOP to generate $\pm 15V$ on-board so that no other power supply is required. Kanalog's footprint with 112 screw terminals, which are pluggable, make wiring easy.

This KFLOP+Kanalog combo provides the most compact, low-cost, high-performance control package available. Unlike other systems with PWM or Step/Dir to Analog circuits, Kanalog includes true digital to analog converters with low ripple and fast response.

Kanalog is the most popular of the KFLOP expansion boards for its capability in incorporating the needs of a complete system. Those who are retrofitting mills and routers with existing analog servo drive find the Kanalog expansion board especially useful.

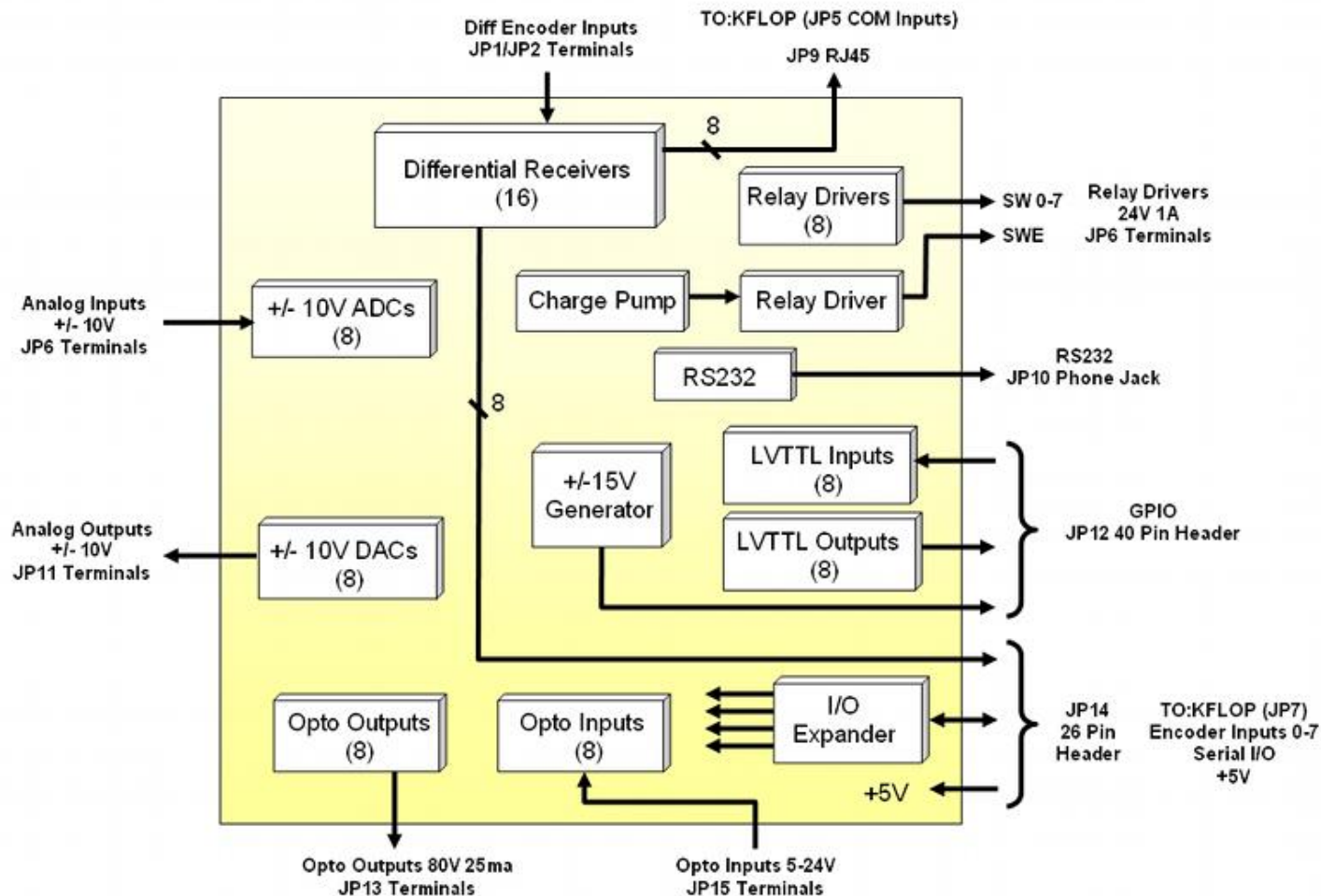
For CNC applications the [KmotionCNC](#) software with your KFLOP+Kanalog and get highly advanced data capture capabilities to fully understand how the system is performing in terms of following error, speed, output, response, bandwidth, etc.

Example Input/Outputs:

- Analog Motor Amplifiers
- Relays
- Switches
- Encoders
- Analog Sensors

Example Applications:

- KFLOP/Kanalog works well with all of ADVANCED Motion Control's drives that accept +/- 10V. Analog input commands and have differential encoder outputs for closed loop control. KFLOP by itself also works well in open loop Step/Direction with ADVANCED Motion Control's DigiFlex® Performance™ DPR... and DZR... series servo drives. For PWM/Direction, KFLOP also works with the AC powered DPR... and DC powered DZR... servo drive series as well as the new plug-in/embedded AZBDC10A4 μ -sized servo drives.
- Other:
 - CNC machining
 - Mills
 - Lathes
 - Brakepresses
 - Grinders
 - Spinners
 - Routers
 - Saws
 - Robotics
 - Automation
 - Camera Control
 - Pick-and-place
 - Data Acquisition



Kanalog Block Diagram

Kanalog 1.0 Hardware

Function	Parameter	Specification
Analog	DAC Outputs	(8) $\pm 10V$ @ 10ma, recommended load >2Kohm 12 bit - update rate 11.1KHz all 8 channels
	ADC Inputs	(8) $\pm 10V$ 100Kohm input Impedance 12 bit - update rate 11.1KHz all 8 channels
Optos	Opto Isolated Outputs	(8) Max differential voltage 80V 25ma
	Opto Isolated Inputs	(8) 3-24V input, internal 10KOhm series resistor
Differential	Differential Input Receivers	(16) ANSI TIA/EIA-422-B, ANSI TIA/EIA-423-B $\pm 7V$ common mode range, 200mv sensitivity Internal 470ohm termination
Relay Drivers	N channel FET Switches	(8) 24V @ 1 Amp max Open Drain switches to ground
Digital I/O	GPIO - LVTTL	(8) Outputs Source/Sink 12ma (8) Inputs LVTTL, 3.3V 1 μ a max

±15V	On-board DC-DC Generator	2 Watts (70ma each supply)
RS232	Driver/Receiver	EIA/TIA-232-F
Terminal Strips	Screw Terminals	112 Pluggable Screw Terminals (7) x 16 pin 5mm pitch
Watchdog	Charge Pump	DSP communication enables (1) Relay Driver, FET Switch 24V @ 1A
Logic Supply	Voltage Typical Current	+5V ±10% 0.5 A
Environment	Operating Temperature Storage Temperature Humidity	0-40° C 0-40° C 20-90% Relative Humidity, non-condensing
Dimensions	Length Width Height	8.5 inches (216mm) 7.0 inches (178 mm) 0.75inches (19 mm)
Green	RoHS	Compliant

Made in USA