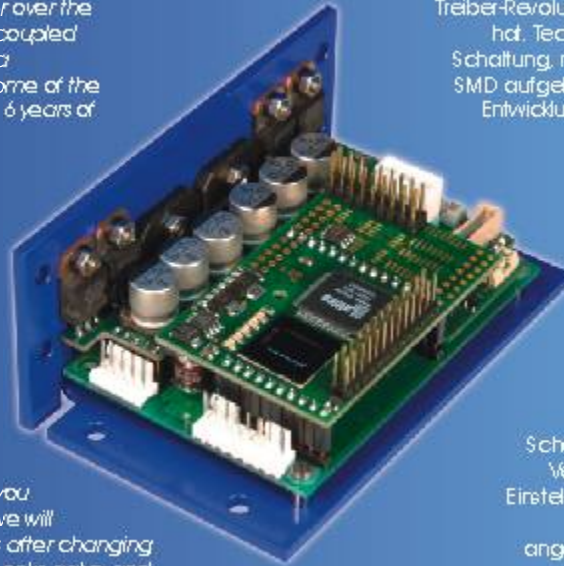# X-DRIVE
## DIGITAL GALVO SCANNER DRIVER

## Perfect sensation: Drive your scanners to their physical limits!
## The first "over 60k driver" available!

Faster movement, now in your hand! X-Drive brings you the digital driver revolution, you have been looking for over the years. Sophisticated high speed DSP processors, coupled with highly integrated CPLD components, offers a tremendous performance, which compares to some of the fastest computers available! Full SMT technology, 6 years of development and compact dimensions. For continuous use, additional heatsink is required.

But X-Drive can do more for your galvos than "just drive" it. The complete galvo electronic including connections is permanently scanned with more than 100,000 samples per second. If there is a failure or anything out of the usual, the electronics will shut down to prevent the well-known sudden death to galvos. For additional safety use, the feedback signal is provided.

Take a careful look at the driver´s picture. Don´t you miss any adjustment pots? We don´t! Cause X-Drive will do this for you by itself! No more user adjustments after changing galvos. On each power-on procedure, X-Drive checks galvo and measures the maximum possible speed, stores the information in its internal memory, and your done.

Schnelleres Scanning - jetzt verfügbar! xDrive ist die digitale Treiber-Revolution, auf die die moderne Showwelt gewartet hat. Technisch durchdachte DSP-Prozessor und CPLD-Schaltung, mit einer Wahnsinns-Performance. Komplett in SMD aufgebaut, wartet dieser Treiber mit einer 6-jährigen Entwicklungszeit auf, deren Resultate es in sich haben!

Kompakte Maße des Groundplane machen den xDrive universell einsetzbar. Für dauerhaften Einsatz ist für eine extra Kühlung der Leistungsendstufen zu sorgen. Mit mehr als 100.000 Abtastungen pro Sekunde wird die komplette Galvoelektronik kontinuierlich gescannt, um schnellstens Fehler im System zu erkennen.
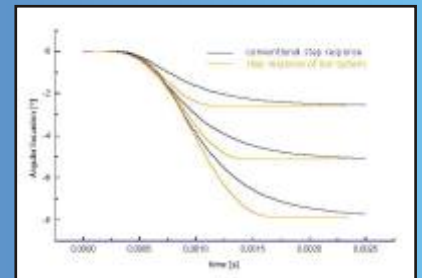
Schauen Sie sich den Treiber einmal genauer an. Vermissen Sie nicht die sonst üblichen Potis und Einstellmöglichkeiten? Wir nicht! Denn xDrive hat gar keine! Die automatische Einstellung auf das angeschlossene Galvo macht eine umständliche Einstellarbeit absolut unnötig.

Features:

- Maximum possible galvo speed up to 80k
- Self calibration during on-cycle
- Autotuning at any scale
- Automatic damping control
- Temperatur compensation of galvo settings
- No user adjustments
- Fits to any galvos by updating flash software memory

Graph shows step response of driver system. A fast step response results in a faster scanning!

Technical data:

| | |
|---|---|
| Voltage: | +/- 24 - 40VDC |
| Current: | 2A continous, 6A peak |
| Input voltage: | +/-5V differential, symmetrical |
| Resolution: | 16bits total resolution |
| Max. speed: | 80kpps at 7°, >50kpps at 20° |
| Sample rate: | 100 kHz |
| Limiters: | Power, temperature, current, stop |
| Speed CPU: | 220 MHz |
| Dimensions: | 105x65x45mm per channel |
| Fits to galvos: | CTi 6800, 6210 |

ILDA test pattern, scanned at an optical angle of 8° with 70,000 pps, using CT 6800 with x-Drive at a powerful supply.

This pic shows enhanced galvo connectors on driver output side. High current is possible for fastest small step responses. On the input, a standard MTA100 connector holds all necessary pins and signals

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