MYLAPS
SPORTS TIMING

MYLAPS X2

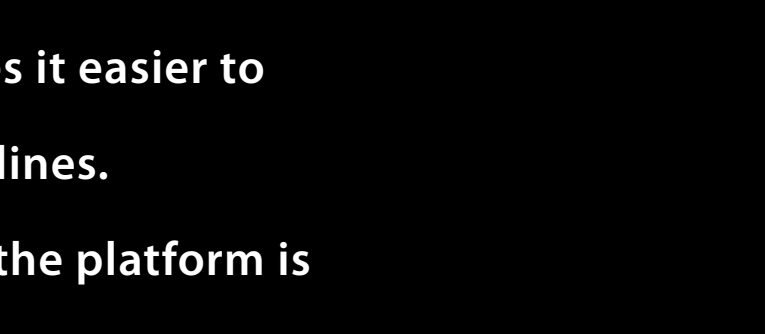
The next generation timing platform

MYLAPS brings timing to the next level with the MYLAPS X2 server at the core of the new MYLAPS X2 platform.
At the heart of this platform a number of important new technologies allow for more versatile and easier use of the system.

- 2-way communication to racer
- Designed for Multi loop installations
- Software programmers interface for customized data acquisition and communication

MYLAPS 2-way system

The next generation timing platform offers an intuitive system based on 2-way communication that enables to send messages and status info from and to the racer (car / bike).
With the MYLAPS X2 server at the core, the platform is more accurate in high density loop passings and makes it easier to configure multiple timelines.
Besides those benefits, the platform is designed to develop dedicated and customized hardware and software solutions by or with 3rd parties.



Key benefits of the system:

- **2-way communication**

  With the introduction of the new 2-way timing platform a new 2-way transponder and decoder technology is introduced. This technology allows communication with the car or bike using the same detection loops as being used for timing.
  This 2-way technology offers opportunity to develop functionality like: providing racers with live sector times and results and allow race control to communicate with the racers. It may also be used to collect data during a session like RPM, temperature, max acceleration etc.

- **Designed for Multi loop installations**

  Part of the functionality that used to be in each decoder is now centralized in the X2. Because of this, the decoders that connect to the X2, are easy to use, more reliable and cost efficient making e.g. section timing, speed trap, and positioning information accessible for a much larger part of motorsport.

- **Software programmers interface for tailor made data acquisition and communication to the car or bike**

  With the new platform the transponders and decoders can be used for much more than just timekeeping.
  With the MYLAPS Software Development Kit (SDK) it is very easy for 3rd party developers to interface with the platform. Acquired data can be used for different applications like safety and noise measurement.
  Of course MYLAPS offers a whole suite of programs on top of this platform as well using the same SDK.

System Components

MYLAPS X2 server

The X2 server is the central processing and communication unit of the X2 platform, its main function is data acquisition and storage. The design is optimized for reliability (like the decoders). The X2 server includes:

- Third party application interface with Software Development Kit (SDK)
- System setup and diagnostics
- Multi decoder manager incl. monitoring of synchronization
- 24/7 on

Technical specs

- Dual power supplies (wide range 110 - 230 VAC/ 50/60 Hz)
- Solid State Drive (60 GB = 20.000.000 passings)

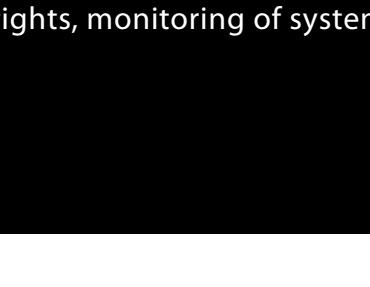
2u 19"rack (8kg, 17,64 lbs)

Different X2 interfaces

X2 Web interface for Authorization and Authentication.
All drivers and software are available on the X2 and are accessible via this interface.

X2 User interface; console for hardware system setup, decoder management, extensive diagnostics on system performance, automatic error and warning system.

Pocket X2 to make setup and diagnostics of the system more effective:
Login account per user with selected user rights, monitoring of system performance.



2-way transponder with built in back-up battery

The 2-way transponder enables enhanced timing accuracy with help of 2-way communication. Due to a built in back-up battery high reliability is assured.

Technical specs

- CAN bus interface for data communication from and to the X2
- Data communication up to 32kbps while above a loop (for example: 20hits = 20 * 8 bytes is 160 characters)

X2 compliant decoder

The new generation decoder uses 2-way communication with the X2 Transponder to increase timing accuracy and enables data communication to and from the transponder. The decoder autonomously synchronizes to available synchronizations sources.

Technical specs

- Built in high sensitivity GPS receiver for time synchronization
- Dual decoding capability, also supports TranX3
- Accurate timing also with transponders placed horizontally
- < 5W power consumption at 12 Vdc
- 10/100B-T

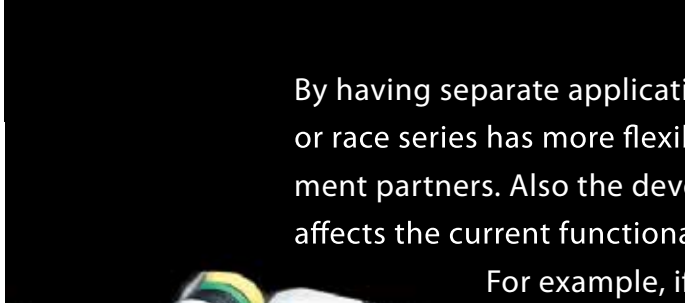
Detection loop

The detection loop works as the system antenna to receive all transponder signals.

With the new platform different applications can be made for different functions, for example:

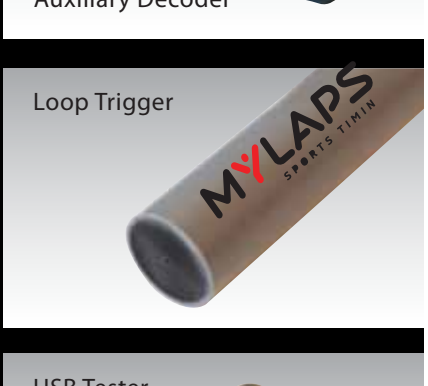
- Different sorts of timekeeping and scoring applications
- Track map showing positions on the track
- Pit lane speed measurements
- Overtaking under yellow
- Camera tracing
- Safety
- Detect cars slowing down
- Automatically show yellow light to cars approaching sector with car slowing down
- Show blue light at pit exit if a car is approaching on the track
- Software to monitor track activity and possibly use this in determining how much to bill a team or car etc.

By having separate applications for separate functionality, the circuit or race series has more flexibility in working with different development partners. Also the development of new functionality no longer affects the current functionality.
For example, if camera tracing has to be built as part of the timing program, the development and especially the testing will take much more time. It will also jeopardize the reliability of the timekeeping software.

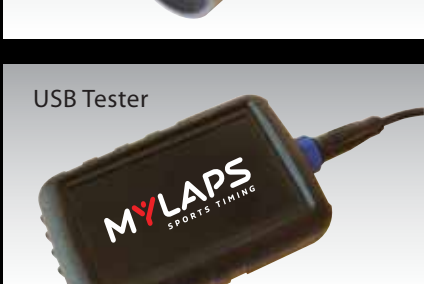


Add ons

With system add-ons, you can add more functionality to the platform



Auxiliary Decoder
An auxiliary decoder enables control of external devices via an I/O terminal with 8 digital in- and 8 outputs and 4 Analog in- and 4 outputs (12 Vdc). The decoder contains a built in high sensitivity GPS receiver for time synchronization and has a GPS NTP time server function with pulse per minute output option.



Loop Trigger
Allows the X2 to automatically check the complete system set up once per minute.

USB Tester
The USB tester is a transponder, loop and beacon tester with USB interface to enable pro active diagnostics of the system.

Loop Tester kit
With a loop tester kit you are able to detect broken loop wires and broken coax connections to the loop.

Beacon
The beacon is a rechargeable device to be installed at the track. Its signal is sensed and logged by all the 2-way transponders to a distance of up to 1.5m. Installed at the start grid, beacons can be used to detect jumpstarts. Installed at pit stop locations beacons can be used to make a pitstop classification.

Portable System Rack
The MYLAPS Portable System Rack is a weatherproof portable housing for your timing system. It provides power and data switch, for up to 3 decoders.
The system rack supports UTP based media convertors and has a power management unit with back up battery built in.
It offers a power diagnostic interface to the X2/SDK via the built in Auxiliary Decoder.

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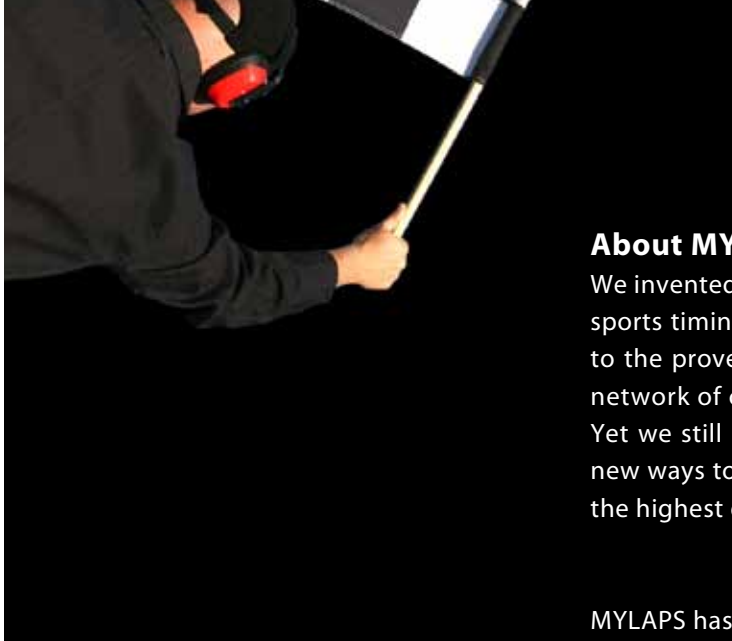

About MYLAPS
We invented automatic sports timing back in 1982. Since then, automatic sports timing has been adopted throughout the world of racing. Thanks to the proven quality of our products, we now have a large and strong network of customers around the world in all sports categories.
Yet we still have our pioneering spirit, and are constantly searching for new ways to improve and extend our timing systems. Always striving for the highest quality. And complete customer satisfaction.

MYLAPS has offices in The Netherlands, USA, Australia and Japan.

You can find our contact details on
mylaps.com

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