



# MYLAPS ProChipT2

## Manual

Version 1.1  
2024-11-15



MYLAPS Headquarters  
Zuiderhoutlaan 4  
2012 PJ Haarlem  
The Netherlands  
+31 (0)23 760 0100

## Contents

Introduction.....	2
Operating modes.....	3
Deep sleep mode.....	3
Charge power detected.....	3
Button pressed .....	3
Real Time Clock wakeup alarm .....	
Charging mode .....	
Online mode .....	4
Button pressed .....	4
LED Indication table.....	5
Technical Parameters .....	5
Dimensions.....	6

## Introduction

The MYLAPS ProChip Tracker is a small device which is meant to track the location of an athlete. The ProChip Tracker is typically worn by an athlete high up at the back, in a pouch on a shirt or vest, or it is mounted to the front fork of a racing bicycle. There is also a possibility to connect a BLE device (e.g. heartrate monitor/ core temperature sensor) to the ProChip Tracker. The ProChip Tracker will then forward the sensor data from the BLE device to an online service.

Additionally, the ProChip Tracker functions as a ProChip Timing Chip which is compatible with the MYLAPS ChipX System.



- RGB Led: Multi-colour led to indicate the status of the ProChip Tracker
- Push Button: Used to activate/deactivate the ProChip Tracker
- Charging port: Used to charge the ProChip Tracker

6.78M Usage: Used for local positioning and timing,  
the 6.78MHz signal is decoded by our receivers, which then know where  
and when they are.

## Operating modes

The ProChip Tracker has 3 operating modes:

- Deep sleep mode
- Charging mode
- Online mode

By default the ProChip Tracker is in deep sleep mode

### Deep sleep mode

In deep sleep mode, the ProChip Tracker is powered off and power consumption is reduced to a minimum. Only the Real Time Clock, gas gauge and wake up monitoring circuitry is active.

Wake up from deep sleep can happen for the following reasons:

- Charge power detected (device inserted in charger case)
- Button pressed for 3 seconds

#### Charge power detected

When charge power is detected, the device wakes up from deep sleep and goes to charging mode.

#### Button pressed

When the button is pressed it will shortly blink GREEN. If the button is kept pressed for more than 3 seconds, it will show solid GREEN and switch to Online mode. If it is pressed for less than 3 seconds, it will fall back to Deep sleep mode.

### Charging mode

The device is charged with 5V, when the voltage is detected, the device automatically goes to charging mode. In charging mode the device turns on the internal battery charger circuitry and starts charging the internal battery.

While the battery is charging, the status LED shows a continuous RED color.

When the battery is full, the status LED shows a continuous GREEN color.

When there is a charging error (e.g. due to high temperature) the LED will blink RED.

When the device is removed from the charger the device goes to deep sleep mode. While in charging mode, if the device is connected to a PC, USB communication is available.

## Online mode

In online mode the device enables the internal LTE modem and (tries to) connect to the configured online server.

The status LED blinks two or three times every 5 seconds to indicate if the device is connected to the online server, if the GPS is locked or not and if the BLE is connected to a BLE device (e.g. a heartrate monitor)

The first blink indicates the online server connection status:

- RED indicates the device is not connected to the online server.
- GREEN indicates the device is connected to the online server.

The second blink indicates the GPS lock status:

- RED indicates the GPS is not locked.
- GREEN indicates the GPS is locked.

The third blink indicates BLE status:

- BLUE indicates a BLE device is connected
- No Blink indicates no BLE device connected

When connected to the online server, the ProChip Tracker will send its data (e.g. Location, Status etc) every second to the server.

## Button pressed

When the button is pressed it will show solid GREEN. When it's kept pressed for more than 3 seconds, the device will show a solid RED and when the button is released the device goes to deep sleep mode. If the button is pressed for less the 3 seconds, it will stay in Online mode.

## LED Indication table

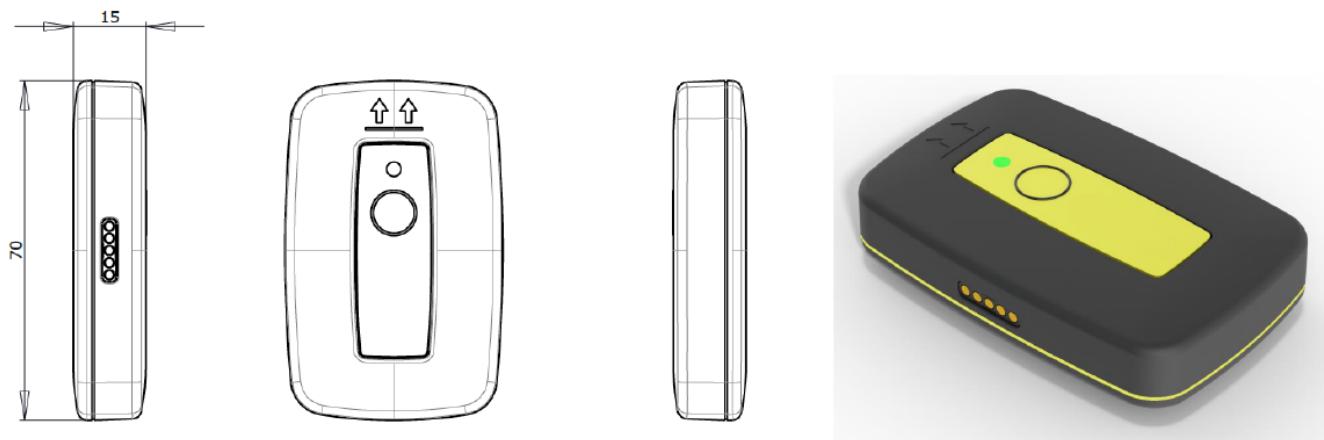
Mode	Pattern	Colour	Status
Deep Sleep	No led indication	-	-
Charging	Solid	Red	Charging
		Green	Full
	Blinking every 1 s.	Red	Charge error (e.g. High Temp.)
Online mode	3 blinks every 5 s.		
	First Blink	Red	No server connection
		Green	Connected to server
	Second blink	Red	GNSS no position fix
		Green	GNSS position fix
	Third blink	None	No BLE device connecter
		Blue	BLE device connected

## Technical Parameters

Technical parameters	
Charge power	5V, 300mA
Battery	Lipo, Varta LPP443441 660mAh
Charge time	< 8 hours
Operation time	> 4 hours
Deep sleep time	1 day deep sleep costs 3 minutes operation time
Operation Temperature	Min -10C, Max +50C
Charging Temperature	Min +5C, Max +40C
Storage Temperature	Min 0C, Max +30C
Weight	50g
Dimensions (l x w x h)	70x45x15mm
GNSS Regions	<ul style="list-style-type: none"> <li>GPS / QZSS L1C/A (1575.42 MHz)</li> <li>Galileo E1-B/C (1575.42 MHz)</li> <li>BeiDou B1I (1561.098 MHz), B1C (1575.42 MHz)</li> </ul>
LTE 4G	<ul style="list-style-type: none"> <li>FDD band 12 (700 MHz)</li> <li>FDD band 28 (700 MHz)</li> <li>FDD band 20 (800 MHz)</li> <li>FDD band 5 (850 MHz)</li> <li>FDD band 8 (900 MHz)</li> <li>FDD band 4 (1700 MHz)</li> <li>FDD band 66 (1700 MHz)</li> <li>FDD band 3 (1800 MHz)</li> <li>FDD band 2 (1900 MHz)</li> <li>FDD band 1 (2100 MHz)</li> <li>FDD band 7 (2600 MHz)</li> <li>TDD band 40 (2300 MHz)</li> <li>TDD band 41 (2600 MHz)</li> <li>TDD band 38 (2600 MHz)</li> </ul>

## Dimensions

### Prochip Tracker Dimensions



Company: <b>MYLAPS</b> SPORTS TECHNOLOGY	Description: Prochip Tracker	Version: 1	Units: mm
		Page: 1 / 1	
		Confidential	Date: 22-Aug-2024

## FCC Warning

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### Specific Absorption Rate (SAR) information:

This product meets the government's requirements for exposure to radio waves. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons regardless of age or health.

### FCC RF Exposure Information and Statement

The SAR limit of USA (FCC) is 1.6 W/kg averaged over one gram of tissue. Model: T2 (FCC ID: NXY-PROCHIPT2) has also been tested against this SAR limit. This device was tested for typical body-worn operations 0mm from the body. To maintain compliance with FCC RF exposure requirements, use accessories that maintain a 0mm separation distance between the user's body.

### Body-worn Operation

This device was tested for typical body-worn operations. To comply with RF exposure requirements, a minimum separation distance of 0mm must be maintained between the user's body, including the antenna. Third-party belt-clips, holsters, and similar accessories used by this device should not contain any metallic components. Body-worn accessories that do not meet these requirements may not comply with RF exposure requirements and should be avoided. Use only the supplied or an approved antenna.