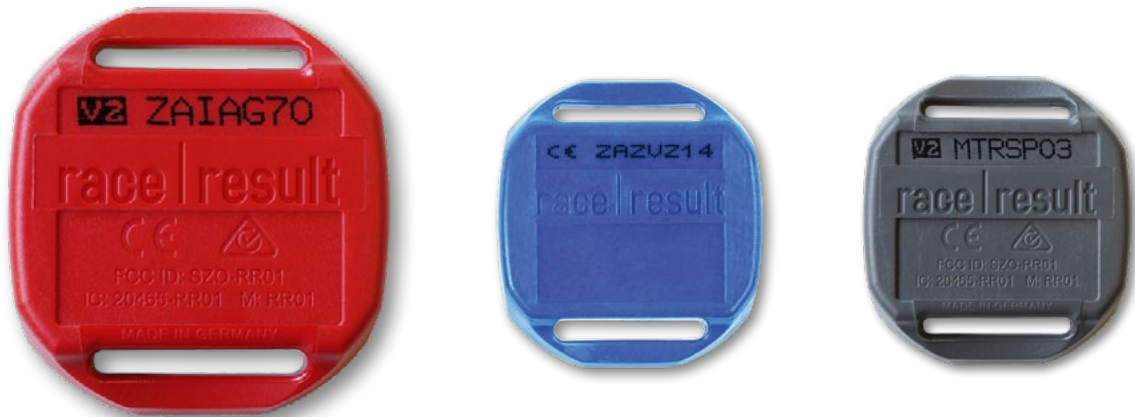


# Active V2 Transponders



The V2 transponder series **has been discontinued in March 2023**. This document refers to this outdated transponder version. Details on the current V3 series can be found in the respective data sheet on our website.



## Active V2 Transponder Features

- **Three options**  
The ActivePro V2 and the MotorKart are high-end transponders with a 3D activation antenna, very high precision and a revolutionary tracking feature. The ActiveBasic is the cost-efficient alternative with 1D activation and less precision.
- **Flexibility**  
All transponders can be used in the same race (for example ActivePro V2 for elite riders, ActiveBasic for amateurs).
- **3D activation antenna**  
The 3D activation antenna of the ActivePro V2 and MotorKart ensure reliable detection in any orientation.
- **Precision**  
Because of the 3D antenna, the ActivePro V2 offers a true 1/100th second precision at speeds of up to 150km/h.  
With a precision of up to 4/1,000th of a second at speeds of up to 250km/h, the MotorKart is the perfect solution for Motorsports. It comes with an Active Chip Holder, for an easy mount on vehicles.
- **Long battery lifetime**  
The ActivePro and MotorKart can be set to deep sleep mode, which reduces the energy consumption and increases battery lifetime.
- **Tracking**  
You can track participants live, without an additional GPS tracker. All you need is to activate tracking on the timing chips and set up Track Boxes along the course or on following vehicles.
- **Ergonomic and robust**  
The plastic casing of all active transponders is robust and comfortable to wear thanks to its smooth edges. We have also improved our quality control, to ensure reliability to the highest standards.
- **Immunity to interferences**  
Thanks to a better channel assessment process and a new dual-frequency transmission technique<sup>1)</sup>, our latest versions of Active System and transponders are more immune to interferences from third-party devices using 2.4GHz channels.
- **Ease of use**  
Our V2 Transponders make your life easier, especially in store mode: The Loop Box beeps and blinks for stored detections<sup>2)</sup>, you can place two loops very close to one another (e.g. for speed traps), and the overwrite logic ensures a cleverer storing of start detections.

1) Only on Loop Box v2 from firmware version 2.5  
2) Only on Loop Box v2 from firmware version 2.4



Active Transponders V2	ActiveBasic	ActivePro	MotorKart
Loop detection antenna	1D activation antenna	3D activation antenna - detects equally in any orientation	
Detection speed	75km/h (45mph)	150km/h (90 mph)	up to 250km/h (155 mph)
Timing accuracy	2/10th second	1/100th second <sup>1)</sup>	4/1,000th second <sup>1)</sup>
Precision sweet spot	at 30-60km/h		at 60-90km/h
Reaction time	250ms		125ms
Passings storage	no	64 passings up to 24 hours time drift of ± 70ms per hour (20ppm)	128 passings up to 24 hours time drift of ± 70ms per hour (20ppm)
Tracking mode	no	tracking rate 1 time per second	tracking rate 2 times per second
Deep sleep mode	no	reduces power consumption by 40%	reduces power consumption by 70%
Prewarn before passing for fast identification	no	yes	yes Prewarn acknowledgement
Expected battery life <sup>2)</sup>	12 years / 300,000 passings	7 years / 200,000 passings	4 years / 300,000 passings
Guaranteed battery life <sup>3)4)5)</sup>	7 years / 150,000 passings	5 years / 100,000 passings / 2,000 tracking hours	3 years / 200,000 passings / 1,200 tracking hours
Battery indicator	battery status data in passing		
Dimensions	36 x 40 x 9mm		
Weight	16.8g		
Housing	IP69 TPE molded case sealed with PU compound 100% salt water proof		
Temperature <sup>5)</sup>	-25°C to 70°C		
Shock Resistance	>1,000G		

1) At 30% loop power & 30 cm wide loop

2) Expectation based on usage without Tracking + 50% deep sleep

3) Whichever comes first

4) Battery consumption is cumulative, e.g. 50,000 passings & 1,000 Tracking hours exploit the guarantee.

5) Battery Warranty limited to temperatures above -10°C

#### Active Transponder Tray

Dimensions	522 x 297 x 12mm
Weight	approx. 1kg (including 50 transponders)
Material	4mm rugged PE (UV stabilized)
Features	Stackable, with numbering 1-50 / 51-100

#### Active Chip Holder

Dimensions	50 x 58 x 20mm
Weight	14g (incl. 3 O-rings)
Material	High-impact resistant plastic
Compatible with	Active Basic, Active Pro, MotorKart
Contents	Active Chip Holder, 3 O-rings
Feature	Can be mounted on plain surfaces or tubes

The Active Chip Holder is included with every MotorKart Transponder.

**Note:** To guarantee full performance, the MotorKart needs at least 5-10mm distance to any metal/carbon part.



Screw mounting:  
2 holes with 5mm diameter  
1 hole with 4mm diameter

