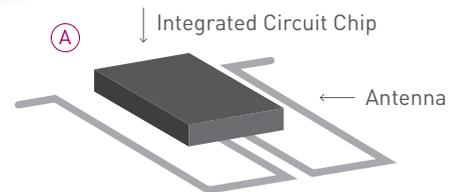




Computype™

Smart Labels for Smart Tires

The label that can store and update data and enable more effective tracking is now a reality for the tire manufacturing industry.



Computype barcode labels have long been an efficient and effective way to identify and track tires through the production and distribution process. Now with Computype's leading RFID expertise and 40 years' tire industry experience, even more control and added benefits are ready for you to utilize.

Computype's materials engineering and RFID expertise means that now you can exploit the many benefits of smart label technology, in a product that's proven to perform throughout demanding tire manufacturing processes and beyond.

- **No line of sight required.** Labels can be automatically placed and concealed inside tires - data is sent and received by radio waves
- **'Write Many/Read Many' (WORM) functionality.** Data related to the tire can be stored, updated and instantly accessed on the integral computer chip wirelessly, from initial application on a green tire to the end of service life
- **Save on labor costs.** Smart labels can be automatically applied and read via equipment that's easily integrated into your production lines, achieving total automation with no need for human intervention
- **No duplicates.** Each smart label's unique identifier cannot be altered. A hybrid RFID label and barcode combined is available for added security
- **Dynamic data means added production and customer benefits.** Along with exceptional tracking and process logging capabilities, our smart labels can supply operational data to a vehicle's engine management system in service. Real-time information such as tire pressure, temperature, tread wear and more can be available for dash board display, **giving product differentiation and added value at the point of sale**

A truly custom solution

Computype smart labels utilize our own in-house adhesive system. Every layer of the construction is designed by our specialist materials engineers to match the characteristics of your specific tire designs and materials – it's how we can guarantee a high performance solution to last the life of the tire.

We use finite elements simulation software to predict the behavior of the device, and ensure that the radio transmission element of the design works faultlessly through the materials and structure of each tire type.

To ensure operational stability, Computype also creates multiple prototypes of each label for testing in our labs and on your production lines, as part of product qualification.

Put Computype and our smart labels to the test

Contact us to discuss details of your current manufacturing process and challenges. We can show how Computype RFID will reduce costs through automation and increase production efficiency.

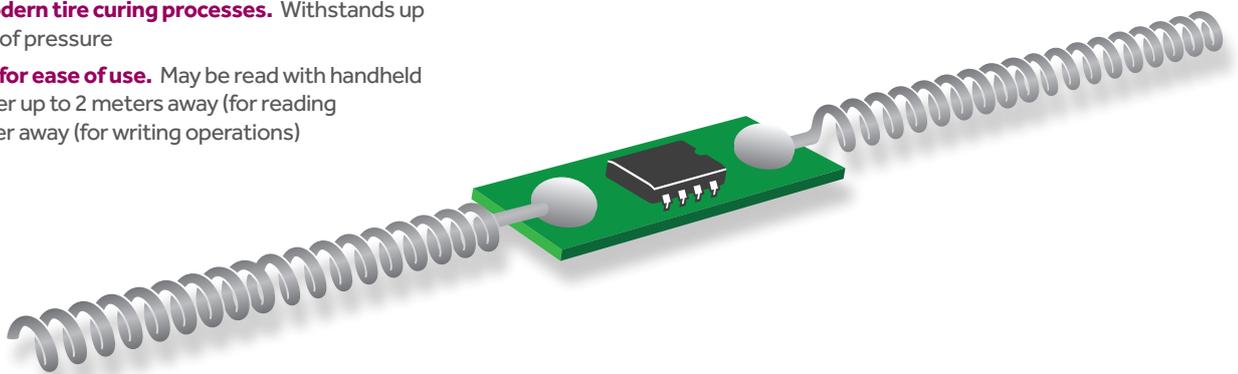
RFID Spring Tags: Small but powerful

Offers the ultimate in design flexibility with the option to embed within the tire or attach to the inner surface with a rubber patch

- **Works on any tire in any location.** A unique broadband design enables utilization over all global UHF frequencies (860-960 Mhz)
- **Designed to be utilized for the entire life of the tire.** An innovative spring antenna provides outstanding fatigue life and endurance for the entire life of the tire (including the retread process!)
- **Compatible with modern tire curing processes.** Withstands up to 200°C and 30 bars of pressure
- **Superior read range for ease of use.** May be read with handheld readers or fixed reader up to 2 meters away (for reading operations) or 1 meter away (for writing operations)

Features	Benefits
Collaborative Innovation Process for custom engineered label materials and adhesives and RFID system	Highly reliable RFID tire label withstands your vulcanization process and results in high RFID read and write rates
RFID system design integrated with your production process, including read/write equipment, automatic applicators, middleware and service	Single-source supply option for all of your tire SKUs (stock-keeping-units); we'll provide all of the necessary components, including the RFID tire labels, for a functional system
Custom engineering through finite elements (FE) modeling	Our RFID wireless circuits are modeled in advance using powerful computing tools enabling us to predict performance with your tires prior to the prototyping stage, resulting in rapid product development and fewer trials in your plant.
Accurate tracking and tracing and dynamic data management through the production process and into distribution and the retail environment, including the customer-use period	Benefits beyond automation labor savings now include product differentiation benefits—your customers will see the advantages of smart tires that communicate wirelessly for vehicle monitoring and control purposes and for service during the life of the tire.

- **Compliance with international standards** (ISO-18000-63/EPCC1G2/ISO-15962)
- **Built to withstand the extreme demands of off-road applications.** Uncompromising design stands up to the necessities required of racing tires & heavy construction tires.



We can also demonstrate how Collaborative Innovation ensures you get precisely the tire labeling solution your plant requires.

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