muRata
INNOVATOR IN ELECTRONICS
World's First
Robot Cheerleaders
Debut!
muRata
INNOVATOR IN ELECTRONICS

Introducing the World's First Robot Cheerleaders!

Innovation is a way of life at Murata,
which is why the company continues to push the boundary of technologies.
And now, with the goal of using technology to produce happy smiles,
Murata introduces the world's first team of robot cheerleaders.
Representing the infinite possibilities of electronics,
Murata cheerleaders are ready to cheer on innovators everywhere!

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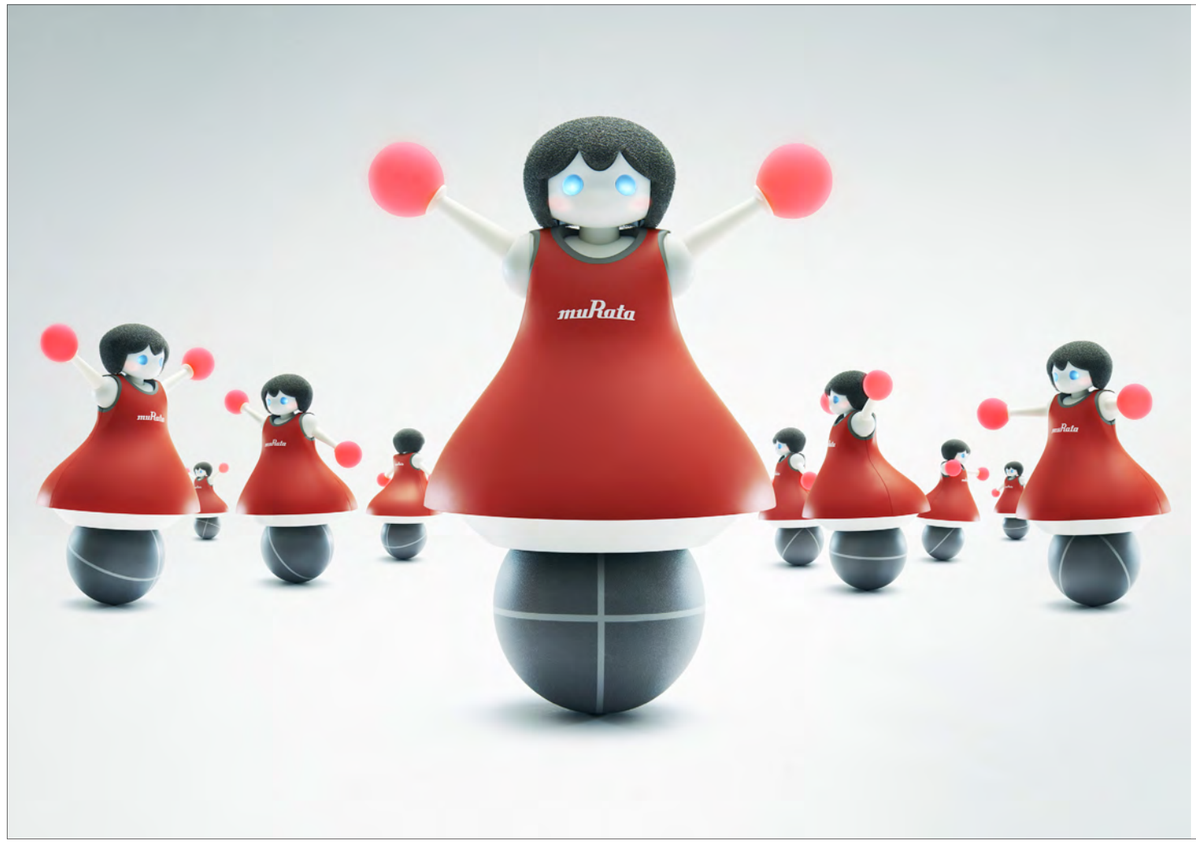


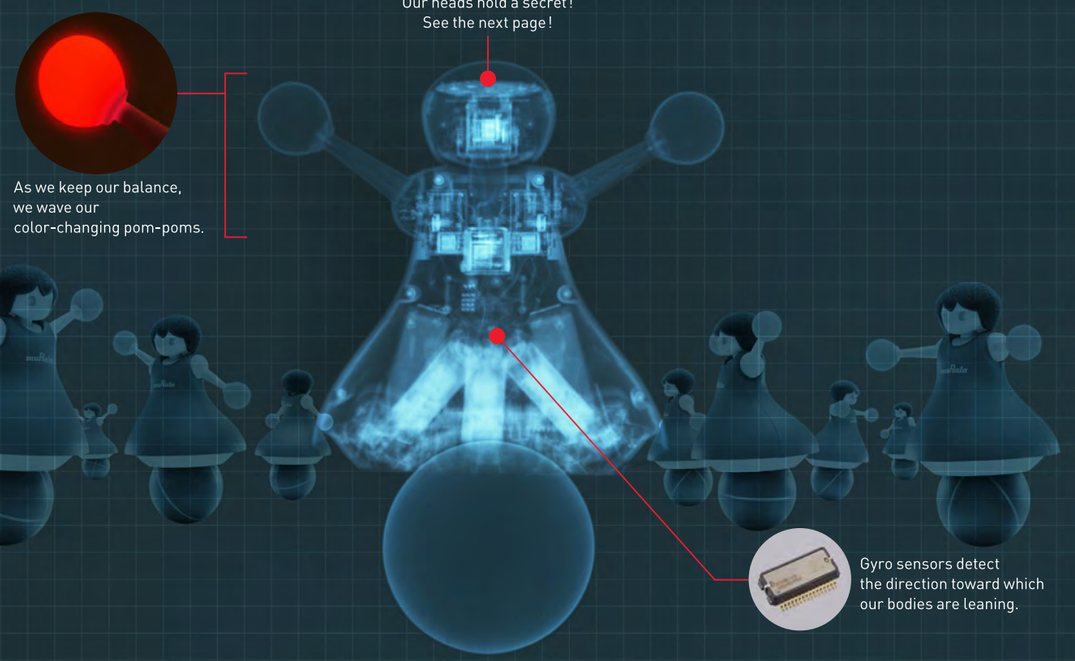
Hi, we're the Murata Cheerleaders!

Bicycle-riding MURATA BOY and unicycle-riding MURATA GIRL,

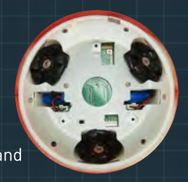
get around on wheels, but we move balanced on top of a ball.

Our secret? Amazing balance that keeps us upright and control technology for flawless and seamless teamwork, which is why the 10 of us never collide.

We hope that our synchronized routines bring smiles to people's faces everywhere and inspire the innovators of the world to tackle new challenges. We're cheering for you!

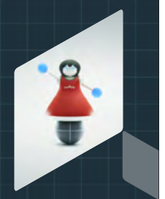


How do you maintain your balance ?



The secret to our amazing balance lies in three gyro sensors, which identify the direction that our bodies are leaning toward and then move us in that direction. Body alignment remains perfect, even when dancing atop the ball. This highly sophisticated system is an upgraded version of a system originally developed for the MURATA BOY and MURATA GIRL robots.

Murata Cheerleaders use gyro sensors much like those found in the electronic stability control systems of vehicles.



Each Murata cheerleader is equipped with five ultrasonic microphones and four infrared sensors, installed in its head. Data from these sensors are shared via a wireless network, enabling each cheerleader's position to be accurately located in real time.

Relative positions are determined with a combination of ultrasonic and infrared signals, which travel at different speeds. It's the same principle as counting the seconds between a flash of lightning and the sound of thunder to determine distance.

Each cheerleader has a communication module to relay the data to a central control system, where relative positions are processed to ensure that the Murata Cheerleaders move flawlessly without bumping into each other.

We are asked many questions. Here are just few that we thought you might like to know.

Q What is your height and weight?
A We're each 36cm tall and weigh 1.5kg.
That's about the size of a 2 liter plastic bottle.

Q How old are you?
A We're elementary school
students full of energy and curiosity.

Q What color are the lights used for your eyes and your pom-poms?
A The LED lights are tri-color,
so they shine in all sorts of colors.

Q What Murata parts do you contain?
A

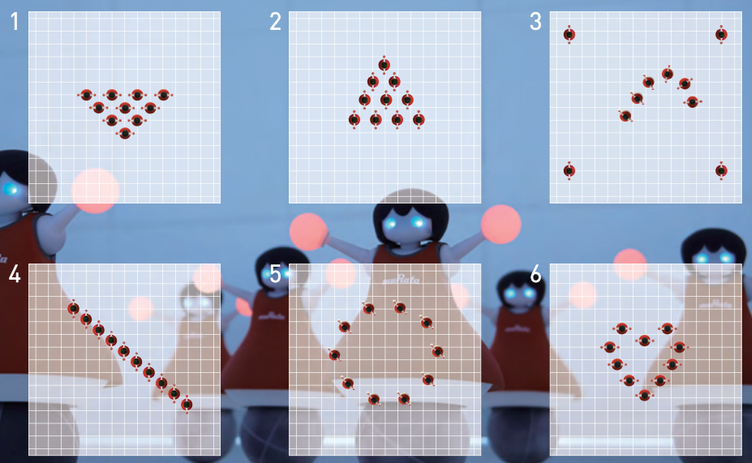
Q How long can you continuously cheer?
A For approximately one hour.
At a soccer game, we could cheer until halftime!

Q How fast can you move?
A About 30cm per second.
That's probably the fastest of any robot ever!

Q How large of a surface area can you move across?
A To date, we can move across a 4m x 4m space.

Q Do you plan to add cheerleaders to the club?
A We're currently accepting new members.

Check out our new formations!



For more information on performances,
visit the Murata website at "www.murata.com"