**About Murata**

**Murata products**

Murata electronic components contribute to enriching people’s lives through their use in all sorts of electronic devices in everyday life, including radios, televisions, and mobile phones. Murata will also continue offering new value as an innovator in the growing electronics field such as automobiles, energy, and healthcare.

**Murata products supporting the evolution of electronics**

Murata electronic components have supported the evolution of devices through miniaturization and increased functionality. For example, approximately 800 capacitors, a mainstay Murata product, are used in a single smartphone, and approximately 8,000 are used in a single automobile.

**Quantity used and global share of Murata products**

<table>
<thead>
<tr>
<th>Component Type</th>
<th>Quantity used for each finished product</th>
<th>Murata’s global share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chip multilayer ceramic capacitors</td>
<td>800 (Smartphone) 8,000 (Automobile)</td>
<td>40%</td>
</tr>
<tr>
<td>SAW filters</td>
<td>25 (Smartphone)</td>
<td>50%</td>
</tr>
<tr>
<td>Noise suppression products EMI suppression filters</td>
<td>100 (Smartphone) 200 (Automobile)</td>
<td>35%</td>
</tr>
<tr>
<td>Connectivity modules</td>
<td>1 (Smartphone) 1 (Automobile)</td>
<td>55%</td>
</tr>
</tbody>
</table>

*Quantity used based on high-performance product

**New challenges**

**Launch of worker safety monitoring systems utilizing sensor technologies and IoT**

“Contributing to workers’ health management by monitoring biological information and the working environment”

It is becoming increasingly necessary to develop a safe and comfortable working environment in the construction industry as the number of construction workers declines owing to the falling population of Japan and higher average age of workers at construction sites. Furthermore, the lack of awareness of deteriorating working environments has become an issue at construction sites in recent years, as the summer heat has become increasingly intense, resulting in onset of heat stroke, excess fatigue, and ill health. Accordingly, Murata Manufacturing Co., Ltd., with expertise in offering sensor technology and system solutions, collaborated with TODA CORPORATION to develop a system for monitoring biological information and working environments in August 2018. Looking ahead, we will continue using technologies to address such social issues.

**Overview of worker safety monitoring system**

A. Sensor devices (Data collection functions)
B. Gateway (Data aggregation and cloud upload functions)
C. Relay device (Relay functions at each installation location)
D. Web services

![Diagram of worker safety monitoring system](image-url)