



FUJIKURA NEWS

Information on Fujikura's Participation in CEATEC 2021 ONLINE

Fujikura participates in CEATEC 2021 ONLINE, which takes place from Tuesday, October 19 (Tue) -21 (Fri), 2021. This year's CEATEC is held fully online under the slogan of "CEATEC toward Society 5.0 with the New Normal," focusing on the theme "Connecting Society, Co-Creating the Future."

We use videos to showcase our products and services indispensable to a network society now and in the future with the keyword, "Tsunagu (connecting) Technology to support the creation of a reassuring, safe society." We are looking forward to welcoming you at our booth online.




CEATEC 2021 ONLINE

Dates and times

October 19 (Tue)-22 (Fri), 2021
10 a.m.-5 p.m.

CEATEC 2021 ONLINE Fujikura booth
<https://online.ceatec.com/booth/2622>



[Archive period]
From October 22 (Fri), 2021, at 5 p.m. to November 30 (Tue), 2021, at 12 p.m.

Please read below for more details of each product on display.

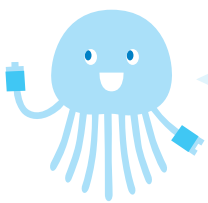
Point applicable to SDGs17

3 GOOD HEALTH AND WELL-BEING

7 AFFORDABLE AND CLEAN ENERGY

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

11 SUSTAINABLE CITIES AND COMMUNITIES



DSSCs generate clean energy in low-light conditions and ensure the safety of our lives by visualizing the risk of heatstroke, which is a social problem. AI-based sound classification system and high-voltage cable deterioration diagnostic device prevent accidents at social infrastructures such as electric power facilities to provide energy stably. The 5G wireless modules and fiber-optic cables using Fujikura's proprietary technologies make high-speed, high-capacity communication possible and contribute to the advancement of sustainable, reassuring, safe, and robust infrastructures,



CEATEC 2021 ONLINE — General Concept

Tsunagu (connecting) Technology to support safe and secure urban development

Fujikura's Tsunagu Technology is introduced with three key words: "safety of people and cars," "Watching over safety of life," and "Security through connection."

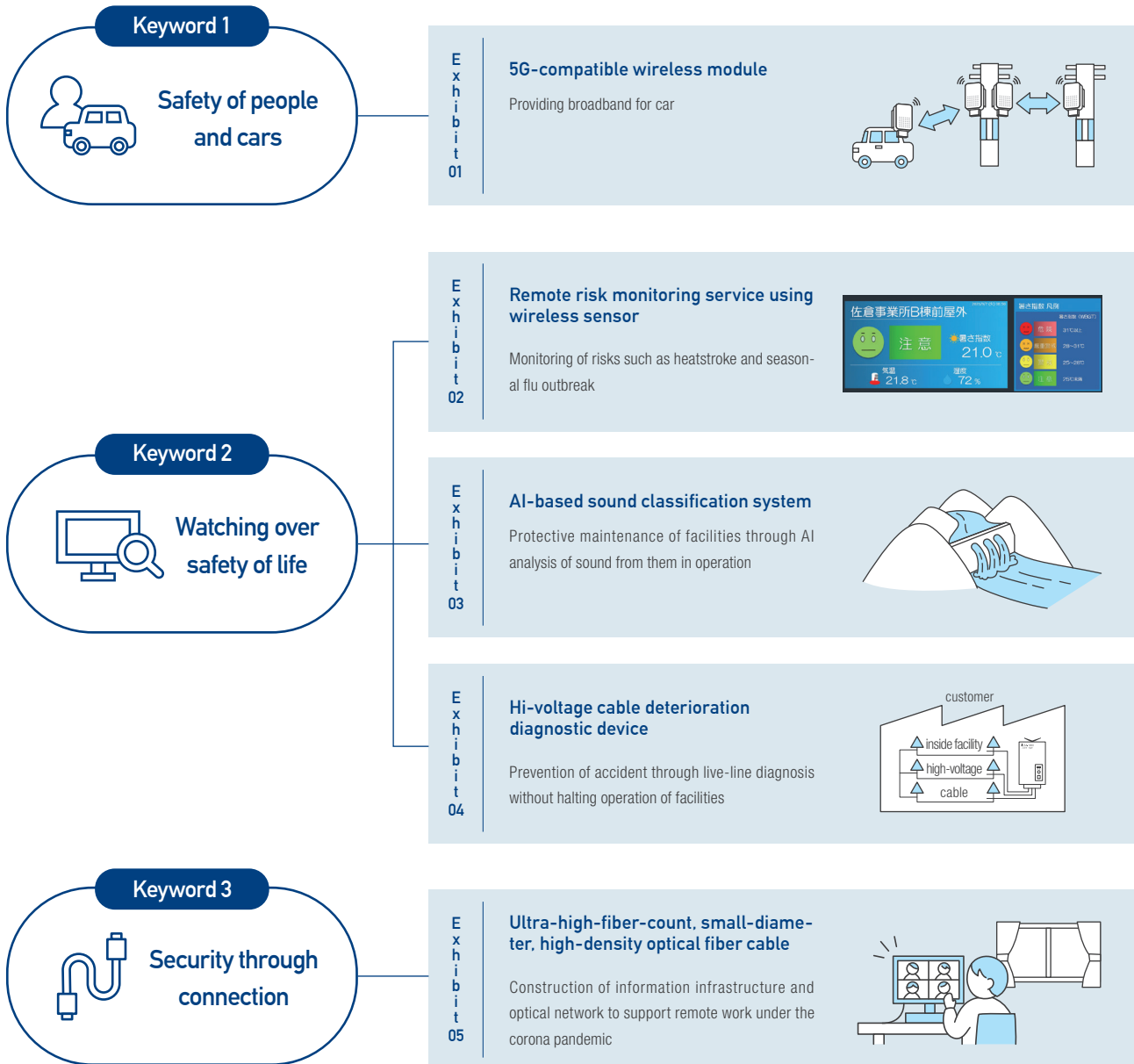


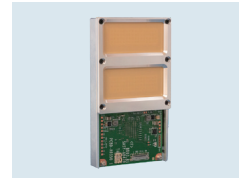


Exhibit 01

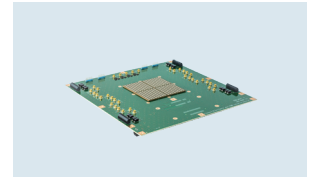
5G-compatible wireless module

Fujikura has developed a 28 GHz phased-array antenna module (PAAM) for 5G millimeter-wave stations and 60 GHz millimeter-wave communication module, which can be used in frequency bands newly allocated for 5G communication.

The module, 28 GHz PAAM, consists of antenna arrays, a beamforming IC, frequency converting IC, and filter. The modules will help 5G base stations significantly reduce costs and time for developing and manufacturing the products when being installed there. In addition, the 60 GHz millimeter-wave communication module, which requires no license, enables the world's top-level high-speed, high-capacity communication. As a new use case, installing the 60 GHz module as a V2X device will allow various types of cars (for general purpose, transportation, construction and service, autonomous driving at plant) to access broadband networks.



60 GHz millimeter-wave module



28 GHz PAAM for 5G millimeter-wave base station use

[60 GHz millimeter-wave module]
<https://mmwavetech.fujikura.jp/ja/>



[5G phased-array antenna module, FutureAccess™]
<https://mmwavetech.fujikura.jp/ja/5g/>



Exhibit 02

Remote monitoring service using wireless sensor

Fujikura offers energy-harvesting sensor systems powered by dye-sensitized solar cells (DSSCs) and equipped with a wireless device operating at 920 MHz. We also provides application services that use an IoT cloud platform.

At CEATEC 2021 ONLINE this time, we put on display two solutions: monitoring the risk for heatstroke and seasonal flu and water condensation in warehouses. The sensor systems placed in measurement points enable the users to collect environmental data from the devices and manage and visualize it on the IoT cloud.

In addition, processing of the measurement data can be incorporated in

the IoT cloud. This allows, for example, sending emails to alert users and remotely operate an alarm light when a set threshold value is exceeded, thereby warning can be issued timely.



IoT Cloud screen



Indoor sensor



Outdoor sensor

[DSSC]
<https://dsc.fujikura.jp/>



[Energy-harvesting IoT Sensor solution]
<https://eh-iot.fujikura.jp/>



[Heat stroke prevention IoT solution]
<https://eh-iot.fujikura.jp/heat/>



Exhibit 03

AI-based sound classification system

Fujikura has developed an acoustic sensor that uses AI and automatically distinguish between normal and abnormal operation of facilities at factories based on acoustic data. This sensor supports preventive maintenance by using AI for early diagnosis of abnormalities of facilities and urging the repairs so that accidents and breakdowns can be prevented. Moreover the system meets the current needs for remote monitoring of facilities and reducing dependence on experienced inspectors. Before customers start using the sensor, we record sound emitted from the facilities or machines, which customers need to monitor, and in the atmosphere

at factories and incorporate the algorithms in the sensor. CEATEC 2021 ONLINE introduces application examples of the acoustic sensor and demonstrates the detection of abnormalities at a pumping facility.



AI-based sound classification system



Exhibit 04

High-voltage cable deterioration diagnostic device

Diagnosis of deterioration of high-voltage cables uses two methods: live-line measurement and dead-line measurement. A live-wire diagnostic device checks high-voltage cable in operation for deterioration.

Implementing cable deterioration diagnosis on live wire, which required turning off the power in the past, allows efficient maintenance and management and preventative maintenance through monitoring the trends.

Fujikura Dia Cable (FDC) offers a wide range of live-wire diagnostic device of

portable-type and permanent installation-type for measuring the resistance of sheath insulators, shields, and the main insulators. We are willing to present customers our proposals of an optimal diagnostic method and combination of devices as per customer request.

Furthermore, we also provide cloud-based cable diagnosis services using IoT and the feedback of diagnosis from the engineer to support customers' maintenance operation.



Live-wire diagnostic device (portable-type)
Model:LISSA-100



Sheath defect identifier
Model:LILIA-150T



Live-wire diagnostic device (permanent installation-type)
Model:LISSA-1500

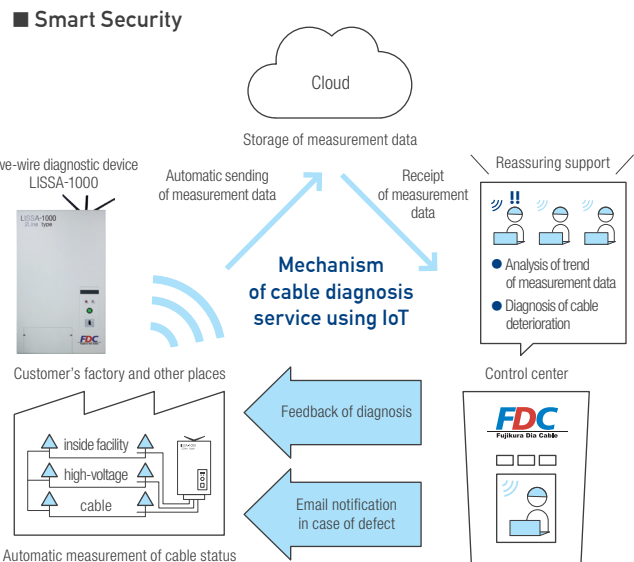
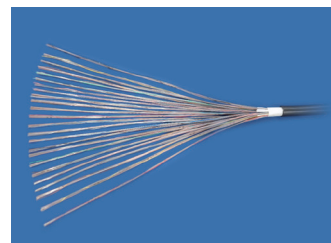


Exhibit 05

Ultra-high-fiber-count small-diameter high-density optical cable

Recently, the amount of data communication on networks has been explosively increasing with increasing use of services including big data, 5G, and IoT. Most of the services are supported by optical cable networks.

At CEATEC 2021 ONLINE, our ultra-high-fiber-count, small-diameter, high-density optical cables and optical fiber fusion splicers are on display. In addition, we also introduce our research on the multicore fiber with multiple cores.



Ultra-high-fiber-count small-diameter high-density optical cable