

# FUJIKURA NEWS 3

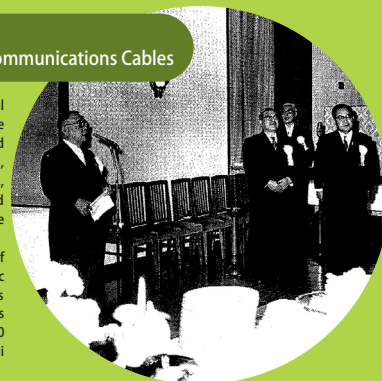
2021 No.475

Fujikura Modern history -11

## 70th Anniversary of Providing Communications Cables

From 1965 to 1975, Fujikura enhanced industrial competitiveness by actively modernizing the company and conducting unique research and development. With its business expanding, Fujikura Real Estate, PEP, Fuji Metal Processing, Fuji Mold, Fujikura Distribution Center, and Fujikura Shoji Co., Ltd. joined Fujikura as affiliate companies.

The year 1973 marked the 70th anniversary of the company's appointment as the first domestic designated factory by the Communications Ministry in 1903. To commemorate Fujikura's providing communications cables throughout 70 years, a party as a thank you was held at Mitsui Club on January 29th in the same year.



70th anniversary party to celebrate Fujikura's providing communications cables

Power & Telecom

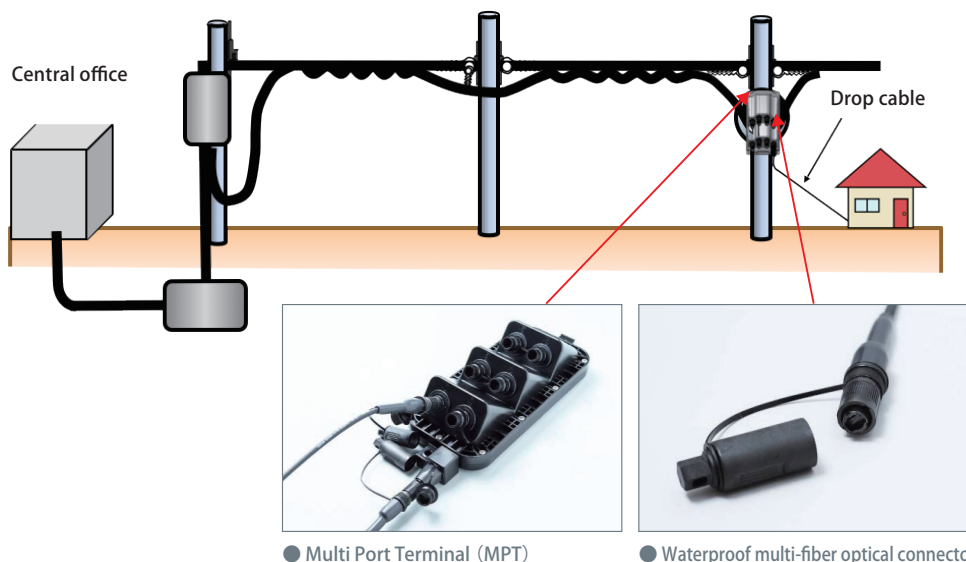
## Plug & Play Solutions (Optical Access Network Installation Components) Using Waterproof Multi-fiber Optical Connector



Fujikura has developed a waterproof multi-fiber optical connector and multi-port terminal (MPT) as installation components to be used in FTtx and 5G optical networks. The MPT has a structure containing input/output waterproof multi-fiber optical connectors with optical interconnections between them to facilitate multipoint connections.

Conventionally, optical network construction includes different works such as drawing and branching of optical cables underground (in manholes) or aerial. In addition, fusion splicing is required, splice protectors and fiber are stored in a closure or cabinet in connecting drop cables. High level of operation skill and long operation hours are unavoidable.

The newly developed waterproof optical connector adopts a bayonet structure which provides an easy connect/disconnect experience. The sophisticated skill dependent closure and cabinet operation are replaceable by a single action. Therefore, working time could be significantly reduced. The connector can be used in various configurations by combining with a waterproof single-fiber connector, which has been commercialized by one of our group company, America Fujikura Ltd. We will continue to contribute to the development of an advanced information society.



● Multi Port Terminal (MPT)

● Waterproof multi-fiber optical connector





## Digital Transformation in Manufacturing by AI

The Fujikura Group is engaged in research and development of AI using deep learning. By establishing a learning method to raise the percentage of correct answers and visualizing abnormality in the process of manufacturing products, we conduct inspection efficiently using AI. We launched research on AI in 2015 and the development of a visual inspection system as the first practical use of AI in a production line in 2017, and have operated the system automatically since 2018. The inspection subjects are laser diode wafers, which are manufactured by one of our group

companies, Opt Energy, and are key components of fiber lasers. Since the system was introduced more than a year ago, it has kept inspecting the appearance of products stably without human intervention. Since there are few cases where manufacturing companies put AI to practical use, our practice draws attention. We will promote to produce products using AI through applying AI technology to the process of manufacturing products.

## Fujikura Dia Cable's Digital Production

Fujikura Dia Cable Ltd. adapts to changes in a business environment and promotes innovation in its operations and the process using data and digital technology based on society and customer needs. The company's digital production system is designed to consistently manage orders, production schedule, production, inspection and shipment in an integrated manner. Concretely, the system digitizes information on customer needs, and the details and trends of orders and directly connects the data to each line of production sites. The system also manages production, inspection, distribution to warehouse and

shipment to customers based on a delivery schedule. In addition to such digital technology, the plants have introduced hardware for automation and simultaneously improved production technology through the digitization of conditions and records of production and digital data analysis. These efforts have led to enhancing product assurance. The whole company including headquarters, the sales site, the four production sites and eight distribution bases operates the system so as to produce necessary and reliable products at the right timing and deliver them to customers in a short time.



● Cable material automatic carrying system

# Fujikura

# DX

## Introduction to Fujikura Group DX

## Online Seminar Presented by BRIDGE: "Image analysis by AI: Fujikura's progress and solutions from most advanced startup companies"

The innovation hub "BRIDGE" promotes various activities such as holding seminars for the purpose of fostering an innovation culture. On January 28th, we introduced the image analysis solution using AI on online seminar explaining in detail on the front-line efforts and collaboration progress of our company and external start-up companies. As a keynote speech, a wide range of topics from the AI Promotion Department, which promotes the development of AI solutions for the manufacturing innovation, such as its

concept, vision, and also actual examples of image analysis were introduced. In addition to introducing specific examples of collaboration between Fujikura and AI startup companies and presentations from such startup companies, how Fujikura proceeds with open innovation was also shared. It was a very fulfilling seminar where you can learn about our front-line efforts in the AI field from wide range of perspectives. We will continue to introduce the latest progress of our open innovation. BRIDGE will proceed to flexibly foster an innovation culture and promote value co-creation.



● Online seminar offered by BRIDGE



## FUJIKURA NEWS Apr.2020 - Mar.2021

Power & Telecom	<p><b>Apr.</b> Small-diameter High-density Slot-less Optical Fiber Cable Registered in NETIS (New Technology Information System) of the Land, Infrastructure, Transport and Tourism</p> <p><b>Jun.</b> Development of New Fire-resistant Cable Fujikura Releases World's Highest Density Indoor-Outdoor Fiber-optic Cable</p> <p><b>Jul.</b> Release of Ultra-high-fiber-count Optical Cable Splicing Rack</p> <p><b>Sep.</b> Fujikura Expands Lineup of Thin Dye-Sensitized Solar Cells</p> <p><b>Nov.</b> Release of One-Click® Cleaner HOC, Cleaning Tool for Hardened Fiber Optic Connector Development of FuseConnect® MPO Connector with Thermo-shrinkable Reinforcing Sleeve Prefabricated Branch Cable Receives Contribution Award (ECO-VC Award)</p> <p><b>Dec.</b> Fujikura Receives the Society of Iodine Science Award 2020 for Commercialization of Dye-sensitized Solar Cells PANDA Fiber for usage under small Bending Radius at 1310nm wavelength region</p> <p><b>Jan.</b> Fujikura Releases Solution To Visualize Seasonal Flu Outbreak Risk Introduction to ZLCX Series, Cable-type Antenna for 920 MHz Band RFID Communication</p> <p><b>Feb.</b> The Fujikura Group's Two Products Registered in NETIS Are on Display at Construction Technology Pavilion of Kanto Technical Office, Kanto Regional Development Bureau, Ministry of Land, Infrastructure, Transport and Tourism Two Solutions for Installation of Ultra High Density Cable between Data Centers Introduction to Ultra High Density cable with connectors</p> <p><b>Mar.</b> Plug &amp; Play Solutions (Optical Access Network Installation Components) Using Waterproof Multi-fiber Optical Connector</p>
Electronics	<p><b>Apr.</b> Board to Board Connector, the FB35AB series, for smartphones</p> <p><b>Jul.</b> DFAC Series Expanded lineup of board-to-board connectors for industry use</p> <p><b>Sep.</b> Fujikura's Cold Plate Used in Supercomputer Fugaku</p> <p><b>Dec.</b> Board-to-Board Connector, FB35AF Series, for Smartphones Development of PEDOT Transparent Touch Sensor</p>
R&D	<p><b>Jun.</b> Strong Magnetic Field Superconducting Magnet for 1.2 GHz High-resolution NMR Successfully Put into Use Introduction to Next-generation Healthcare Management Solutions</p> <p><b>Sep.</b> Fujikura Acquires Experimental License on New 5G Band (66~71GHz) and Begins Field Experiments</p> <p><b>Nov.</b> Fujikura enters 5G mmWave infrastructure market with the introduction of industry's highest performance, and low power consumption Phased Array Antenna Module (PAAM)</p> <p><b>Dec.</b> Fujikura joins MIT.nano Consortium</p>
Special feature Information Exhibition	<p><b>Apr.</b> Fujikura Introduced in TV Tokyo Corporation's Program, Unknown Gulliver? Excellent Company File Excellent Award in Flying Car Competition Fujikura Publishes Fujikura Group Integrated Report 2019 Birth of Essential Woods about Origin of Name of Bio Garden, "The Fujikura-Kiba Millennium Woods"</p> <p><b>Jun.</b> Introduction to Next-generation Healthcare Management Solutions</p> <p><b>Jul.</b> IoT Solution for Heatstroke Prevention</p> <p><b>Aug.</b> Fujikura Group's efforts in UN SDGs</p> <p><b>Sep.</b> Fujikura Selected for FTSE4Good Index Series, International ESG Investment Index, Five Years in Row</p> <p><b>Oct.</b> Fujikura Joins CEATEC 2020 Online Exhibition</p> <p><b>Nov.</b> BICSI JAPAN District Conference &amp; Exhibition</p> <p><b>Jan.</b> 2021 President's New Year's Message for 2021 "Dr. James Wong Award" Received from IEEE</p> <p><b>Feb.</b> QoL (Quality of Life) Online Seminars held at BRIDGE</p> <p><b>Mar.</b> Introduction to Fujikura Group DX</p>