



CLOSING THE GAP

A Newsletter Dedicated to Cutting Edge Solutions for the Next Generation

MARCH 2021 UPDATE

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RFOCS 2021 Catalogue Out Now



The RFOCS Catalogue 2021 is now available with direct purchase links. With one click on a SKU# or product name you can see the price and stock level of any RFOCS product. [pg.3](#)

On-Demand: 5G Report Webinar



5G experts from Keysight Technologies, Radio Frequency Systems (RFS), Wavecontrol, and Bird discuss new questions, solutions and revelations related to 5G. [pg.6](#)

Gap Wireless at STAC 2021



Gap Wireless is a full conference sponsor of STAC 2021, Canada's premier tower industry event. The STAC Conference & Exhibition will be held virtually April 12-16, 2021. [pg.8](#)

THE FIPLEX FLEX DH7S SERIES



Fiplex is 100% focused on delivering true mission-critical solutions that set the standard for performance, survivability, and deployment efficiency.

The Fiplex FLEX platform not only addresses the complexity and performance challenges facing the AHJ community, but also the economic barriers that hinder Systems Integrators from repeatable, scalable deployments.

For most buildings and properties, a signal booster or bidirectional amplifier (BDA) solution will provide the required coverage. But do not be mistaken, these deployments are no less complex and demand mission-critical performance as a DAS deployment. Fiplex FLEX BDA solutions are the industry's most flexible, user-friendly true mission-critical solution available. From software define configuration to innovative features that ensure mission-critical success, FLEX BDAs are the any jurisdiction, any code, any building, any systems integrator better buildings, better business answer.

It's Not Another RED Box. It is the FLEX DH7S Series!



From software define configuration to innovative features that ensure mission-critical success, FLEX BDAs are the any jurisdiction, any code, any building, any systems integrator better buildings, better business answer.

Features:

- BDA line for 700/800 MHz including Band 14. Single and Dual Band.
- Field Upgradable with license to convert:
 - Power from 0.5W to 2W
 - Band from Single band to Dual band 700/800 MHz
 - Filtering from Class B to Class A
- Uplink and downlink squelch, per channel and per time slot on channel selective mode

- User adjustable gain control, UL and DL independent, per band, per channel and per time slot on channel selective mode
- Automatic gain control per band, per channel, per time slot
- Built-in input and output spectrum analyzer
- PS700 and PS800 High-capacity versions (64 channels)
- IFC & NFPA compliance; UL2524 2nd Edition Listing with SGS, Nationally Recognized Testing Laboratory (NRTL) approved by OSHA for UL2524
- Power consumption less than 80W
- UL2524 2nd Edition Listing

Applications include:

- For P25 Phase I & Phase II, DMR, NXDN and Conventional systems
- Indoor coverage: buildings, schools, hospitals, casinos, tunnels, metro stations
- Outdoor coverage: oil rigs, stadiums, dense urban areas, rural areas

Fiplex Communications, Inc. is a worldwide recognized designer and manufacturer of highly innovative telecommunication products focused on providing solutions to Public Safety and Mission Critical applications.

[LEARN MORE ABOUT FIPLEX](#)

Gap Wireless Helps First Responders From Coast to Coast

"Fiplex sees GAP Wireless as trying to set themselves apart from the other players. This initiative is encouraging as 2021 needs better strategy to capture the market due to present times." Barry Jones, Fiplex

Over the years, Gap Wireless has been keeping First Responders from coast to coast safe with lifesaving wireless communication systems. Partnering with industry leading manufacturers in the Public Safety and 2-Way radio sector, such as Fiplex, Bird, Freedom, RFS, and RD Microwaves. Gap Wireless has supplied in-building coverage solutions for Airports, Conference Centers, Hockey Arenas, Provincial & Federal penitentiaries, Hospitals and a wide range of other venues, both big and small.

We offer a wide range of Public Safety specific equipment to meet the needs of all wireless technologies and frequency bands from VHF, UHF, Analogue & Digital 2-Way Radio, 700MHz P25, TETRA, PS LTE and PS 5G.



Gap Wireless is the proud supplier a lifesaving Fiber Based P25 700MHz Public Safety system for the new Vancouver Convention Centre west building. This iconic building was centre stage for the 2010 Winter Olympics and offers the world's first Double LEED Platinum certified facility. Consisting of almost 500,000 sq.ft of floor space, the facility required a uniquely engineered Public Safety coverage solution which respects the architecturally sensitive design and breathtaking art work.

Lead by the engineering and project teams of a local Systems Integrator, Gap Wireless supplied a cutting edge Digital Fiber DAS distribution system from our partners at Fiplex Communications. The DH700 series was designed specifically for large venues such as the Vancouver Convention Centre, by offering multiple optical ports to drive 6 or more high power remote radio locations. The Fiplex DH700 strategically paired up with special fire rated 1/2" coax cable and a network of distributed antennas provides the wireless coverage needed by Vancouver's first responders.

Rogers Arena, home to the Vancouver Canucks, is a 475,000 sq.ft facility which was opened to the public in 1995 with a seating capacity of over 19,000 spectators. In a similar system architecture to the Vancouver Convention Centre, Rogers Arena also benefits from a cutting edge Digital Fiber DAS distribution system. Once again lead by the engineering and project teams of a local Systems Integrator, Gap Wireless played a critical role in supplying the all the necessary Fiber DAS Master & Remote Radios, coax cable, and antennas to ensure Fire, Police and EMS members entering the facility can rest assured knowing their radio communications devices will work.



RFOCS CATALOG NOW ONLINE

RFOCS (Radio Frequency and Optical Components and Systems) is a world class vendor of test grade RF components and microwave components. RFOCS offers a wide range of low PIM RF components that are often used on cellular towers, on in-building DAS systems, and in wireless research and development labs.

The RFOCS Catalogue 2021 now has direct purchase links. With one click on a SKU# or product name you can see the price and stock level of any RFOCS catalogue product on our Gap Wireless Web Store. Ordering that product is just a easy, all you need to do is sign-in to your web store account or create one.

RFOCS products available at Gap Wireless include:

- Attenuators
- Coaxial Cable Jumpers
- Adapters
- Terminations
- Grounding Kits
- Weather Enclosures
- Hoisting Grips
- Hose Clamps

RFOCS CATALOG

Download



On-Demand: 5G Report Webinar

5G Experts From Bird Technologies, RFS, Wavecontrol, and Keysight Answer Critical 5G Questions



Webinar Agenda & Speakers

Total Time: 90 minutes

10 min **5G Health & Safety** – Ernest Cid, CEO of Wavecontrol

10 min **5G Testing** – Roger Nichols, 5G Program Manager at Keysight Technologies

10 min **5G Coverage** – Nader Famili, Head of Technical Solutions, North America at RFS

10 min **IoT & 5G** – Dr. Esteve Hassan, Ph.D., PEng, Industrial Research Chair for IIOT Applications at Mohawk College.

10 min **5G Public Safety Applications** – Tim O'Brien, Director of Strategic Development, Public Safety at Bird RF

10 min **5G Solutions** – Mike Rusiniak, Senior Account Manager, Carrier Solutions, Eastern Canada at Gap Wireless

30 min **Q&A for Panel**

About the Webinar

Industry experts from Keysight Technologies, Radio Frequency Systems (RFS), Wavecontrol, Mohawk College, and Bird discuss new questions, solutions and revelations related to 5G Health and Safety, 5G Testing, 5G Coverage, 5G & IoT, and 5G Public Safety Applications in Canada.

[WATCH IT NOW](#)

Bird The RF Experts Available at Gap Wireless



Whether it's for commercial wireless or public safety radio, traditional tower solutions for providing coverage and capacity only take you so far. Bringing those signals inside buildings, tunnels, and mines, or simply adding densification many times requires Distributed Antenna System (DAS) networks consisting of Fiber DAS products, repeaters/signal boosters, as well as couplers, splitters, and antennas.

For over 35 years Bird has designed, manufactured, and sold distributed antenna system networks. Their current blend of products can support wireless voice and data services (GSM, EDGE, UMTS, CDMA, LTE) as well as other applications such as broadcast and public safety communications (FM, TETRA, P25).

Bird's products can also be utilized to transport other technologies including Gigabit Ethernet LAN, backhaul for small cells and WiFi, CPRI/OBSAI, as well as CCTV. Our complete product offering allows one stop shopping for the entire system from off-air repeaters/signal boosters and Fiber DAS to low PIM components. With thousands of units deployed across the world in diverse venues ranging from highways and tunnels to high rises and stadiums, Bird products can provide coverage and capacity wherever it is needed.

Whether for commercial applications, military maintenance, or electronic military instrumentation, Bird has a built-in, single-minded devotion to reliability. Bird has become known as the world's most reliable RF specialists for all markets and segments — because to you, yours is the only market or segment that matters.

COVERAGE

- RF Signal Boosters for LMR & Public Safety
- Cellular Repeater
- Fiber DAS (Distributed Antenna Systems)
- Passive Components

SENSORS

- RF Power Sensors
- Semiconductor Products
- Software Applications
- Diagnostic Systems

TEST AND MEASUREMENT

- RF Analyzers
- RF Power Meters
- RF Power Monitors
- Attenuators
- Loads

[LEARN MORE](#)

RF Industries is Connecting the Next Generation



RF Industries designs and manufactures a broad range of interconnect products across diversified, growing markets including wireless/wireline telecom, data communications and industrial.

RF Industries products include RF connectors, coaxial cables, data cables, wire harnesses, fiber optic cables, custom cabling, energy-efficient cooling systems and integrated small cell enclosures.

RF Industries designs and manufactures a broad range of interconnect products across diversified, growing markets including wireless/wireline telecom, data communications and industrial. The Company's products include RF connectors, coaxial cables, data cables, wire harnesses, fiber optic cables, custom cabling, energy-efficient cooling systems and integrated small cell enclosures.

Small Cell Connectivity Solutions

RF Industries small cell connectivity solutions include a portfolio of copper, fiber, and coax cable assemblies that are available in custom and standard lengths/configurations/terminations. With fabrication in the United States along with a large network of distributors, RF Industries provides fast delivery of finished products.

DAS and Wireless Infrastructure Passive Components

The RF Industries family of Passive Components help network designers face the challenges of improving capacity and coverage both indoors and at stadium and large outdoor venues where wireless overloading is problematic.

Their passive components feature high-quality materials, support multiple frequency bands and come in a variety of connector options providing you with reliable, safe and compliant network performance.

RF Industries Public Safety Solution

The RF Industries line of Public Safety Passive components are designed specifically for Public Safety DAS. Their wide frequency range (138 – 960 MHz) covers VHF, UHF, FirstNet, 700 MHz, 800 MHz, and 900 MHz systems. All feature an easily identifiable red coating, are RoHS compliant and have an IP rating allowing them to be used in both indoor and outdoor applications. Each component has been thoroughly tested to meet or exceed industry standard compliance and regulations.

[LEARN MORE](#)

Eagle Eye Power Solutions at Gap Wireless



Why Eagle Eye Power Solutions Battery Monitoring?

Depending on battery type and application, Lead Acid batteries have a design life that can range from 5 to 20 years. That design life estimation is based on the battery being maintained in accordance with recommended practices, operating under ideal conditions and ensuring that any individual failing units are replaced before they impact the other units in the string.

However, in most installations, those conditions are seldom met, and the actual life of a battery may be closer to half of the published design life. This potential for failure has been confirmed in a number of studies over the years. In fact, in one Ponemon study into Data Center failures, the UPS Battery was responsible for over 50% of the reported outages. This data, and the uncertainty of most operating environments, confirms why battery monitoring is an essential part of maintaining today's systems.

Portable Battery Testing Equipment

Eagle Eye Power Solutions carries a full line of Digital Hydrometers that allow technicians to test battery electrolyte levels and measure their specific gravity and temperature. EEPS also offers impedance and capacity testers that comply with IEEE standards and meet the requirements stated in NERC PRC-005. A battery jar/cell charger, discharger, & activator can also beneficially assist technicians when identifying a troubled battery system. Finally, EEPS offers ground fault locators, which allow service techs to quickly pinpoint a specific ground fault on a DC system without disrupting the critical power.

Critical Stationary Battery Power Solutions

EE offers complete packaged solutions (batteries, battery chargers, power equipment, battery accessories and more) by leveraging the latest technologies available for each unique customer requirement. This focus on providing a wide range of battery technologies allows us to work directly with you to match the best technologies to your specific application.

[LEARN MORE](#)

Keysight DSOX1202A GIVEAWAY



Like, Comment, and Follow to Win a
Keysight DSOX1202A Oscilloscope



gapwireless **LinkedIn** KEYSIGHT TECHNOLOGIES

How to Enter

It's simple to enter all you have to do is:

How to Enter.

1. Like our contest post
2. Comment on our contest post (tell us why you want the scope)
3. Follow our [LinkedIn Company Page Here](#)

The contest runs until March 31, 2021 and then we randomly select someone who has liked and commented on the post and is a follower of our company page.

DSOX1202A Oscilloscope: 70MHz, 2 Analog Channels Features

70 MHz (upgradable to 100MHz/200MHz)

See more signal detail at 200,000 waveforms/sec update rate

Make professional measurements, including mask, math, FFT, analog bus, and protocol triggering/decode

Quickly learn how to use; oscilloscopes have built-in help and training signals



Where to enter
the contest?

ENTER HERE

mmWave WideBand FieldFox Handheld Analyzers



The Keysight FieldFox handheld analyzers can withstand your toughest working conditions with a ruggedized yet light weight and portable battery powered design for making measurements for RF devices like cables, antennas, filters, amplifiers, and signal/spectrum analysis. Create your specialized handheld analyzer solution by selecting FieldFox options and features to address cable and antenna test (CAT) spectrum analysis (SA) or vector network analysis (VNA) real time spectrum analyzer and over the air digital demodulation analysis required for your application. The FieldFox analyzers are always ready to make RF measurements, ensuring every operating mode is flexible enough to meet the needs of novices and experts alike.

Why choose FieldFox?

Ideal 5G deployment and field-testing tool with 100 MHz real-time bandwidth and over-the-air (OTA) measurements Ability for 5G, satellite and radar operators to make true RF coverage measurements, up to 54 GHz and beyond, and beamforming verification with phased array antenna support

Simplified field signal monitoring with wideband capture and recording of fully corrected IQ data

Highly efficient radar and EW systems diagnostics with spectrum analysis, full 2-port VNA, power meter, pulse and noise figure measurements and results that correlate with high-performance bench top instruments

Durable handheld analyzers that can withstand your toughest working conditions

Field-proof usability for better answers in less time

- Bright, low-reflection display and backlit keys enable easy viewing in direct sunlight or darkness



- Intuitively designed user interface for your workflow, enabling measurements in fewer key presses
- One-button measurements simplify complex setups and ensure quick, accurate results with confidence
- Calibration Wizard guides user to ensure simple and accurate calibrations
- Standard three-year warranty ensures field confidence, especially in harsh environments
- 5-, 7- and 10-year warranties are also available

Designed for You and the Work You Do Everyday

- Kit friendly at 7.35 lb. (3.34 kg) for the N991B/3xB and N995xB/6xB
- Large buttons are easy to operate, even when wearing gloves
- Field swappable battery lasts up to 4 hours
- Non-slip rubber grip securely fits in your hands and won't slide off the hood of your vehicle
- Vertical "portrait" orientation makes it easy to hold and operate at the same time

Contact Gap Wireless Today to Purchase The Keysight FieldFox



NEW! Smart Bench Essentials

- **EDU33211A** Waveform generator, 20 MHz, 1-channel
- **EDU33212A** Waveform generator, 20 MHz, 2-channel
- **EDU34450A** Digital Multimeter, 5.5 digit
- **EDU36311A** DC power supply, triple-output, 6 V, 5 A and 2 x 30 V, 1 A, 90 W: LAN, USB
- **EDUX1052A** InfiniiVision 1000 X-Series Oscilloscope, 2Ch, 50 MHz
- **EDUX1052G** InfiniiVision 1000 X-Series Oscilloscope with WaveGen, 2Ch, 50 MHz
- **EDU190A** Instrument stacking kit



Smart Bench Essentials Series

Keysight's New Smart Bench Essentials Series
The Keysight Smart Bench Essentials Series is a revolutionary design solution for modern teaching labs and aspiring new product development electronics engineers.

The solution allows you to test, analyze, and share results collaboratively, across the room or around the world. Whether you are teaching, learning, or working on a design, from a classroom or from home, you have full access to configure and test using your connected instruments. The hardware, leveraged from higher-performance instruments, is built into the Smart Bench Essentials Series. So you get the benefits of Keysight's measurement performance in a low-cost, compact package. We gave the user interface and display special treatment to make them straightforward, easy to operate, and consistent with our best-selling products. With the signature 7-inch color display, you can view more information clearly, even from a distance.

The Smart Bench Essentials Series comes with KeysightCare support. You get access to technical experts from Keysight and our 24/7 knowledge center to help you get up to speed in the shortest amount of time.

Smart Bench Essentials Series Products

EDU34450A 5½-digit dual-display digital multimeter

The Keysight EDU34450A is a modern DMM designed for bench applications. It measures a broad range of input signals. The measurement engine leverages Keysight's industry-grade benchtop DMM. It features 5½ digits of resolution, 0.015% basic DCV accuracy, and up to 100 readings/s measuring rate for speed-critical tests. The EDU34450A includes generous internal memory, allowing prolonged data logging of up to 5,000 data points. It includes PathWave BenchVue DMM software for remote control and data logging. With the EDU34450A, you get the benefits of Keysight measurement performance in a low-cost, compact package.

Key features

- measures 11 input signals (DC voltage, DC current, true RMS AC voltage, AC current, two and four-wire resistance, frequency, continuity, diode test, temperature, and capacitance)
- 7-inch dual measurement color display
- 0.015% basic DCV accuracy
- standard USB and LAN for flexible PC connectivity

EDU33210 Series 20 MHz function / arbitrary waveform generator

The Keysight EDU33210 Series function / arbitrary waveform generator offers the standard signals and features you expect — such as modulation, sweep, and burst. Additional features provide the capabilities and flexibility you need to get the job done quickly, no matter how complex. An intuitive, information-packed front-panel interface enables you to easily resume where you left off.

Key features

- 7-inch color display for simultaneous parameter setup, signal viewing, and editing
- six built-in modulation types and 17 popular waveforms to simulate typical applications for testing
- 16-bit arbitrary waveform capability with memory up to 8 M samples per channel

EDU36311A triple-output bench power supply

The Keysight EDU36311A triple-output DC bench power supply comes with a robust design and usability at an affordable price. Its 90 W electrically isolated channels supply clean and reliable power. The 7-inch color wide video graphics array display gives you a clear view — from instrument setup to output status. You can control the EDU36311A triple-output DC bench power supply remotely via USB or LAN.



The EDU36311A provides excellent programming / readback accuracy, convenient benchtop capabilities, low acoustic noise, and intuitive, easy-to-use interfaces.

Key features

- low output ripple and noise
- exceptional line / load regulation
- superior overvoltage, overcurrent, and overtemperature protection
- three independent power supplies in one box

InfiniiVision 1000 X-Series oscilloscopes, 50 MHz, analog channels

The Keysight InfiniiVision 1000 X-Series (EDUX1052A and EDUX1052G) oscilloscopes provide a quality education for students and prepare them for industry with professional-level instruments.

The 1000 X-Series leverages the technology used in our higher-end oscilloscopes, allowing students to learn on the same hardware and software used in leading research and development labs. Built-in training signals enable students to quickly learn to capture and analyze signals.

**Contact Gap Wireless Today
to Purchase The Smart Bench
Essentials Series**

Gap Wireless Sponsoring STAC 2021 & 2021 Bell NLC



ment vendor partners such as JMA Wireless, RFOCS, MECA, Wavecontrol, RFS, Klein Tools, Freedom, Bird RF, Keysight, Hammond, Wirewerks, and many more.

STAC 2021 Giveaways

Gap Wireless is also be hosting an online scavenger hunt each day from April 13-15 with a daily prize of a brand new \$350 50" TV.

Would you like to attend STAC 2021?

[Click here for more information or to register for STAC 2021](#)

STAC 2021 April 12-16, 2021

The Structure, Tower and Antenna Council (STAC) annual conference is the premier event dedicated to Canadian tower safety and is devoted to sharing the important information and best practices that will help maintain Canada's world-leading tower safety record. Attendees will learn about new industry practices and technologies and will receive exclusive information about the development of STAC best practices and other industry resources that are normally only available to STAC Members. This year, STAC 2021 will be going online and will be held virtually.

What is STAC?

STAC is a non-profit Council of the Canadian Wireless Telecommunications Association, representing and providing a collaborative forum for Canadian wireless communications carriers, tower owners/operators, tower and rooftop equipment engineering service suppliers, and wireless communication facilities construction and maintenance contractors.

Gap Wireless is a full conference sponsor for STAC 2021 and will be showings exciting new offerings from our Telecom Infrastructure, ICT, and Test and Measure-

2021 Bell Network Leadership Conference

The 2021 Bell virtual Network Leadership Conference will bring together hundreds of Network team members from across Canada, key stakeholders from other Bell business units and vendor partners in an exciting virtual platform. Like our past Network Leadership Conferences, Stephen Howe, Chief Technology Officer and Executive Vice President, will host the event along with the Network senior leadership team.

Gap Wireless will be showcasing the next generation of cutting edge solutions from our world-class vendor partners such as Matsing, Sun-wave Solutions, CCIA, Keysight, Bird RF, JMA Wireless, and many more at the 2021 Bell virtual Network Leadership Conference.

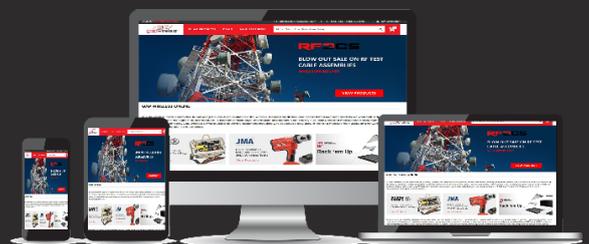


Gap Wireless Web Store



Browse the extensive Gap Wireless Web Store to discover the latest solutions from our network of more than 60 world-class manufacturers. You'll find a wide variety of test and measurement equipment, ICT equipment, and telecom infrastructure equipment.

[Visit Web Store Now](#)



Gap Wireless

Gap Wireless is a leading provider of products and services for wireless network operators and contractors, as well as electronic labs in the Government, OEM, and Education markets. Gap Wireless works with industry-recognized vendors to stock and distribute thousands of wireless infrastructure, public safety, and test & measurement products across North America. Gap Wireless also provides value-added technical/engineering services.

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