

ClearFill Space2: advanced multi-band multi-operator indoor wireless coverage

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RFS (Radio Frequency Systems), the wireless infrastructure specialist, is showing its ClearFill Space2 solutions at the GSMA World Congress event in Barcelona.

The ClearFill Space2 technology is an advanced multi-band multi-operator

RF-over-fiber distribution system for wireless indoor coverage solutions especially serving the public transportation sector (metro, rail and road tunnels). Its flexible and modular design supports highly customizable wireless indoor solutions with virtually unlimited topology configurations.

According to Peter Raabe, global product manager for Wireless Indoor Solutions with RFS, "complex indoor topologies with high capacity requirements (and often on a very large scale such as a metro system or a large airport) need to support multiple operators and wireless services, and usually demand a custom-built indoor wireless system."

This, he says, is the remit of the RFS ClearFill Space2 solution set. This incorporates best-in-class fiber-fed remote units to drive sections of RF broadband passive distribution systems, often relying on RFS' unsurpassed RADIAFLEX radiating cable technology for in-tunnel applications.

ClearFill Space2 utilizes a sophisticated, modular, head-station that is custom-configured to suit a specific network topology. These high power output fiber-fed remote units, Raabe explains, allow much longer tunnel sections or larger areas to be covered, with best-in-class RF output power per RF carrier for optimum QoS (quality of service).

The RFS ClearFill Space2 solution is unmatched in terms of the combination of fiber optic performance and RF coverage achieved per remote unit. "High-power ClearFill Space2 fiber-fed remote units can be situated up to 20km distant and each remote unit provides coverage for up to 500m of tunnel or 20,000 square meters of indoor space," Raabe said.

"Thanks to its virtually unlimited coverage capabilities, ClearFill Space2 is the ideal high-capacity complement to our ClearFill Space1 RF-over-fiber technology, designed as a low to medium capacity plug-and-play system capable of covering up to 5,000 square meters indoors with each single-band remote unit," he added.

Raabe went on to say that, since ClearFill Space2 now supports all major frequency bands specified by the Federal Communications Commission in the US, as well as other wireless frequencies ratified for use in other jurisdictions around the world, it has become a highly flexible solution for tunnels, major indoor spaces and campuses on a global basis.

The key to this flexibility lies in its ability to enhance the RF signals in single-band or multi-band (multi-standard)/multi-operator environments, spanning all main mobile wireless standards such as 2G (GSM/PCS), 3G, GSM-R and TETRA applications.

And despite its powerful ability to propagate signals into large indoor spaces and campus areas, RFS is keen to stress that it can achieve such coverage with high cost efficiencies. This is made possible with the master unit (head station) directly interfacing with BTS and Node B systems, as well as RFS ClearFill Air off-air repeaters.

The technology can also be upgraded by implementing other RF interfaces, to add the coverage from other mobile operators or mobile standards as they evolve or arrive in the market.

A key feature of ClearFill Space2, says Raabe, is the conversion of RF signals into optical signals that are then propagated through optical fiber distribution to optical repeaters (fiber-fed remote units).

“A wide range of optical repeaters is available with this technology, ranging from single standard (single-band) equipment through to opex-friendly tri-standard remote units with minimized power consumption and floor space requirements,” said Raabe, adding that the master unit manages communication with all the remote units.

The ClearFill Space 2 technology can be managed remotely and locally, using SNMP connectivity, a wireless modem built into the head station, or via RS232.

“It’s this wide range of applications and ability to cover large buildings, tunnels and shopping malls that has ensured a healthy take-up of this technology by carriers around the world. We’re proud of this system’s capabilities and the fact that ClearFill Space2 is meeting the requirements of situations that would otherwise have required more complex - and much more expensive - wireless infrastructures,” he added.

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Photo

Can be downloaded here:

http://fs.turtleconsulting.co.uk/pics/RFS0220_ClearFillSpace2_Unit.jpg

Note to EDITORS:

Please follow the links for further Mobile World Congress press releases and supporting photographs :

- Mobile World Congress Preview (RFS0213)

Download here; http://fs.turtleconsulting.co.uk/PICS/RFS0213_APPROVED_RFS_Preview_GSMAMWC.doc

- LTE -“Ready when you are” says RFS (RFS0214)

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- RFS pushes the diplexer technology envelope to assist in cellular longevity (RFS0224)

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- CELLFLEX Lite - new additions complete RFS' proven aluminum transmission line technology range (RFS0223)
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- High performance and healthy ROI go hand in hand with RFS' new Optimizer CELLite base station antenna (RFS0222)
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- RFS Mobile TV antenna: compact, slim and lightweight features come as standard (RFS0221)
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- ClearFill Space 2: flexibility and customizable wireless coverage with virtually unlimited topology applications (RFS0220)
download here; http://fs.turtleconsulting.co.uk/PICS/RFS0220_APPROVED_ClearFillSpace2_GSMAMWC.doc
- Wireless RF-over-Ethernet becomes a reality from Radio Frequency Systems (RFS0219)
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RFS Company background

Radio Frequency Systems (RFS) is a global designer and manufacturer of cable, antenna and tower systems, plus active and passive RF conditioning modules, providing total-package solutions for wireless infrastructure.

RFS serves OEMs, distributors, system integrators, operators and installers in the broadcast, wireless communications, land-mobile and microwave market sectors. As an ISO compliant organization with manufacturing and customer service facilities that span the globe, RFS offers cutting-edge engineering capabilities, superior field support and innovative product design. RFS is a leader in wireless infrastructure.

For more information visit: <http://www.rfsworld.com/>

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