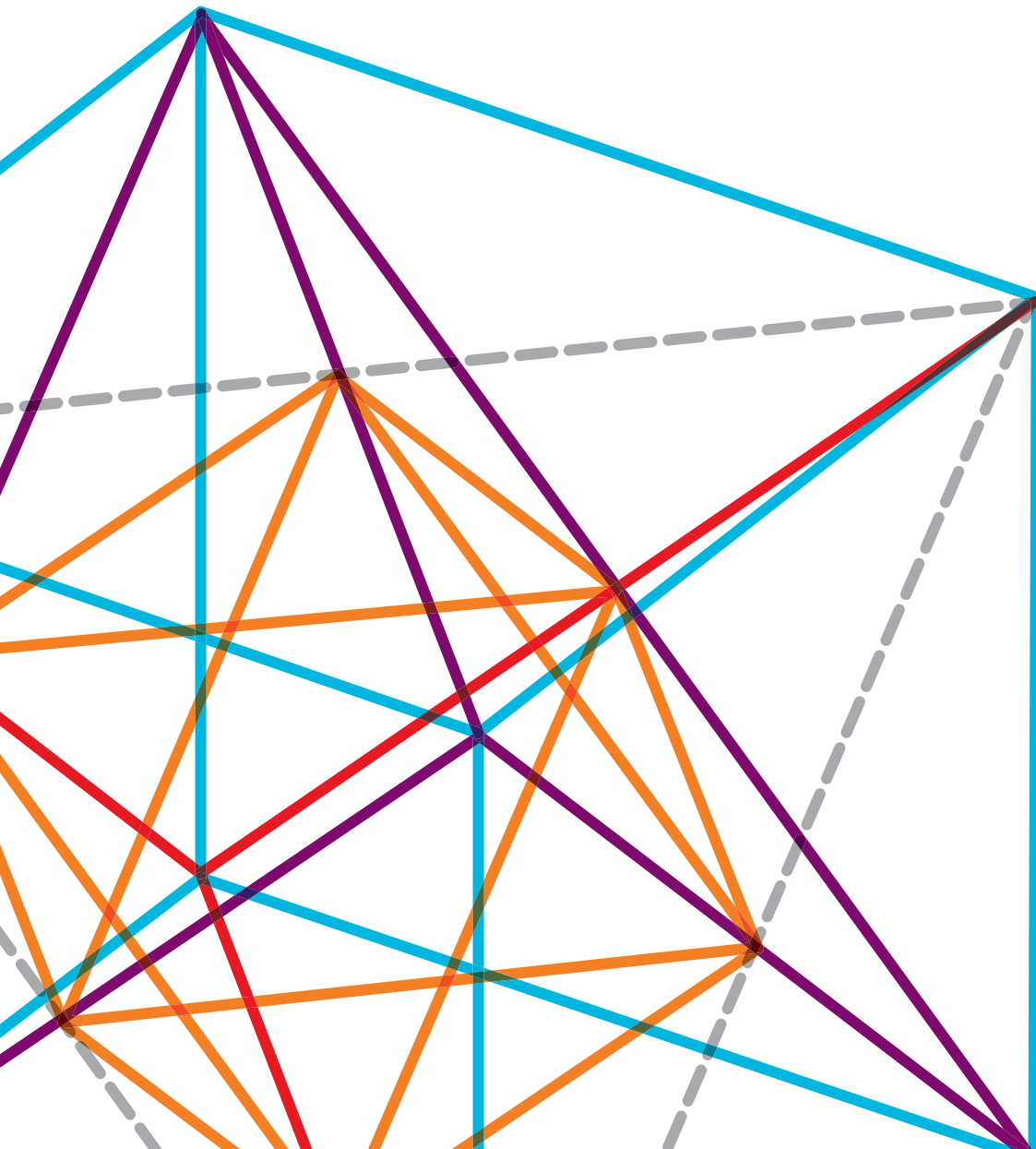


MultiPort Radio Operation
AppNote 2456934.675174
October 4, 2014



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INTRODUCTION

“MultiPort Radio Operation,” or “MultiPort,” is the ability of Zebra’s Link-OS® printers to support seamless and simultaneous operation of both the 802.11a/b/g/n and Bluetooth® 3.0 interfaces. The feature is supported on

the following Link-OS printers, when the printer has the 802.11a/b/g/n radio: QLn™, iMZ™, ZT400™, and ZQ500™ series.

CUSTOMER USE CASES & BENEFITS

Data Collection and On-Demand Printing

The MultiPort Radio enables simplified data collection and on-demand printing by allowing a printer to communicate with both a scanner via Bluetooth and to a computer server via Wi-Fi®. This solution can be used in a number of scenarios, such as price-update labeling.

In the price update scenario, the Bluetooth scanner reads a barcode label on a product and then sends that information to the printer via Bluetooth. The printer can automatically forward the scanned information to an app on a server, which checks with a database to determine if a price update is needed. When a price update event is detected, the server can send a new label to the printer over the Wi-Fi connection. This simplified data collection and on-demand printing solution can operate in an on premise or Cloud-connected solutions. Additional details are available at <https://www.zebra.com/us/en/products-services/software/link-os/cloud-connect.html>

Device Management

Previous to the MultiPort Radio solution, customers using Bluetooth-only printers did not have a way to manage the printer. By leveraging the MultiPort Radio option, the printer can now be managed via network-based device management tools, such as Mirror, Profile Manager or AirWatch®. Additional details are available at <https://www.zebra.com/us/en/products-services/software/link-os/mirror.html> and at <https://www.zebra.com/us/en/products-services/software/link-os/profile-manager.html>

Flexibility

Customers with Bluetooth applications can avoid the need to switch printer models if their application changes to include communication via the Wi-Fi connection, future proofing the printer for new uses and applications.

CONFIGURATION

Configuring MultiPort Radio Operation requires only that both the Wi-Fi and Bluetooth radio interfaces are enabled on the printer. There are no “MultiPort Radio” commands. The following commands are used to configure the feature:

wlan.enable - Setting this to ‘on’ will enable the Wi-Fi radio function.

bluetooth.enable - Setting this to ‘on’ will enable the Bluetooth radio function.

To configure MultiPort radio operation, send these commands to the printer.

```
! U1 setvar "wlan.enable" "on"  
! U1 setvar "bluetooth.enable" "on"  
! U1 setvar "device.reset" "now"
```

NOTE: the commands must be followed by a carriage return/line feed or a space character.

FUNCTIONALITY

Default Behavior

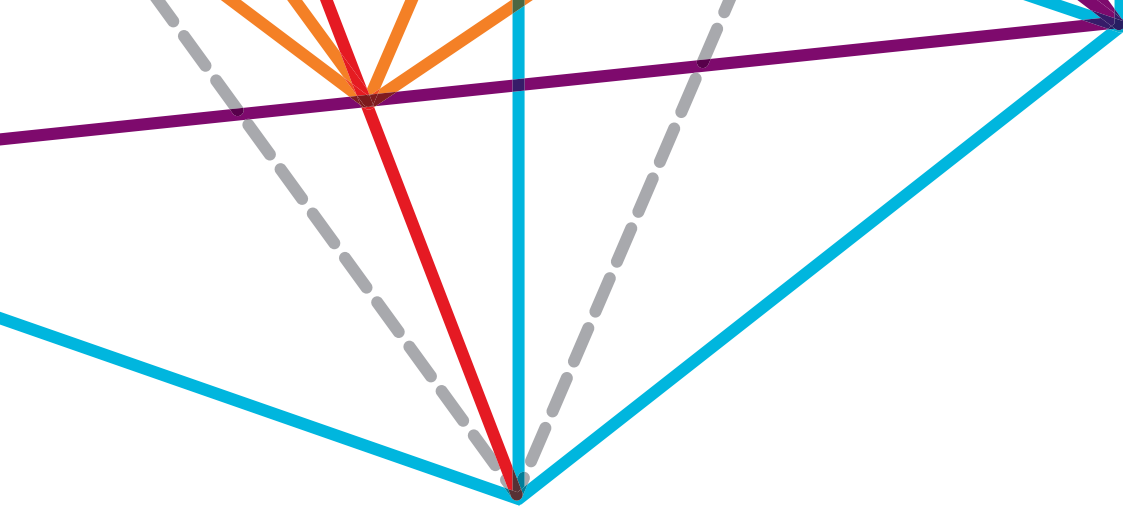
By default, the Bluetooth radio is disabled on printers that support the MultiPort Radio, in order to allow administrators to control which devices are emitting radio traffic in their environment. The Bluetooth radio can be enabled by using the `bluetooth.enable` command, as shown above.

Shared Transmit Receive Input Method

Both Bluetooth and WLAN operate on the ISM RF Band on frequencies between 2.40-2.472GHz. The two interfaces share the same RF antenna.

Power Save Mode

When both the Wi-Fi and Bluetooth radios are enabled in MultiPort operation, the `wlan.power_save` feature will be turned off to ensure that the Bluetooth radio is continuously available.



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