



Fiber to the Premises (FTTP) Single Wire Return Device (SWRD) Boot and Packet Loss Technical Bulletin

Overview

Introduction

The Fiber to the Premises (FTTP) Single Wire Return Device (SWRD) has been found to have a potential hardware and software issue. This condition can be fixed with a field upgrade of the application code.

Purpose

The purpose of this document is to provide notification, identification, and resolution for technical personnel regarding SWRD field issues.

Audience

This document is intended for internal use by authorized service personnel who have experience working with similar equipment. The service personnel should have appropriate background and knowledge to complete the procedures described in this document.

Qualified Personnel

Only appropriately qualified and skilled service personnel should attempt to install, operate, maintain, and service this product.



WARNING:

Allow only qualified and skilled personnel to install, operate, maintain, and service this product. Otherwise, personal injury or equipment damage may occur.

Issue and Solution

Issue

Cisco has been investigating possible failure modes between the SWRD and set-tops at customer sites. The following issues have been experienced:

- Non-responding SWRD on boot-up, possibly caused by a bad MAC address (00:02:DE:01:02:03), and possibly worse under cold-temperature conditions
- 100% Packet Loss communication (Sleepy SWRD), resulting in traffic from the set-top not being sent upstream from the SWRD to the DNCS

Identifying Potential Cases

It has been reported that repeated hard boot cycles can bring the non-responding SWRD back to proper operation, although this solution is not always effective.

Firmware Affected

A software bug affecting SWRD application code 1.10 and earlier causes a memory allocation error. This error in turn causes a buffer overrun in the ATM driver, resulting in the corruption of other data.

Hardware Affected

In the case of non-responding SWRDs on boot-up, hardware built in early 2006 and units with MAC addresses starting with 00:14:F8 may be affected. These possible failures are due to a bus termination problem.

In the case of 100% Packet Loss communication, all hardware may be affected.

Solution

These issues are resolved by installing SWRD application code 1.13 as described below.

Notes:

- The procedure below assumes the use of a Dynamic Host Configuration Protocol (DHCP) server and a read-only FTP server specifically set up for SWRDs, as described in *Configuring the DHCP Server and QPSK Modulator for an FTTP System Installation Instructions*, part number 4001384.
- The procedure below provides general instruction. Procedural details will vary depending on the operating system.

Upgrade Procedure

Complete the following steps to perform the software upgrade.

- 1 Obtain SWRD application code 1.13 from Cisco Services.
- 2 Confirm that the file name is SWRDAppVer113.bin.
- 3 Copy the file to the appropriate folder on the FTP server.
- 4 Allow 1-2 days for all SWRDs in the network to discover the file and upgrade their software if appropriate.
- 5 Confirm that the SWRD issues noted earlier have been resolved.

For Information

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If You Have Questions

If you have technical questions, call Cisco Services for assistance. Follow the menu options to speak with a service engineer.



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August 2012 Printed in USA

Part Number 78-4018361-01 Rev D