



syn1588®

### Abstract

This application note describes the procedure to update the firmware of an Oregano Systems syn1588® Gbit Switch. The firmware update function is available since hardware build ID 45 (August 2012).

### Introduction

Starting with the hardware build ID 45 (August 2012) the syn1588® Gbit Switch supports a firmware update functionality. The firmware update is performed via the serial interface of the syn1588® Gbit Switch.



figure 1 syn1588® Gbit Switch in 19” rackmount case: rear view

The serial interface is available as a 9-pin Sub-D connector (female) for the 19” 1HE rack mount case. It allows a direct connection (RS232 cable) to a host.

Pin	9-pin sub-D
1	N.C.
2	TXD
3	RXD
4	N.C.
5	GND
6	N.C.
7	N.C.
8	N.C.
9	N.C.

table 1: Pinout of the serial interface connector for 19” rack mount case

### Pre-Requisites

One requires the following items to perform a firmware update of the syn1588® Gbit switch.

- syn1588® Gbit Switch with firmware version supporting the firmware update
- Terminal software with support for XMODEM protocol
- E.g. TeraTerm (free download at: <https://osdn.net/projects/ttssh2/releases/64118> )

**Attention: Do not use newer versions of TeraTerm. Supported**

versions are V4.89 and downwards.

- PC with serial interface (USB-to-Serial, RS232)
- Serial cable (9-pin sub-D connectors, 1x male connector, 1x female connector, straight cable)
- If PC is not equipped with an serial interface one can use an USB-to-Serial adapter as well
- New firmware file for the syn1588® Gbit Switch
- Made available by Oregano Systems support in your account on the Oregano Systems secure file server sftp.oregano.at

## Firmware Update Procedure

### Step 1

Select an appropriate PC (or Notebook) equipped with a serial interface. Optionally an USB-to-serial converter may be used as well. Start the terminal software (e.g. Tera Term). Choose your serial port.

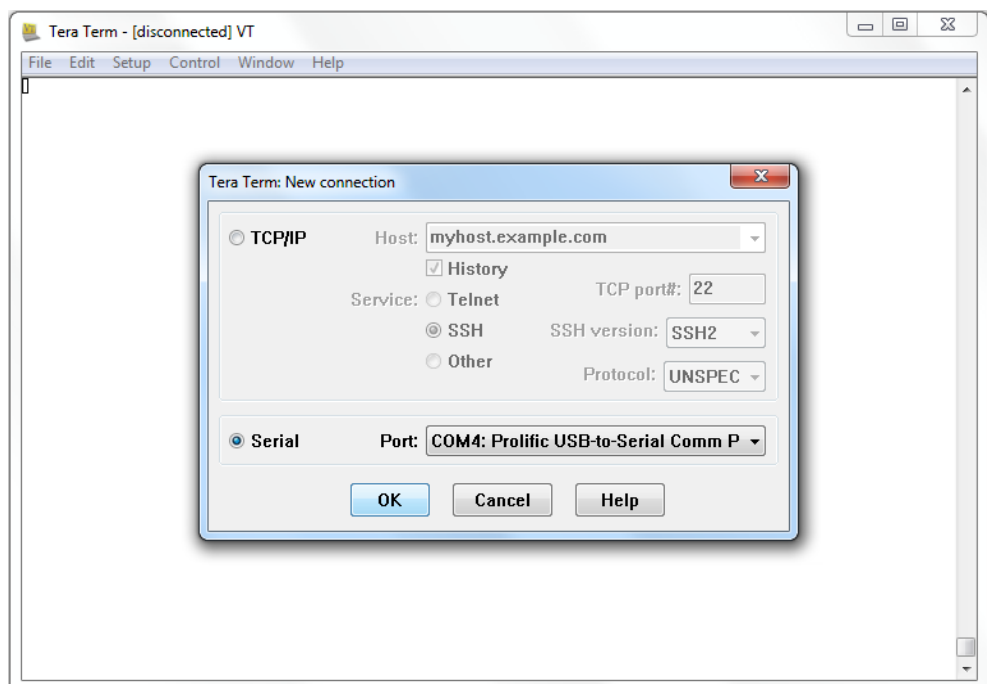


figure 2 Tera Term: Select the serial port

## Step 2

Configure the serial port.

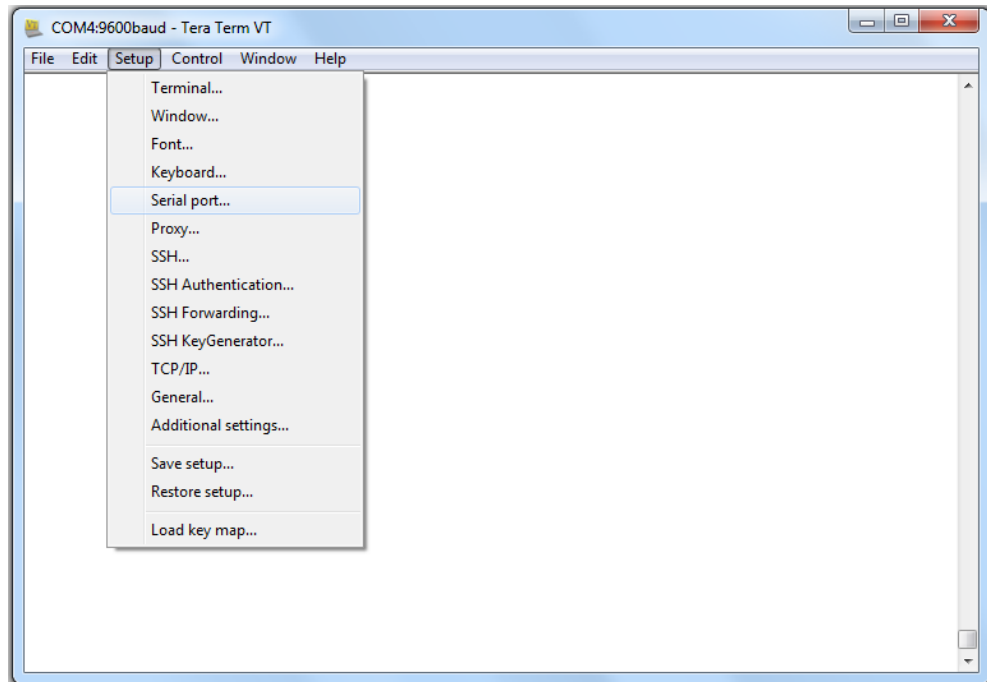


figure 3 Tera Term: Configuring the serial port

### Step 3

The serial interface unit shall be configured to a baud rate of 115200 using eight data bits, no parity, and no flow control:

- 8 bit data
- 115200 baud
- no parity
- no flow control
- 1 stop bit

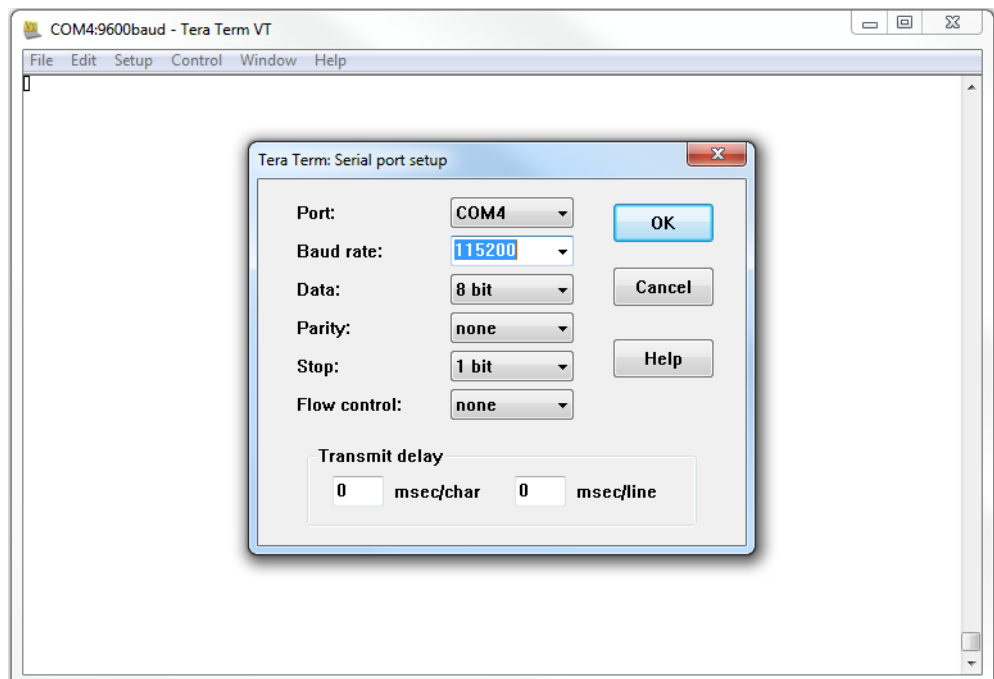


figure 4 Tera Term: Configuring the serial port

## Step 4

Connect the USB-to-serial converter or serial cable to the syn1588® Gbit Switch. Connect the mains cable to the syn1588® Gbit Switch. One shall end up with the following messages on the terminal window.

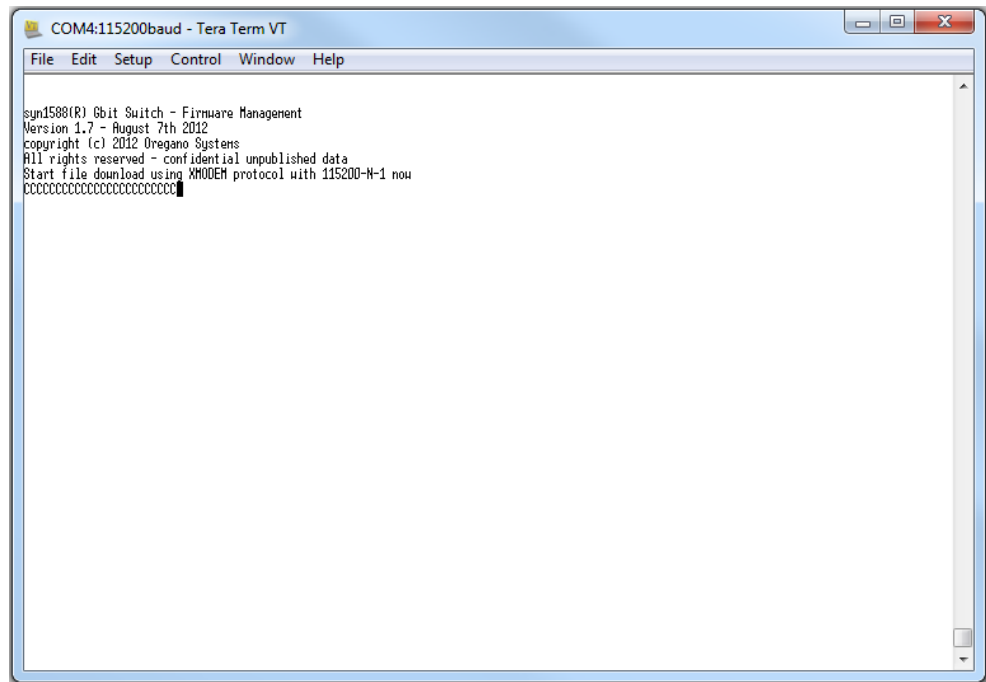


figure 5 Tera Term: Checking proper serial setup

## Step 5

Now select the firmware file to be downloaded to the syn1588® Gbit Switch.

Choose: File → Transfer → XModem → Send

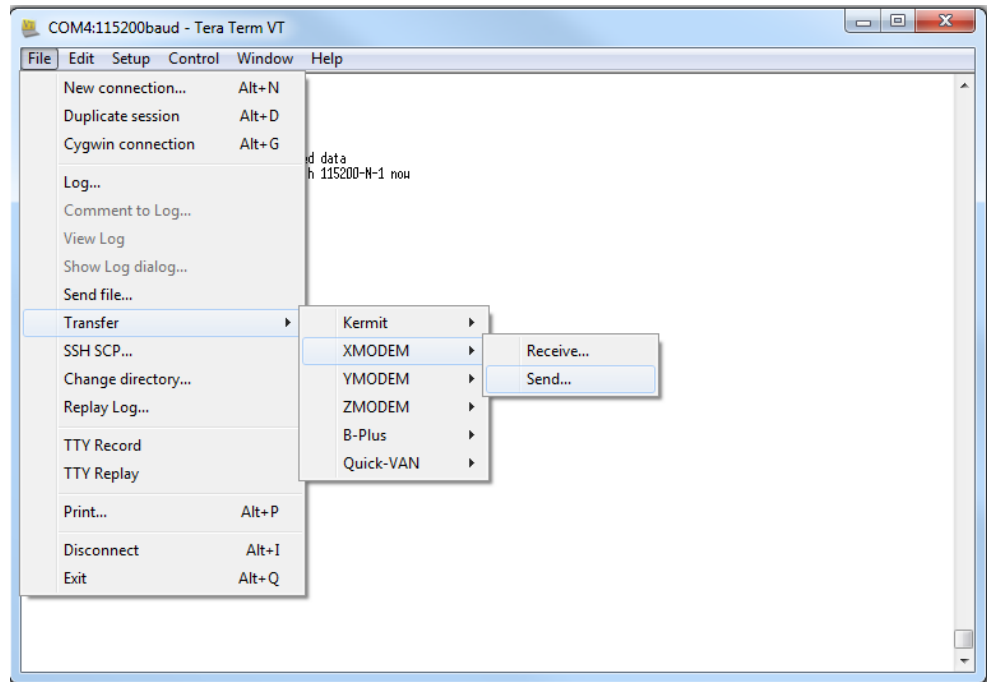


figure 7 Tera Term: Send file via Xmodem

## Step 6

Select new firmware file “\*.rpd” and in “Options” select “1K”.

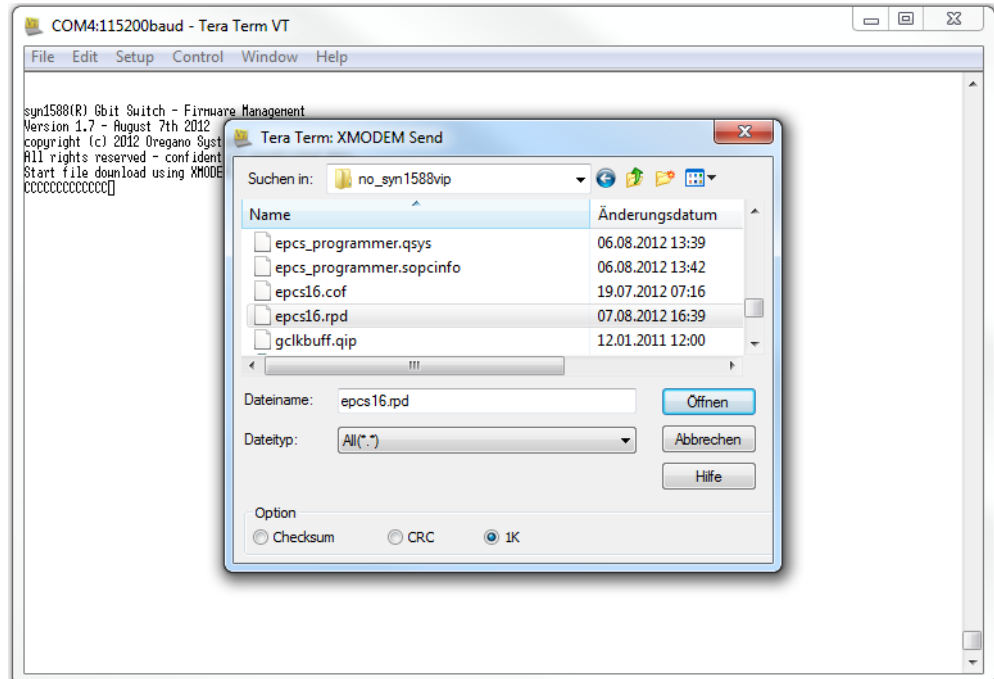


figure 8 Tera Term: Select firmware file

## Step 7

The transfer starts immediately. Please note that the very first XMODEM packet will be processed approx. 20 seconds (typical 20 sec, maximum 50 sec.) since the Flash memory has to be erased in this state. The whole download process will take approx. 5 minutes.

### Caution!

Do NOT disconnect the syn1588® Gbit Switch from mains when transfer is active. This will corrupt the firmware and further inhibit the operation of the syn1588® Gbit Switch.

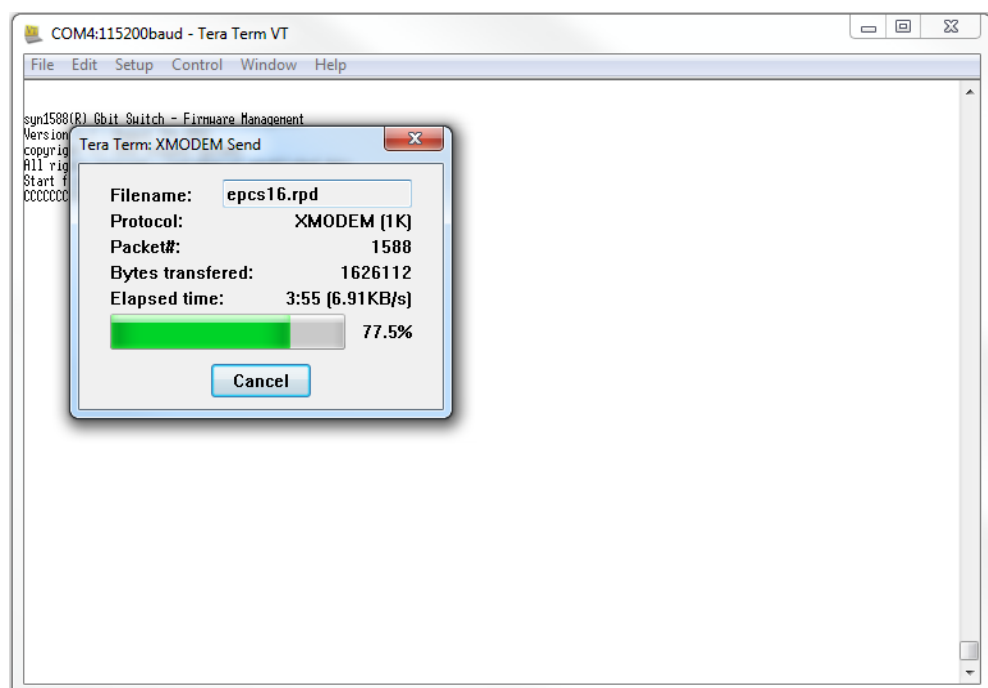


figure 9 Tera Term: Transfer of firmware file



## Step 8

Updating is completed if the message “XModem successfully received: 200000 / Turn off power now. / Upload completed successfully. Halted.” is displayed in the terminal window:

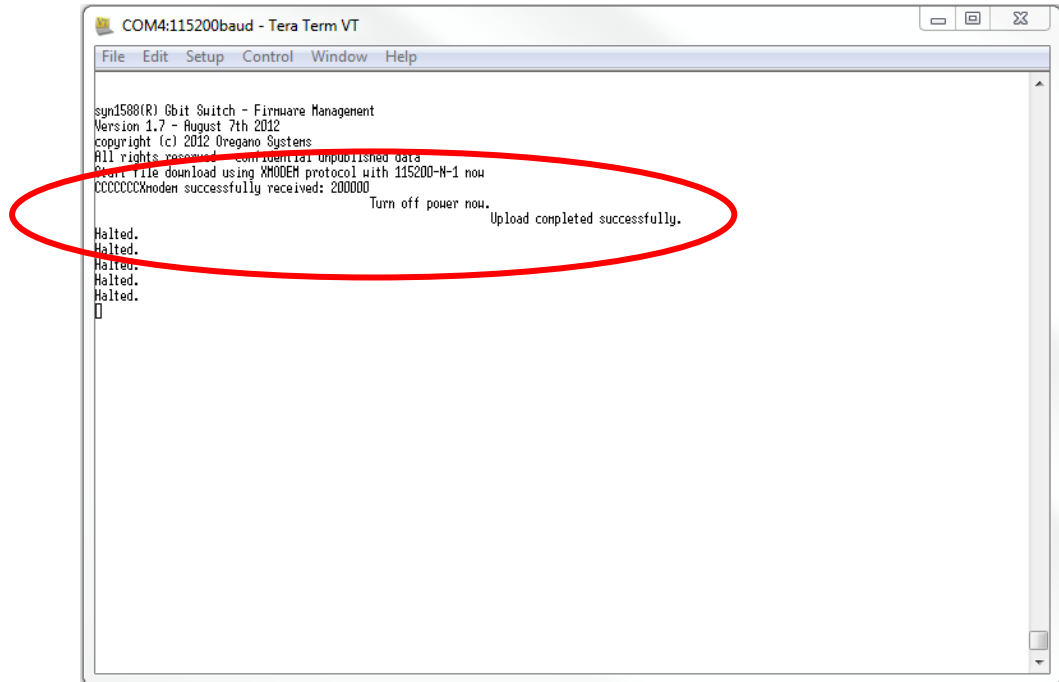



figure 10 Tera Term: Transfer successfully



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