

# Обновление программного обеспечения маршрутизатора RTT-R200

На компьютере запустить программу эмуляции терминала (HyperTerminal, TeraTerm, Minicom) и произвести следующие настройки:

- выбрать соответствующий последовательный порт;
- установить скорость передачи данных – 115200 бод;
- задать формат данных: 8 бит данных, 1 стоповый бит, без контроля четности;
- отключить аппаратное и программное управление потоком данных;
- задать режим эмуляции терминала VT100 (многие терминальные программы используют данный режим эмуляции терминала в качестве режима по умолчанию).

Подготовить и подключить к маршрутизатору (порт 1) tftp-сервер с указанием расположения следующих файлов:

**rtt-r200-1.4.4-build6.xload**

**rtt-r200-1.4.4-build6.uboot**

**rtt-r200-1.4.4-build6.firmware**

Произвести запуск маршрутизатора.

Далее консольный вывод

BRCM XLP Stage 1 Loader (X-Loader:1.0.7-RTT.2) [Big-Endian] (Dec 12 2015 - 16:20:11)

XLP104B1: Node 0 frequency: CPU=400MHz, SOC=400MHz, REF=133MHz

POWER ON RESET CFG:30CE1FA8, VRM:6A, PRID:0xC1203

MBist Pass

DDR3: Node 0 Channel 0 Mem size = 4096 MB UDIMM, I2C: bus=0, addr=0x56

DDR3: Node 0 DRAM frequency 666 MHz

Board DDR VDD set to 1.5V.

N:0 Ch:0 m:40 s:40 R OK.

N:0 Ch:0 m:40 s:40 RW OK.

n:0 ch:0 addr mode:2T OK

Node:0 Ch:0 TGE Set Memory:4096 MB value:FF FF -- PASS

Node:0 Ch:0 TGE Set Memory:4096 MB value:FF 00 -- PASS

Node:0 Ch:0 TGE Set Memory:4096 MB value:AA 55 -- PASS

Node:0 Ch:0 TGE Set Memory:4096 MB value:00 00 -- PASS

DDR3 Initialization Passed.

DDR Interleave Mode: (node:0 chan:1)

NBU0 DRAM BAR0 base: 00000000 limit: 0013f000 xlate: 00000001 node: 00000000 ( 0|00000 MB -> 319|0013f MB, size: 320|00140 MB)

NBU0 DRAM BAR1 base: 001d0000 limit: 00bff000 xlate: 00090001 node: 00000000 ( 464|001d0 MB -> 3071|00bff MB, size: 2608|00a30 MB)

NBU0 DRAM BAR2 base: 00e00000 limit: 0128f000 xlate: 00290001 node: 00000000 ( 3584|00e00 MB -> 4751|0128f MB, size: 1168|00490 MB)

XLP watchdog timer: initialized

**Hit any key to stop autoboot: 0** //Пропустить приглашение для входа

POWER ON RESET CFG:30CE1FA8

SPI: Got idcode c2 20 18 c2 20

0x4000 KiB MX25L12805D at 0:0 is now current device

Secure Boot ... Success

## Starting application at 0x8C100000 ...

BRM.XLP.U-Boot:1.0.7-RTT.2 (12/12/2015 - 16:20:50)

DRAM: 4 GB

Detected [XLP104B1]

Booted from SPI/MMC

CS0/CS1 -> OnBoard NOR/NAND

XLP watchdog timer: initialized

Now running in RAM - U-Boot [N64 ABI, Big-Endian] at: ffffffff8c100000

Ref Clk:133 MHz

Read FPGA from partition 'fpga0'

SF: Detected MX25L12805D with page size 256, total 16777216 bytes

Initializing FPGA: OK

## CFI Unknown FLASH on Bank 1 - Size = 0x00000000 = 0 MB

SF: Detected MX25L12805D with page size 256, total 16777216 bytes

Flash: 16 MB

NAND: ONFI flash detected

ONFI param page 0 valid

1024 MiB

SF: Detected MX25L12805D with page size 256, total 16777216 bytes

\*\*\* Warning - bad CRC, using default environment

In: serial

Out: serial

Err: serial

Reading factory settings...

SF: Detected MX25L12805D with page size 256, total 16777216 bytes

Factory settings:

factory\_type: <RTT-R200>

factory\_sn: <RR03000002>

factory\_mac: <C4:36:DA:A3:00:40>

factory\_hw\_ver: <1v3>

Active Nodes: 1

spillsz 0x2000000 @ 0x0000000010000000

node 0 default qsize 28672 credits 50

spill\_base\_cur 0x104b8000 qram\_base\_cur 0x1520

XLP304/204/104 FMN configuration

Validating credits configured for Node-0

Net: Unable to find the frequency in the FDT file for type:6,  
value

using the default

PMA2P0 configuration is OK

xlp2xx\_set\_pll\_dividers: RefClk=125 block=0 lane\_ctrl=4, mode=2

xlp2xx\_set\_pll\_dividers: RefClk=125 block=0 lane\_ctrl=5, mode=2

xlp2xx\_set\_pll\_dividers: RefClk=125 block=0 lane\_ctrl=6, mode=2

xlp2xx\_set\_pll\_dividers: RefClk=125 block=0 lane\_ctrl=7, mode=2

PMA2P0 configuration is OK

xlp2xx\_set\_pll\_dividers: RefClk=125 block=1 lane\_ctrl=4, mode=2

xlp2xx\_set\_pll\_dividers: RefClk=125 block=1 lane\_ctrl=5, mode=2

xlp2xx\_set\_pll\_dividers: RefClk=125 block=1 lane\_ctrl=6, mode=2

xlp2xx\_set\_pll\_dividers: RefClk=125 block=1 lane\_ctrl=7, mode=2

Phy 0x4 not detected on bus 0

Phy 0x5 not detected on bus 0

Phy 0x6 not detected on bus 0

Phy 0x7 not detected on bus 0

initializing port 0, type 1.

nae-0-0: PHY is Broadcom 54240 (600d8463)

initializing port 1, type 1.

nae-0-1: PHY is Broadcom 54240 (600d8463)

initializing port 2, type 1.

nae-0-2: PHY is Broadcom 54240 (600d8463)

initializing port 3, type 1.

nae-0-3: PHY is Broadcom 54240 (600d8463)

initializing port 4, type 1.

Error! Unable to detect SGMII PHY

nae-0-4: No PHY found

initializing port 5, type 1.

Error! Unable to detect SGMII PHY

nae-0-5: No PHY found

initializing port 6, type 1.

Error! Unable to detect SGMII PHY

nae-0-6: No PHY found

initializing port 7, type 1.

Error! Unable to detect SGMII PHY

nae-0-7: No PHY found

SMC Endian Test:ae1fac1f

nae-0-0, nae-0-1, nae-0-2, nae-0-3, nae-0-4, nae-0-5, nae-0-6, nae-0-7

Initialized I2C0 Controller.

Initialized I2C1 Controller.

Initialized I2C2 Controller.

Initialized I2C3 Controller.

Temp: MAX6657 temperature (int) 27 C

Temp: MAX6657 temperature (ext) 28 C

Temp: LM75 temperature 27 C

Start ucore ... success!

Thermal Registers are not fused, UCORE Power Management Disabled!

**Hit any key to stop autoboot: 0 //Принимаем приглашения для входа (Enter)**

**BRCM.XLP104B1.u-boot# setenv ipaddr 172.16.20.1 //Указываем ip устройства**

**BRCM.XLP104B1.u-boot# setenv serverip 172.16.20.2 // Указываем ip tftp-сервера**

**BRCM.XLP104B1.u-boot# ping 172.16.20.2 //Проверяем доступность tftp-сервера**

nae-0-0 no link

Using nae-0-1 device

host 172.16.20.2 is alive

**BRCM.XLP104B1.u-boot# setenv xload\_file rtt-r200-1.4.4-build6.xload**

**BRCM.XLP104B1.u-boot# run tftp\_update\_xload //Запускаем обновление**

Using nae-0-1 device

TFTP from server 172.16.20.2; our IP address is 172.16.20.1

Filename 'rtt-r200-1.4.4-build6.xload'.

Load address: 0xa800000078000000

Loading: TftpStart:TftpTimeoutMsecs = 10000, TftpTimeoutCountMax = 6

#####

done

Bytes transferred = 130848 (1ff20 hex)

SF: Detected MX25L12805D with page size 256, total 16777216 bytes

0x4000 KiB MX25L12805D at 0:0 is now current device

X-Loader update OK

**BRCM.XLP104B1.u-boot# setenv uboot\_file rtt-r200-1.4.4-build6.uboot**

**BRCM.XLP104B1.u-boot# run tftp\_update\_uboot //Запускаем обновление**

Using nae-0-1 device

TFTP from server 172.16.20.2; our IP address is 172.16.20.1

Filename 'rtt-r200-1.4.4-build6.uboot'.

Load address: 0xa800000078020000

Loading: TftpStart:TftpTimeoutMsecs = 10000, TftpTimeoutCountMax = 6

#####

done

Bytes transferred = 869184 (d4340 hex)

SF: Detected MX25L12805D with page size 256, total 16777216 bytes

0x4000 KiB MX25L12805D at 0:0 is now current device

U-Boot update OK

**BRCM.XLP104B1.u-boot# setenv firmware\_file rtt-r200-1.4.4-build6.firmware //**

**BRCM.XLP104B1.u-boot# run tftp\_update\_image1 //Запускаем обновление**

Using nae-0-1 device

TFTP from server 172.16.20.2; our IP address is 172.16.20.1

Filename 'rtt-r200-1.4.4-build6.firmware'.

Load address: 0xa800000060000000

Loading: TftpStart:TftpTimeoutMsecs = 10000, TftpTimeoutCountMax = 6

#####

done

Bytes transferred = 50468123 (302151b hex)

Device 0: nand0... is now current device

NAND erase: device 0 offset 0x1440000, size 0x6400000

Erasing at 0x7800000 -- 1895825408% complete..

OK

NAND write: device 0 offset 0x1440000, size 0x6400000

104857600 bytes written: OK

Firmware update OK

**Далее произойдет перезагрузка устройства.**