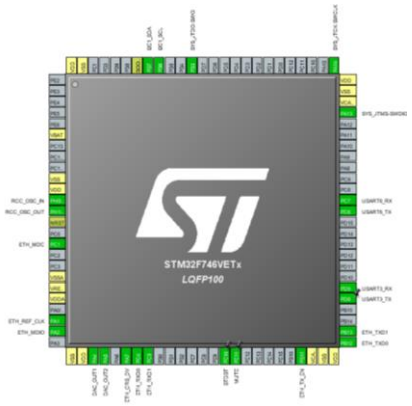
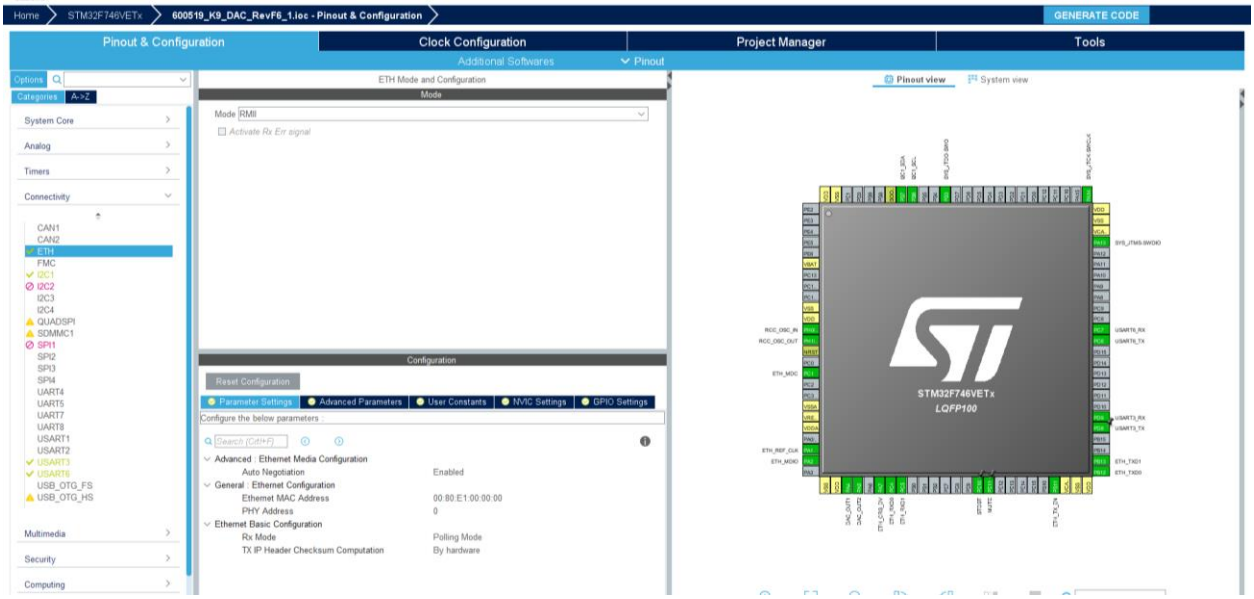
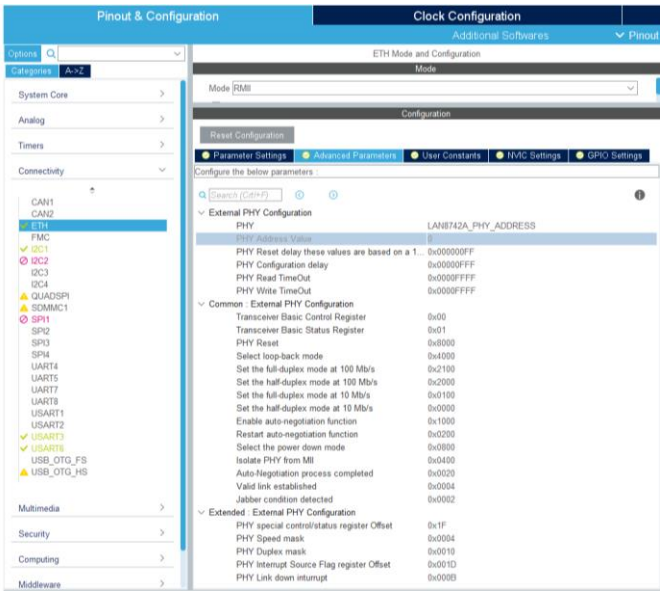

STM32F746VETx
LQFP100


Home
STM32F746VETx
600519_K9_DAC_RevF6_1.ioc - Pinout & Configuration
GENERATE CODE
Pinout & Configuration
Clock Configuration
Project Manager
Tools
Additional Softwares
Pinout
Options
Categories
A->Z
System Core
Analog
Timers
Connectivity
CAN1
CAN2
ETH
FMC
I2C1
I2C2
I2C3
I2C4
QUADSPI
SDMMC1
SPI1
SPI2
SPI3
SPI4
UART4
UART5
UART7
UART8
USART1
USART2
USART3
USART6
USB_OTG_FS
USB_OTG_HS
Multimedia
Security
Computing
ETH Mode and Configuration
Mode
Mode RMII
Activate Rx Err signal
Configuration
Reset Configuration
Parameter Settings
Advanced Parameters
User Constants
NVIC Settings
GPIO Settings
Configure the below parameters :
Search (Ctrl+F)
Advanced : Ethernet Media Configuration
Auto Negotiation
Enabled
General : Ethernet Configuration
Ethernet MAC Address
00:80:E1:00:00:00
PHY Address
0
Ethernet Basic Configuration
Rx Mode
Polling Mode
TX IP Header Checksum Computation
By hardware
Pinout view
System view
STM32F746VETx
LQFP100


Pinout & Configuration
Clock Configuration
Additional Softwares
Pinout
Options
Categories
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I2C3
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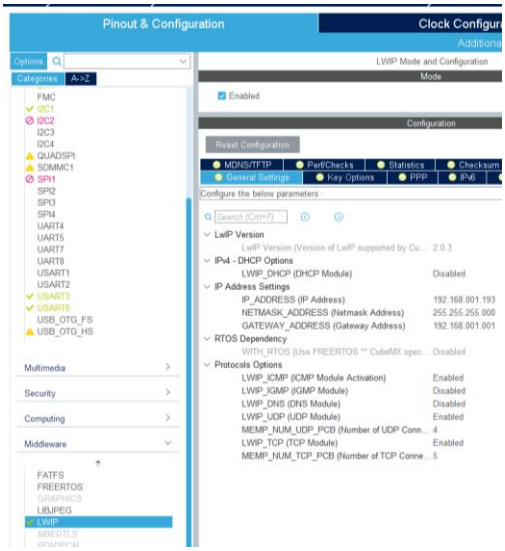
SDMMC1
SPI1
SPI2
SPI3
SPI4
UART4
UART5
UART7
UART8
USART1
USART2
USART3
USART6
USB_OTG_FS
USB_OTG_HS
Multimedia
Security
Computing
Middleware
ETH Mode and Configuration
Mode
Mode RMII
Configuration
Reset Configuration
Parameter Settings
Advanced Parameters
User Constants
NVIC Settings
GPIO Settings
Configure the below parameters :
Search (Ctrl+F)
External PHY Configuration
PHY LAN8742A_PHY_ADDRESS
PHY Address Value 0
PHY Reset delay these values are based on a 1... 0x000000FF
PHY Configuration delay 0x00000FFF
PHY Read TimeOut 0x0000FFFF
PHY Write TimeOut 0x0000FFFF
Common : External PHY Configuration
Transceiver Basic Control Register 0x00
Transceiver Basic Status Register 0x01
PHY Reset 0x8000
Select loop-back mode 0x4000
Set the full-duplex mode at 100 Mb/s 0x2100
Set the half-duplex mode at 100 Mb/s 0x2000
Set the full-duplex mode at 10 Mb/s 0x0100
Set the half-duplex mode at 10 Mb/s 0x0000
Enable auto-negotiation function 0x1000
Restart auto-negotiation function 0x0200
Select the power down mode 0x0800
Isolate PHY from MII 0x0400
Auto-Negotiation process completed 0x0020
Valid link established 0x0004
Jabber condition detected 0x0002
Extended : External PHY Configuration
PHY special control/status register Offset 0x1F
PHY Speed mask 0x0004
PHY Duplex mask 0x0010
PHY Interrupt Source Flag register Offset 0x001D
PHY Link down inturrupt 0x000B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Clock Configur
Additiona
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Categories
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I2C2
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SPI2
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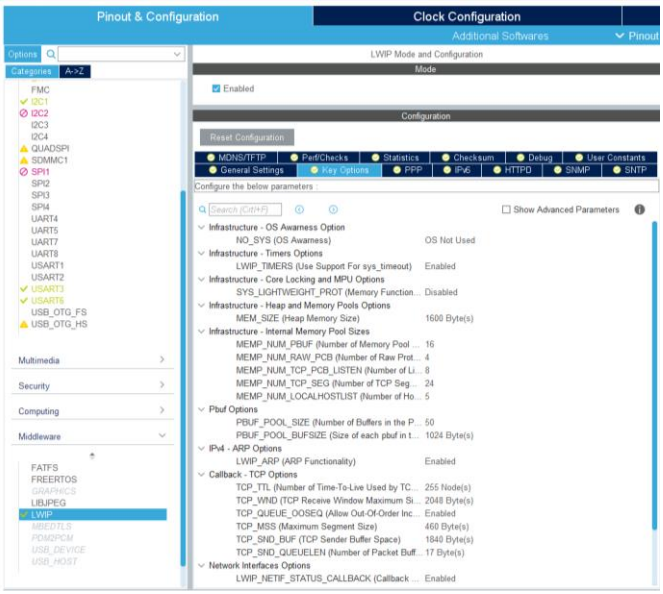
SPI4
UART4
UART5
UART7
UART8
USART1
USART2
USART3
USART6
USB_OTG_FS
USB_OTG_HS
Multimedia
Security
Computing
Middleware
FATFS
FREERTOS
GRAPHICS
LIBJPEG
LWIP
MBEDTLS
LWIP Mode and Configuration
Mode
Enabled
Configuration
Reset Configuration
MDNS/TFTP
PerfChecks
Statistics
Checksum
General Settings
Key Options
PPP
IPv6
Configure the below parameters :
Search (Ctrl+F)
LwIP Version
LwIP Version (Version of LwIP supported by Cu... 2.0.3
IPv4 - DHCP Options
LWIP_DHCP (DHCP Module) Disabled
IP Address Settings
IP_ADDRESS (IP Address) 192.168.001.193
NETMASK_ADDRESS (Netmask Address) 255.255.255.000
GATEWAY_ADDRESS (Gateway Address) 192.168.001.001
RTOS Dependency
WITH_RTOS (Use FREERTOS ** CubeMX spec... Disabled
Protocols Options
LWIP_ICMP (ICMP Module Activation) Enabled
LWIP_IGMP (IGMP Module) Disabled
LWIP_DNS (DNS Module) Disabled
LWIP_UDP (UDP Module) Enabled
MEMP_NUM_UDP_PCB (Number of UDP Conn... 4
LWIP_TCP (TCP Module) Enabled
MEMP_NUM_TCP_PCB (Number of TCP Conne... 5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Mode
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Configuration
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Checksum
Debug
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General Settings
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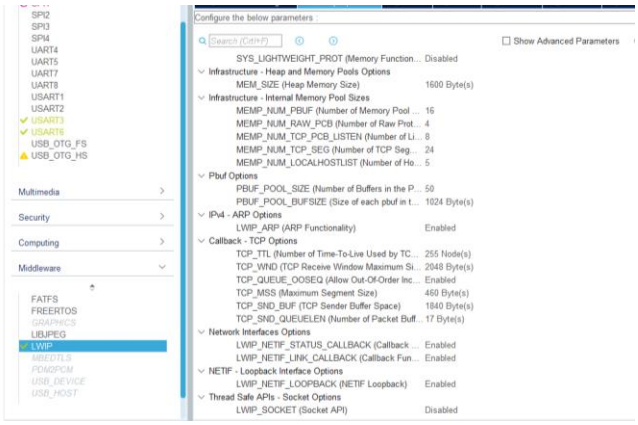
PPP
IPv6
HTTPD
SNMP
SNTP
Configure the below parameters :
Search (Ctrl+F)
Show Advanced Parameters
Infrastructure - OS Awarness Option
NO_SYS (OS Awarness) OS Not Used
Infrastructure - Timers Options
LWIP_TIMERS (Use Support For sys_timeout) Enabled
Infrastructure - Core Locking and MPU Options
SYS_LIGHTWEIGHT_PROT (Memory Function... Disabled
Infrastructure - Heap and Memory Pools Options
MEM_SIZE (Heap Memory Size) 1600 Byte(s)
Infrastructure - Internal Memory Pool Sizes
MEMP_NUM_PBUF (Number of Memory Pool ... 16
MEMP_NUM_RAW_PCB (Number of Raw Prot... 4
MEMP_NUM_TCP_PCB_LISTEN (Number of Li... 8
MEMP_NUM_TCP_SEG (Number of TCP Seg... 24
MEMP_NUM_LOCALHOSTLIST (Number of Ho... 5
Pbuf Options
PBUF_POOL_SIZE (Number of Buffers in the P... 50
PBUF_POOL_BUFSIZE (Size of each pbuf in t... 1024 Byte(s)
IPv4 - ARP Options
LWIP_ARP (ARP Functionality) Enabled
Callback - TCP Options
TCP_TTL (Number of Time-To-Live Used by TC... 255 Node(s)
TCP_WND (TCP Receive Window Maximum Si... 2048 Byte(s)
TCP_QUEUE_OOSEQ (Allow Out-Of-Order Inc... Enabled
TCP_MSS (Maximum Segment Size) 460 Byte(s)
TCP_SND_BUF (TCP Sender Buffer Space) 1840 Byte(s)
TCP_SND_QUEUELEN (Number of Packet Buff... 17 Byte(s)
Network Interfaces Options
LWIP_NETIF_STATUS_CALLBACK (Callback ... Enabled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TCP_QUEUE_OOSEQ (Allow Out-Of-Order Inc... Enabled
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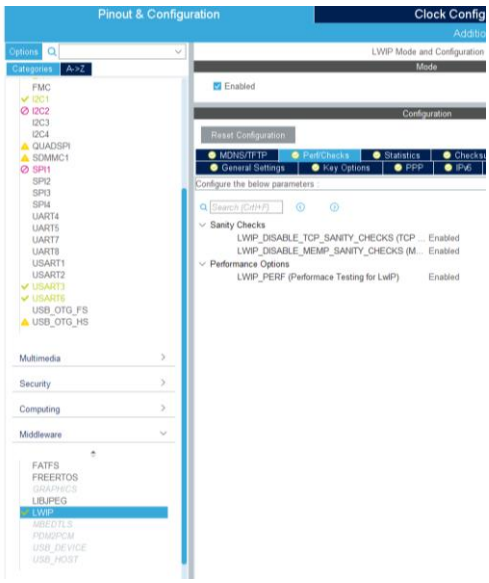
TCP_SND_BUF (TCP Sender Buffer Space) 1840 Byte(s)
TCP_SND_QUEUELEN (Number of Packet Buff... 17 Byte(s)
Network Interfaces Options
LWIP_NETIF_STATUS_CALLBACK (Callback ... Enabled
LWIP_NETIF_LINK_CALLBACK (Callback Fun... Enabled
NETIF - Loopback Interface Options
LWIP_NETIF_LOOPBACK (NETIF Loopback) Enabled
Thread Safe APIs - Socket Options
LWIP_SOCKET (Socket API) Disabled



/********************/

//code: Main.c

```
574  net_ini();
575  tcp_server_init();
576  HAL_UART_Receive_IT(&huart6,(uint8_t*)str,1);
577  dmc_puts("Server init\n\r");
```

```
590  __HAL_UART_FLUSH_DRREGISTER(&huart6); // Clear the buffer to prevent overrun
591  /* USER CODE END 2 */
592
593  /* Infinite loop */
594  /* USER CODE BEGIN WHILE */
595  while (1)
596  {
597    /* USER CODE END WHILE */
598
599    /* USER CODE BEGIN 3 */
600      ethernetif_input(&gnetif);
601      sys_check_timeouts();
602      getCommand();
603
604  }
```

```
665
666 /* USER CODE BEGIN 4 */
667 void HAL_UART_RxCpltCallback(UART_HandleTypeDef *huart)
668 {
669   if(huart==&huart6)
670   {
671       UART6_RxCpltCallback();
672       __HAL_UART_FLUSH_DRREGISTER(&huart6); // Clear the buffer to prevent overrun
673   }
674 }
675
676 void HAL_TIM_ErrorCallback(TIM_HandleTypeDef *htim){
```

//attached “net.c”