

HK NATER TECH LIMITED

WL-UM01YX-7620A Specification

Customer: _____

Description: WL-UM01YX-7620A-V1.0

Customer P/N: _____

Date: _____

Customer		
Approve	Auditing	Admit

Provider		
Approve	Auditing	Admit

Customer:

Add:

Tel:

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Attn:

E-mail:

Provider:HK NATER TECH LIMITED

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SPECIFICATIONS

WL-UM01YX-7620A-V1.0

module

General Description

The MT7620 router module includes an 802.11n MAC and baseband, a 2.4 GHz radio and FEM, a 580 MHz MIPS® 24K™ CPU core, a 5-port 10/100 switch and two RGMII. The MT7620 includes everything needed to build an AP router from a single chip. The embedded high performance CPU can process advanced applications effortlessly, such as routing, security and VoIP. The MT7620 also includes a selection of interfaces to support a variety of applications, such as a USB port for accessing external storage.

Features

- Embedded MIPS24KEc (580 MHz) with 64 KB I-Cache and 32 KB D-Cache
- 2T2R 2.4 GHz with 300 Mbps PHY data rate
- Legacy 802.11b/g and HT 802.11n modes
- 20/40 MHz channel bandwidth
- Legacy 802.11b/g and HT 802.11n modes
- Reverse Data Grant (RDG)
- Maximal Ratio Combining (MRC)
- Space Time Block Coding (STBC)
- 16-bit SDRAM up to 64 Mbytes
- 16-bit DDR1/2 up to 128/256 Mbytes (MT7620A)
- SPI, NAND Flash/SD-XC
- 1x USB 2.0, 1x PCIe host/device
- 1-port 10/100 SW and two RGMII
- An optimized PMU
- Green AP
 - Intelligent Clock Scaling (exclusive)
 - DDRII: ODT off, Self-refresh mode
 - SDRAM: Pre-charge power down
- I2C, I2S, SPI, PCM, UART, JTAG, MDC, MDIO, GPIO
- Hardware NAT with IPv6 and 2 Gbps wired speed
- 16 Multiple BSSID
- WEP64/128, TKIP, AES, WPA, WPA2, WAPI
- QoS: WMM, WMM-PS
- WPS: PBC, PIN
- Voice Enterprise: 802.11k+r
- AP Firmware: Linux 2.6 SDK, eCOS with IPv6
- RGMII iNIC Driver: Linux 2.4/2.6

Applications:

- | | |
|----------------|---------------------------------|
| 1. Routers | 2. iNICs |
| 3. NAS devices | 4. Dual band concurrent routers |

General Specification

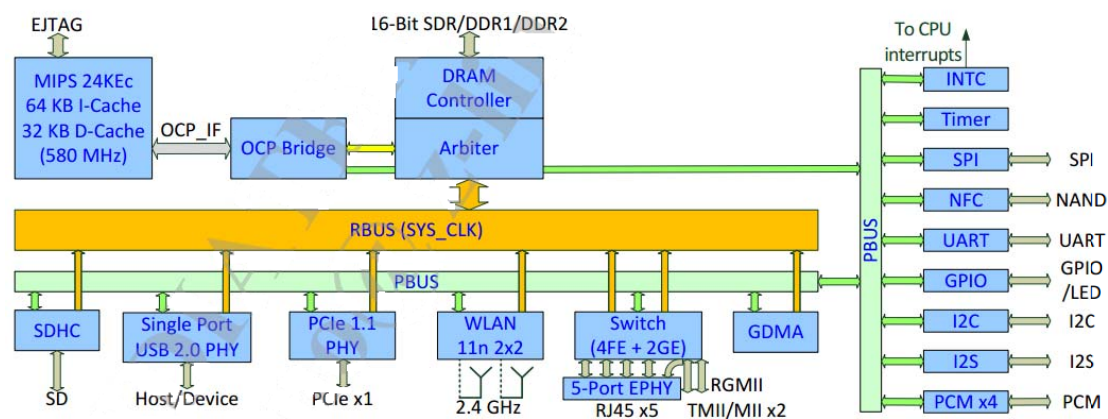
Model	WL-UM01YX-7620A-V1.0
Product Name	WLAN 11b/g/n
Major Chipset	MT7620A
Standard	IEEE802.11n 、 IEEE 802.11g、 IEEE 802.11b
Data Transfer Rate	1,2,5.5,6,11,12,18,22,24,30,36,48,54,60,90,120 and maximum of 300Mbps
Frequency Band	2.4GHz
Power Consumption	3.3 V \pm 10% I/O supply voltage
Dimension	55.0 x 27.5 x 3.25mm (LxWxH) \pm 0.2MM

Storage Conditions

The calculated shelf life in a sealed bag is 12 months if stored between 0 °C and 40 °C at less than 90% relative humidity (RH). After the bag is opened, devices that are subjected to solder reflow or other high temperature processes must be handled in the following manner:

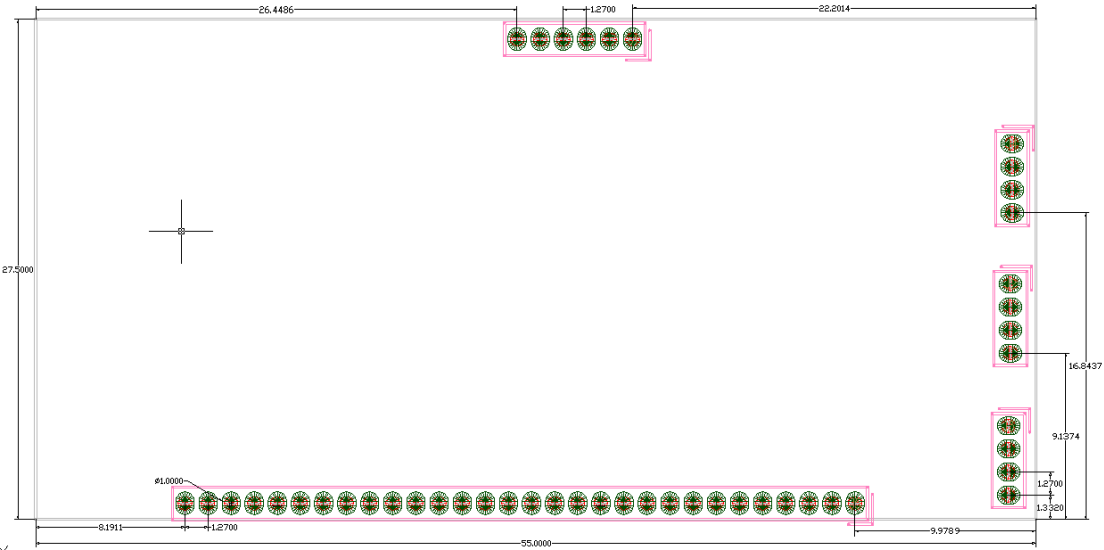
- Mounted within 168 hours of factory conditions, i.e. < 30 °C at 60% RH.
- Storage humidity needs to maintained at < 10% RH.
- Baking is necessary if the customer exposes the component to air for over 168 hrs, baking conditions: 125°C for 8 hrs.

Block Diagram

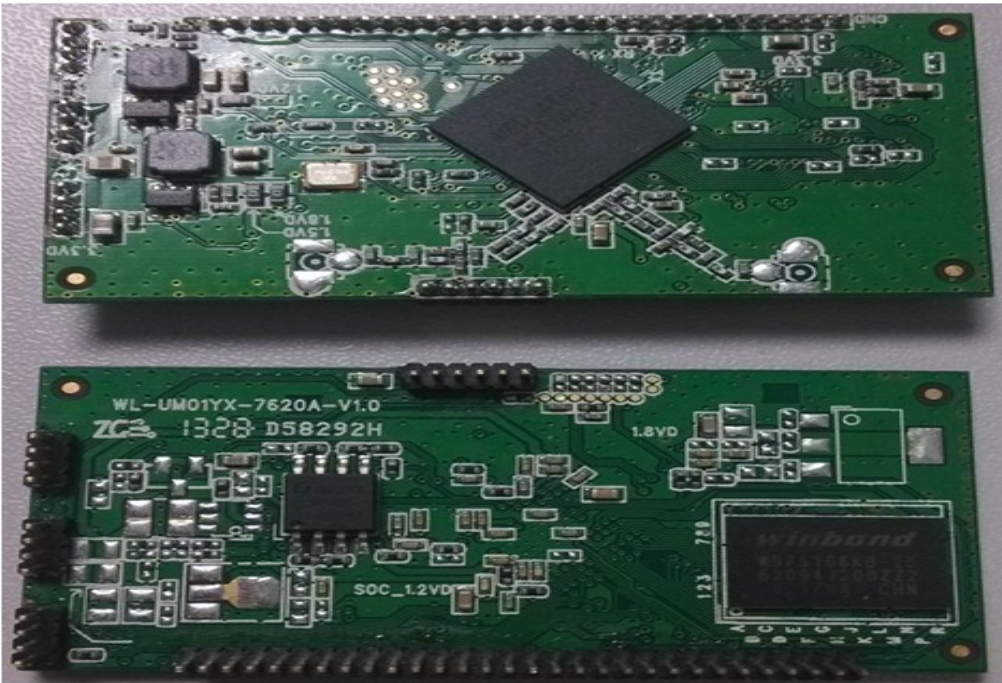
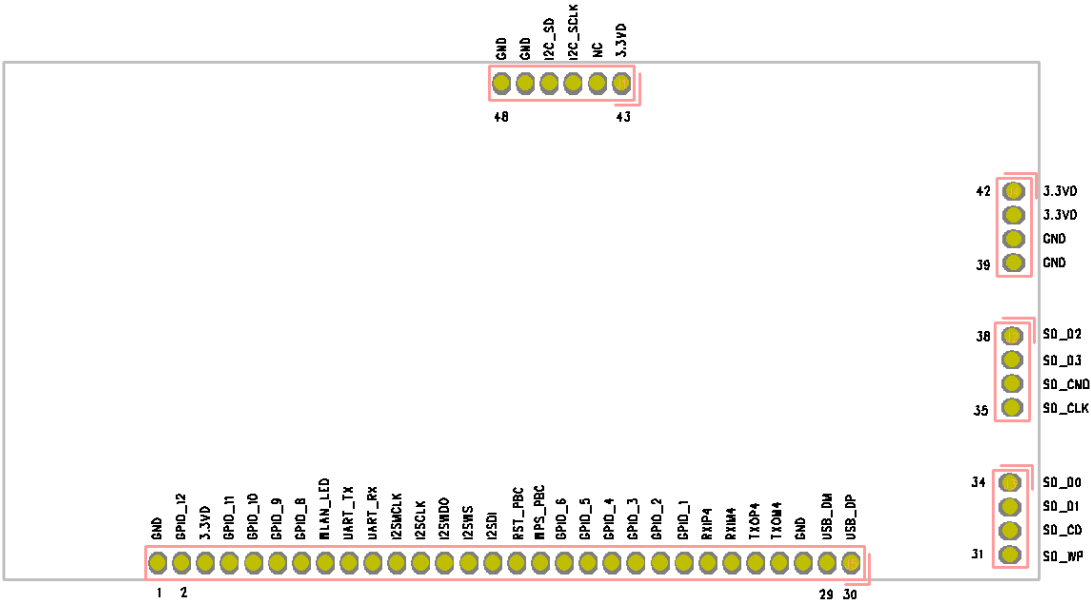


Mechanical

Dimensions (mm)	Length	Width	Height
	55.0 (Tolerance:±0.2mm)	27.5 (Tolerance:±0.2mm)	3.25 (Tolerance:±0.2mm)



Module Pin Assignment

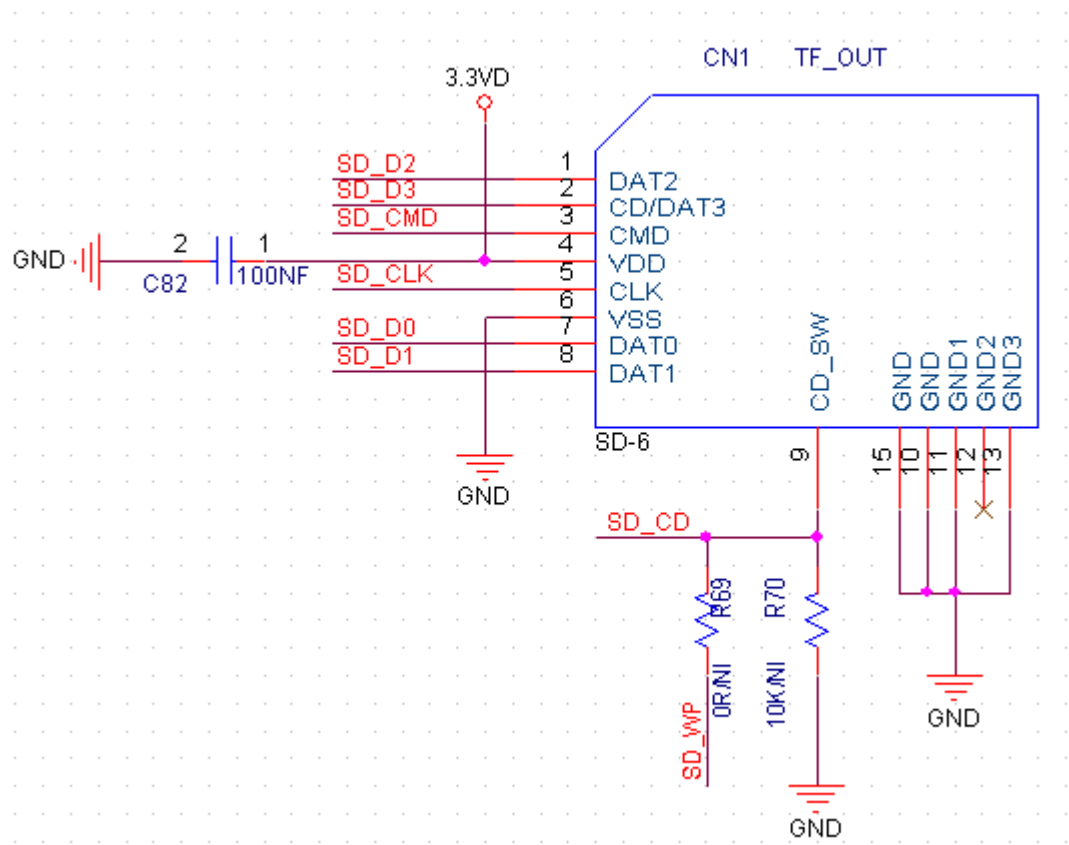


Pin	Function	Description
1	GND	Dround
2	GPIO_12	GPIO
3	3.3VD	3.3VD
4	GPIO_11	GPIO
5	GPIO_10	GPIO
6	GPIO_9	GPIO
7	GPIO_8	GPIO
8	WLAN_LED	WLAN Activity LED
9	UART_TX	UART Lite TXD
10	UART_RX	UART Lite RXD
11	I2SMCLK	I2SMCLK
12	I2SCLK	I2SCLK
13	I2SWDO	I2SWDO
14	I2SWS	I2SWS
15	I2SDI	I2SDI
16	RST_PBC	Restore factory defaults
17	WPS_PBC	WPS
18	GPIO_6	GPIO
19	GPIO_5	GPIO
20	GPIO_4	GPIO
21	GPIO_3	GPIO
22	GPIO_2	GPIO
23	GPIO_1	GPIO
24	RXIP4	Port4 RX+
25	RXIM4	Port4 RX+-
26	TXOP4	Port4 TX+
27	TXOM4	Port4 TX-
28	GND	Grond
29	USB_DM	USB_D-
30	USB_DP	USB_D+
31	SD_WP	SD_WP
32	SD_CD	SD_CD
33	SD_D1	SD_D1
34	SD_D0	SD_D0
35	SD_CLK	SD_CLK
36	SD_CMD	SD_CMD
37	SD_D3	SD_D3
38	SD_D2	SD_D2
39	GND	Grond

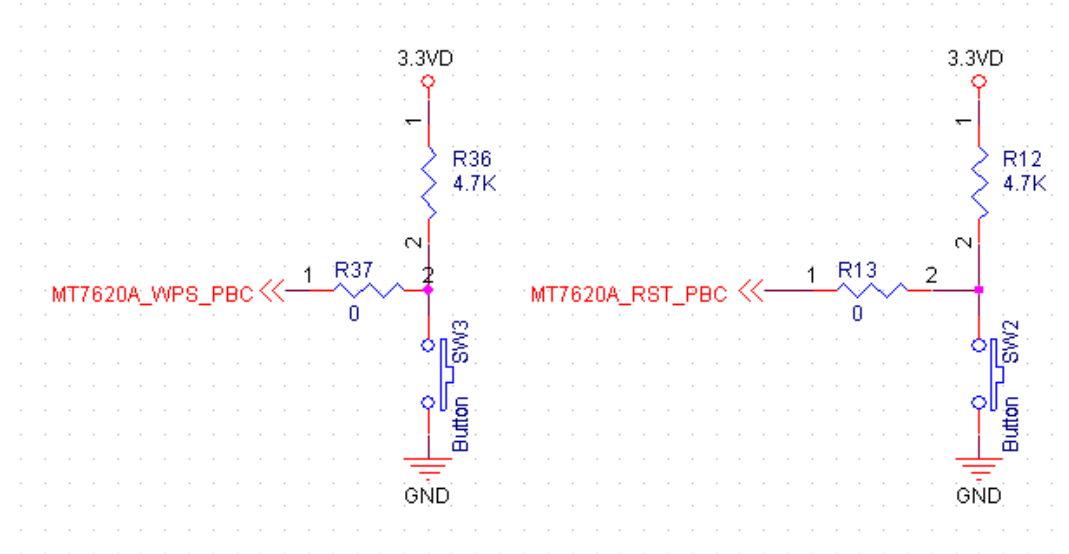
40	GND	Grond
41	3.3VD	3.3VD
42	3.3VD	3.3VD
43	3.3VD	3.3VD
44	NC	NC
45	I2C_SCLK	I2C_SCLK
46	I2C_SD	I2C_data
47	GND	Grond
48	GND	Grond

Circuit reference pictures

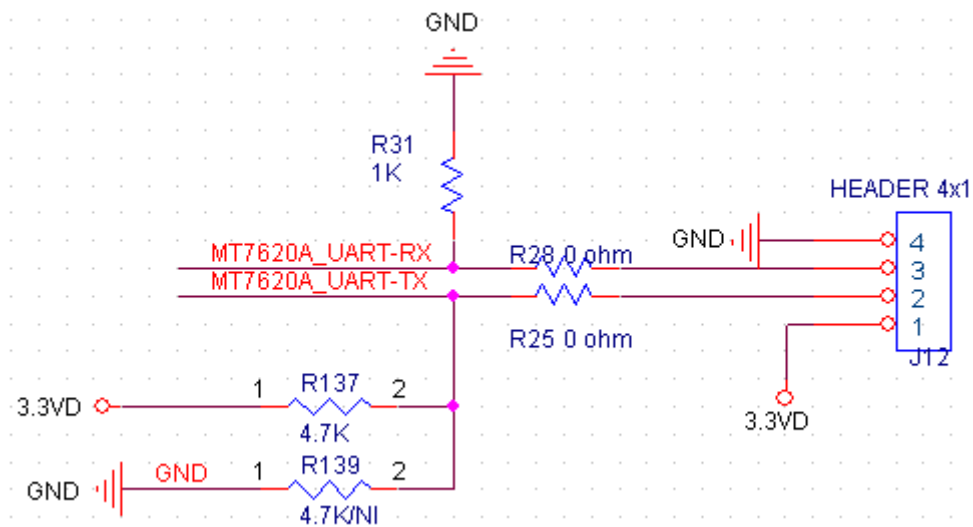
1.SD part reference.



2.Circuit part of the reference.



3. UART part reference circuit.



4. USB part reference circuit.

