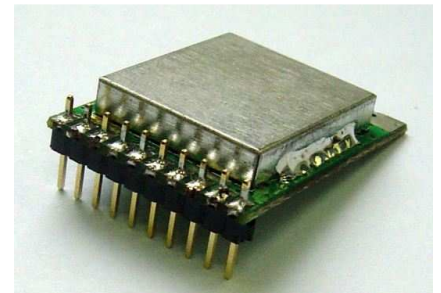


**A. Features**

- ▶ Operating frequency range from 2403 to 2475 MHz
- ▶ Maximum 25 hopping channels
- ▶ Maximum data rate 12 Mbps (@16QAM)
- ▶ 4-wire SPI interface support max. 30MHz clock rate
- ▶ Modulation scheme : 16QAM,QPSK
- ▶ The 16-bit CRC checking
- ▶ Hardware retransmission for packets
- ▶ Power supply range: 2.7 ~ 3.3V
- ▶ Transmission range: 250 m (Line of sight)
- ▶ Outline: 20.40 x 27.65 x 4.4 mm
- ▶ CE & FCC compliance

**B. Applications**

- ▶ Digital AV Sender
- ▶ Digital Baby Monitor
- ▶ Wireless Video Door phone
- ▶ Security Camera
- ▶ Portable Video Recorder



**MDD-24R2001**

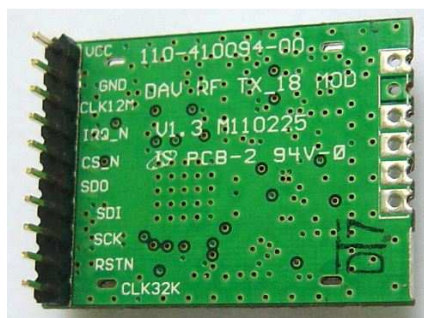
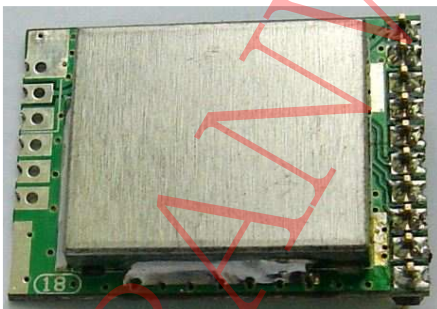
**C: Specification**

Parameter	Min.	Typ.	Max.	Unit
<b>Electrical Section</b>				
Supply Voltage	4.9	5.0	5.1	V
Supply current in TX mode			200	mA
Supply current in RX mode		65		mA
<b>RF Section</b>				
Modulation Mode	QPSK,16QAM			
Operating Frequency	2403	~	2475	MHz
Channel Bandwidth		3		MHz
Channel		25		channels
Data Rate	3M	~	12M	bps
<b>Transmitter Section</b>				
Transmission Power	+14 @16QAM +18 @QPSK			dBm
Power control range	40			dB
Power control resolution	1	1	3	dB
<b>Receiver Section</b>				
Overlay channel spacing	1			MHz
Sensitivity	-78 @ 16QAM -86 @ QPSK			dBm
<b>Operation</b>				
Operating Temperature	-10	~	+60	°C
Storage Temperature	-20	~	+70	°C

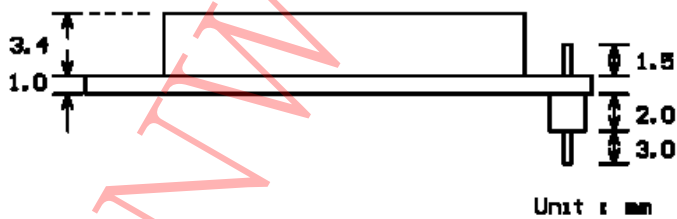
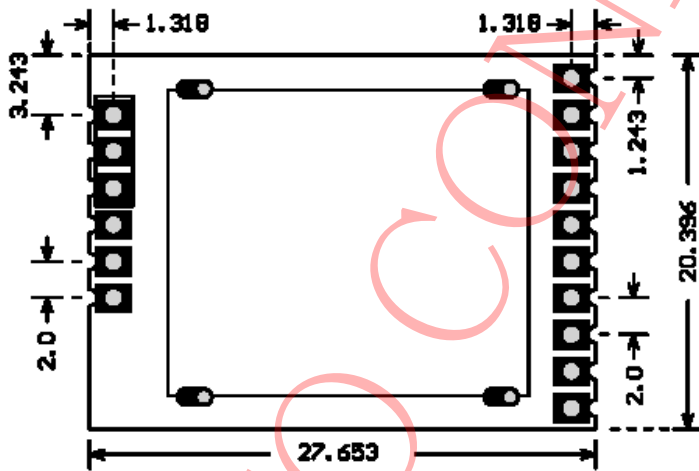
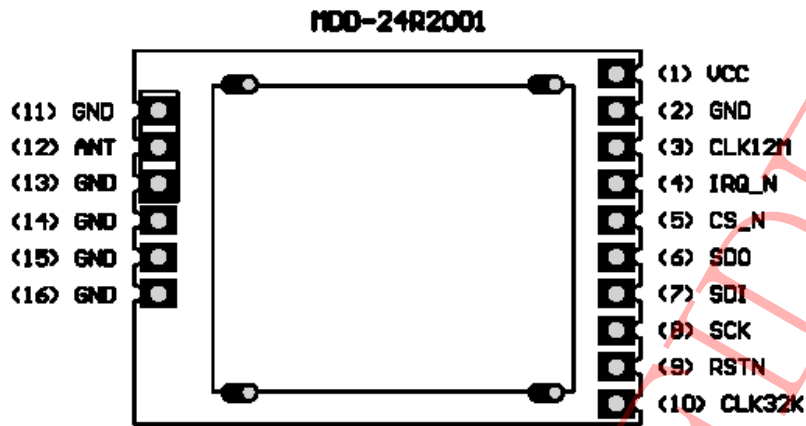
**D: Pin Assignment**

No.	Marks	Function
1	VCC	Power Supply
2	GND	Ground
3	CLK12M	12MHz clock output
4	IRQ_N	Interrupt indication for external MCU
5	CS_N	Chip Selection
6	SDO	Serial data output
7	SDI	Serial data input
8	SCK	Serial clock input
9	RST_N	Negative active reset input
10	CLK32K	32KHz clock output

**Model: MDD-24R2001**



**E: Mechanical Dimension**



### Module User Manual

The purpose of this manual is to explain correct way how to integrate module MDD-24R2001 to the end product. It includes procedures that shall assist you to avoid unforeseen problems. This manual presents information that shows how module and OEM product, where module integrated, complies with regulations in certain regions. Note that any modifications, not expressly approved by the manufacturer could void the authority to operate in these regions.

#### **Integration**

The RF module, model MDD-24R2001 has to be installed and used in accordance with the technical installation instructions provided by the manufacturer.

For detail information concerning type approval of this module please contact the authorized local distributor or the manufacturer.

The system may only be implemented in the configuration that was authorized.

#### **USA-Federal Communications Commission (FCC)**

This device complies with part 15 of the FCC rules.

Operation is subject to the following two conditions :

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

#### **Labeling**

The RF module MDD-24R002 for controller labeled as below.

<p><b>Model: MDD-24 R2001</b> <b>FCC ID: O6L-MDD24R2001</b></p>
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The label that is placed on the module is too small to hold the required FCC information, then that information appear in the user manual for this device. In addition, the "Contains FCC ID : O6L-MDD24R2001" label also must be placed on the outside of the end product system.

This device is to be used only for mobile and fixed applications. The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20cm from all persons and must not be collocated or operating in conjunction with any other antenna or transmitter.

OEM integrators must be provided with antenna installation instructions. OEM integrators and end-users must be provided with transmitter operation conditions for satisfying RF exposure compliance. This grant is valid only when the device is sold to OEM integrators and the OEM integrators are instructed to ensure that the end-user has no manual instruction to remove or install the device. Separate approval is required for all other operating configurations, including portable configurations with respect to 2.1093 and different antenna configurations.