ST5NMT UAV Video Data Transmitter and Receiver

SUNTOR module ST5NMT is the latest miniaturized and functional wireless transmission equipment. It adopts TDD wireless transmission technology and dual antenna diversity design to make the signal transmission quality more stable. The device can support bidirectional transmission of network data and TTL serial data at the same time. The data link can be adjusted according to different ratios, and the uplink and downlink data link transmission rates can be adjusted proportionally. In addition, the module has three frequency of 2.4GHz/1.4GHz/800MHz for option. The equipment can be applied to the use of intelligent unmanned terminals such as UAV drones, unmanned ships, unmanned boats and robots.

1、Feature：

- TDD wireless transmission technology
- Optional frequency 800MHz、1.4GHz、2.4GHz
- Dimension 107x86x25mm Weight: N.W.:144g N.W.:194g(included Antenna)
- Duplex Transmitting Rate is 3-8Mbps
- Support Point to Point and Point to Multi-Point in 1-4 TX to 1RX, or 1TX to 1-4 RX. For example: Three drones to one GCS, Three GCS to one drone
- Dual antenna diversity design to make the signal transmission quality more stable, and high receiving sensitivity
- Long range more than 5km, 50meters-150meters in NLOS
- Lowest RF power 25dBm and power consumption TX 5W RX 5W
- Support IP video output and bidirectional TTL serial data(RS232 Data Customized Acceptable)
- The uplink and downlink data link transmission rates can be adjusted proportionally(2D3U、3D2U、4D1U)
- Optional Bandwidth(3MHz/5MHz/10MHz/20MHz)

2、Product

2.1 Shape and Dimension

2.2、Mechanical chassis and dual bidirectional Omni antenna design

3、Parameter

Module			
Hardware	RF	Frequency	2.4G(2401.5-2481.5MHz) 1.4G(1427.9-1447.9MHz) 800M(806-826 MHz)
		RF Power	25dBm±2
		Receivng sensitivity	2.4G（1Mbps）:20MHz -99dBm 10MHz -102dBm5MHz -104dBm 3MHz -106dBm1.4G （1Mbps）： 10MHz -103dBm 5MHz -106dBm 3MHz -108dBm800M （1Mbps）:10MHz -103dBm 5MHz -106dBm 3MHz -108dBm
	Antenna	Double Antenna	SMA Type
	Serial Port	TTL *1	Baud rate 115200
	Power	consumption	5V power supply the consumption maximum in 850mA±15%。
		9~13V	optional
	Working temperature	-25℃~60℃	
System	Center point	Central node selection	Any node in the network can be configured as a central node
		Rate	The central node simultaneously receives/sends the total rate of data sharing at the current bandwidth.
	From Node	Node Qty	Ethernet Nodes N≥2 maximum 16 access point
		Communications	Any two slave nodes must be forwarded through the central node
			Any node supports unicast and broadcast modes
		Rate	All slave nodes and the central node share the working bandwidth in one direction, the maximum downlink configuration (20M bandwidth, the rate reaches 30M), and the maximum uplink configuration (20M bandwidth, the rate reaches 26M).
		Automatic power adjustment	Support access node adaptive adjustment of transmit power
	Software upgrade	OTA, Local and remote upgrade	
Wireless	Anti-interference	Frequency hopping	Support automatic frequency hopping in the range of frequency

	Retransmission configuration		Select whether to retransmit according to different data carried
	Transmitting mode	Transmission mode	Single antenna transmission, single antenna receiving / single antenna transmitting, dual antenna receiving
		Data link	Master-slave data bidirectional communication, dynamically adjusting rate based on wireless data
		Access	PTP;PTMP
	Bandwidth	2.4GHz	3MHz/5MHz/10MHz/20MHz
		1.4GHz	3MHz/5MHz/10MHz
		800MHz	3MHz/5MHz/10MHz
	Rate		Single node supports up to 30Mbps, adaptive average distribution system rate
	Encryption		Support user configuration layer 2 encryption to turn off And encryption (ZUC, SNOW3G, AES three encryption options are optional)
	Modulation		QPSK、16QAM、64QAM
	Latency	Air latency	Delay from node-central node transmission <10ms
		Start delay	entral node/slave node boot delay <15s
		Network Start	Time <1min