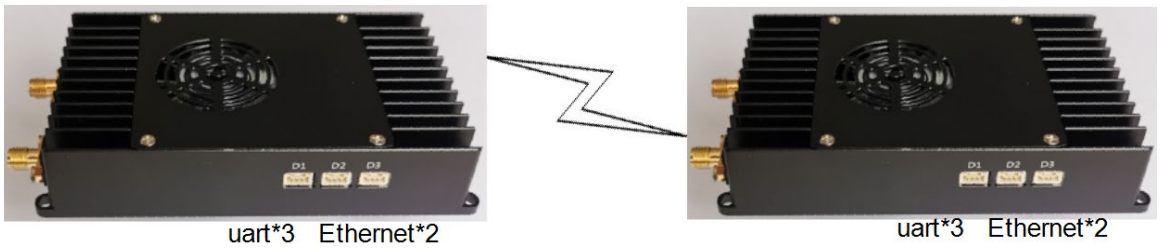
SDL536 2W/5W Data/Video Wireless Transceiver

-- TDD OFDM full duplex wireless transceiver for video and data Link
-- Up to 30Mbps Iperf Throughput @20MHz channel
-- Supports Point-to-Point and Point-to-Multipoint Networks or Mesh networks
-- Interface through web browser or control uart
-- 2 Ethernet and 3 channel uart data link
-- Long distance wireless transceiver with 2W or 5W RF power



Sihid SDL536 was designed for video and data wireless transmission with two way wireless data link. This OFDM radio device works at 800MHz or 1.4GHz bands, with frequency hopping technology (FHSS) to make sure better stability signal communication.

Features:

- TDD OFDM modulation
- Supports 806~826HMz band or 1428~1468MHz band or 1420~1530MHz band
- Supports FHSS inside each band
- 1.4/3/5/10/20MHz band widths
- Maximum 30Mbps@20MHz throughput
- RF transmission maximum power: 2W or 5W
- Constellation: QPSK, 16QAM, 64QAM, self-adaption
- Sensitivity: -108dBm(1Mbps)
- Supports IP data transmission(2 Ethernet port)
- Supports serial data transmission(3 channel, RS232/TTL/Sbus optional)
- 1~7km(ground-to-ground), 22~100km(UAV-to-ground, optional distance grade)
- Web UI and control uart for management
- AES128 encryption
- Uplink and downlink stream control
- Networking mode: Point-to-Point, Point-to-Multipoint, Relay, and Mesh(specify)
- Movement Speed: Supports no less than 300km/h
- Compact size and light weight
- Rugged aluminum alloy housing
- Power input: 12~18V(2W), 24~28V(5W)
- Power consumption: <12W(RF Power 2W), <22W(RF Power 5W)
- Dimensions: 103.4*61.4*22 mm
- Weight: 156g

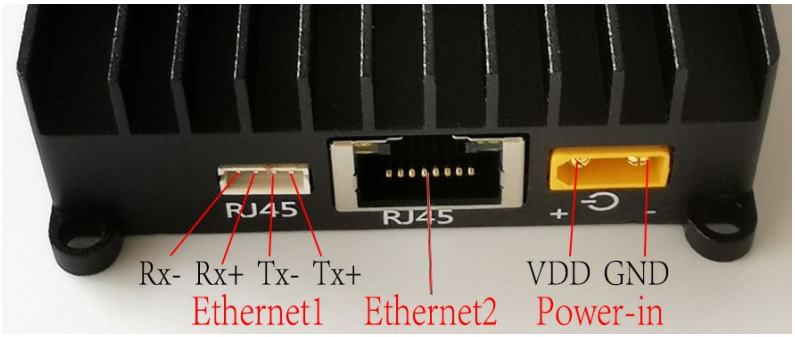
Specification

I/O	Description
Ethernet1	4Pin ZH1.5mm connector, bridged with Ethernet2
Ethernet2	RJ45 connector, bridged with Ethernet1
uart*3	3Pin GH1.25mm lockable connector*3, 3 channel uart, RS232/TTL/Sbus optional
Power in	XT30PW-M connector
ANT1	Tx/Rx Antenna port, SMA female
ANT2	Rx Antenna port, SMA female

I/O Signal

Ethernet 1

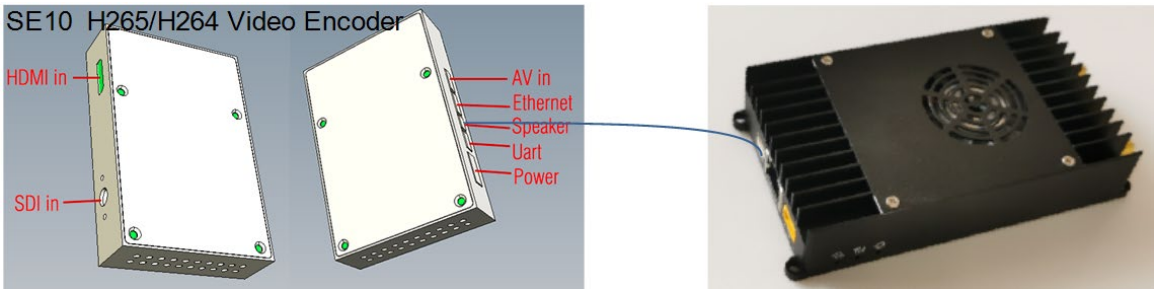
Ethernet 1 is bridged connection with Ethernet 2 on board inside the device. It's a 4PIN ZH1.5mm connector.



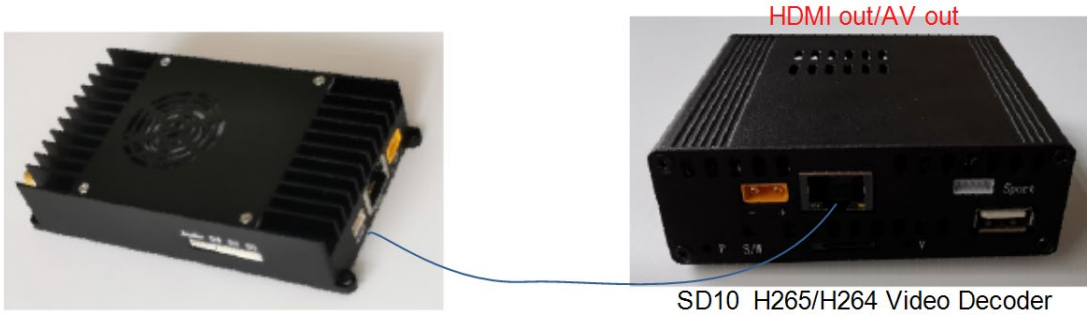
Ethernet 2

Ethernet 2 is bridged connection with Ethernet 1 on board inside the device. It's a RJ45 connector.

IP camera video can be connected with SDL536 directly via Ethernet port. HDMI/SDI/AHD/AV camera video can be encoded with Sihid SE11/SE10 device and then work with SDL536 via Ethernet connection.



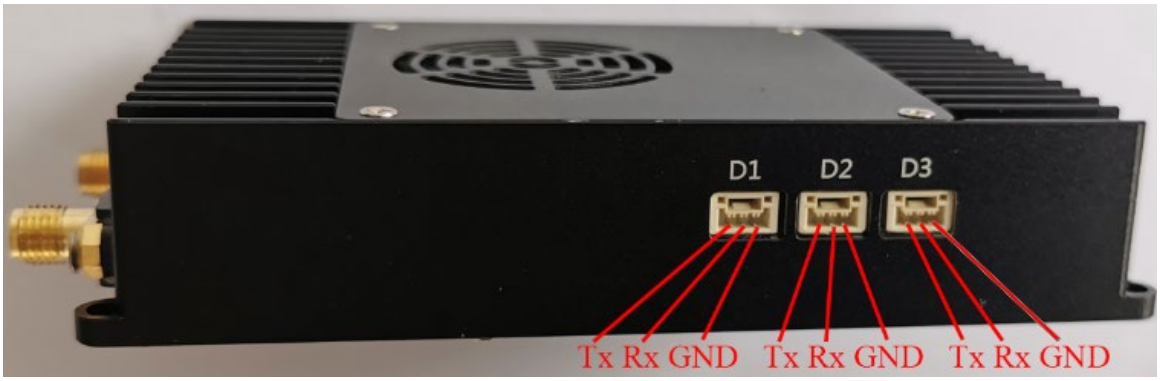
Sihid SD10 H.265/H.264 video decoder device can work with SDL536 via Ethernet connection on the video received side for realtime video monitoring.



Data uart

3Pin GH1.25mm connector*3, 3 channel uart(RS232/TTL/Sbus optional). GH1.25mm connector is lockable.
D1 uart data is wireless transmitted via link layer protocol, D1 uart will be assembled as RS232 uart as default, it can also be assembled as TTL uart according to customers requiremnt.
D2 uart is wireless transmitted via IP protocol, D2 uart will be assembled as RS232 uart as default, it can also be assembled as TTL uart or Sbus port(GND/Sbus-in/Sbus-out) according to customers requiremnt.
D3 uart is wireless transmitted via IP protocol, D3 uart will be assembled as RS232 uart as default, it can also be assembled as TTL uart according to customers requiremnt. D3 uart can also be set as control uart.
Baud rate of the three uart can be setup by web UI.

The three uart assembled as RS322(or TTL) uart:



The three uart assembled as 2 RS232 (or TTL) uart + 1 Sbus port:

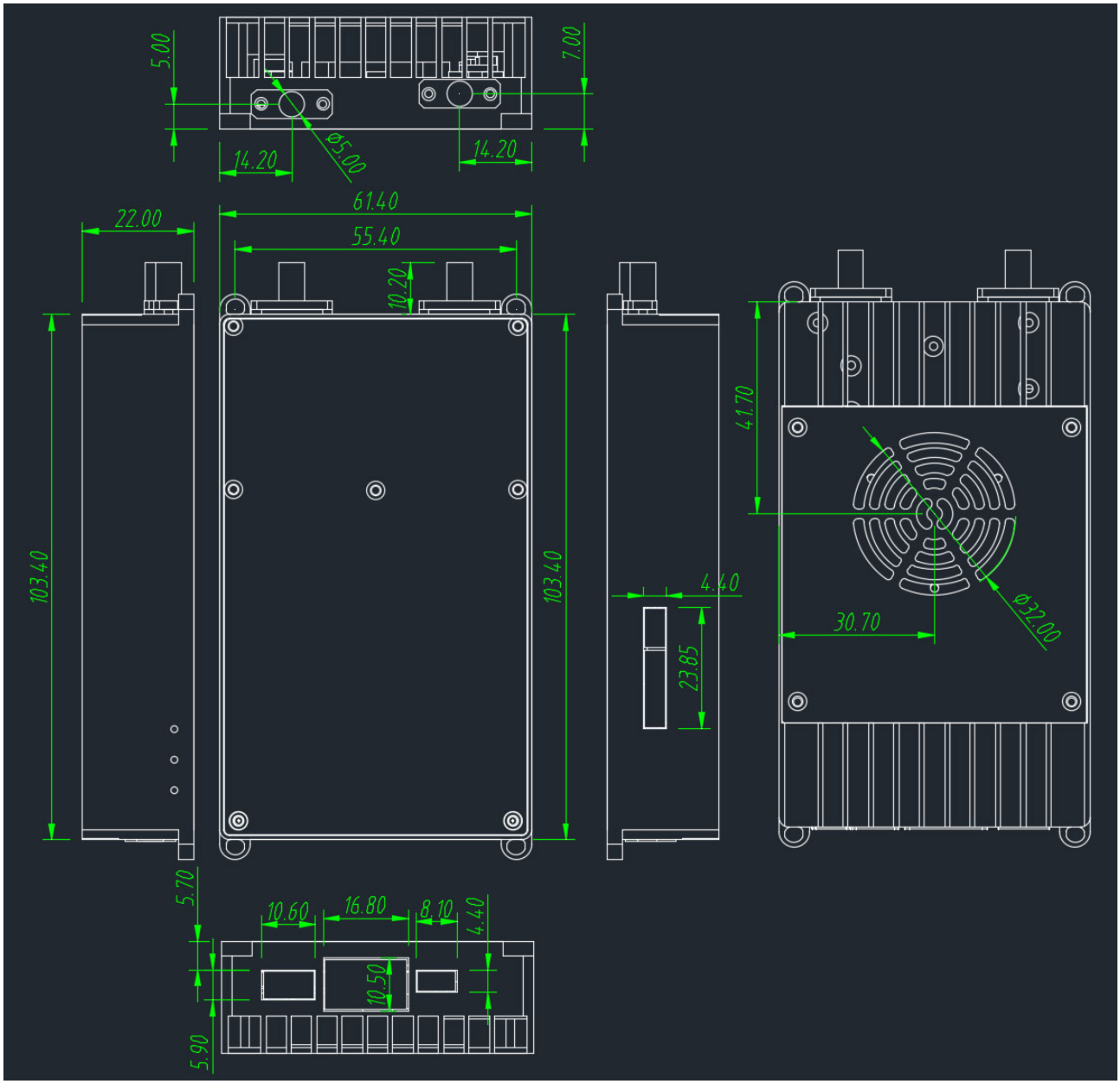
The SDL536 system has a built-in uart to Ethernet TCP server. The D2 and D3 uart ports can use the uart to Ethernet TCP server function to achieve uart to Ethernet data conversion, and it can support both TCP and UDP protocols.

LEDs

Power LED, red light on normal powered;
Node LED, blue light for Node type indictor. Continuous light when the device worked as Centrol Node, blink light when the device worked as Access Node;
Link LED, wireless link working status indictor as below description:

Link LED	Wireless link status
No light	This node is not connected with the wireless network.
Red light	This node is connected with the wireless network, the wireless link signal is weak.
Orange light	This node is connected with the wireless network, the wireless link signal is in middle.
Green light	This node is connected with the wireless network, the wireless link signal is strong.

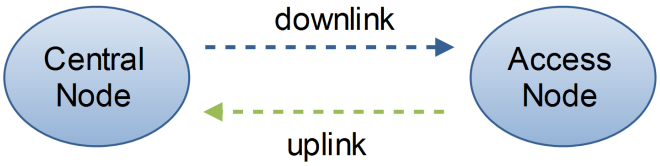
SDL536 device size(mm)



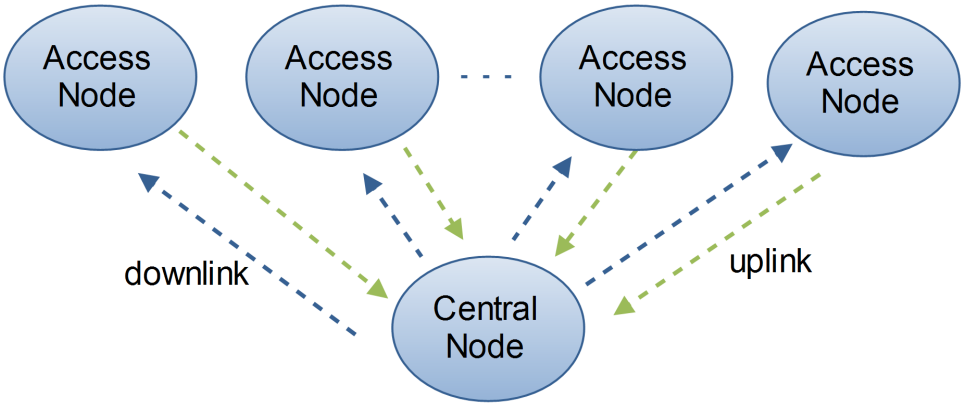
Wireless networking with SDL536

SDL536 supports two operating modes: Access Node or Central Node. It can be managed through web UI. SDL536 supports features of maximum 16 Access Nodes connected to a Central Node. All of the Nodes are in a same wireless LAN and share the whole transmission bandwidth (maximum 30Mbps@20MHz throughput). Data from Central Node to Access Node, we call downlink, and data from Access Node to Central Node, we call uplink. Uplink and downlink stream ratio can be controlled through web UI. When using SDL536 for Point-to-Point transmitting, uplink and downlink share the whole transmission bandwidth (maximum 30Mbps@20MHz throughput) too. SDL536 supports networking mode: Point -to-Point, Point-to-Multipoint, Relay, and Mesh (specify mesh version when order).

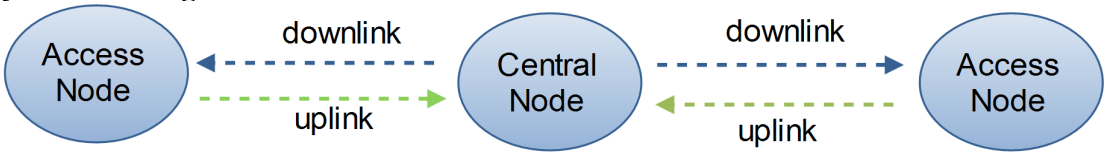
Point-to-Point transmitting



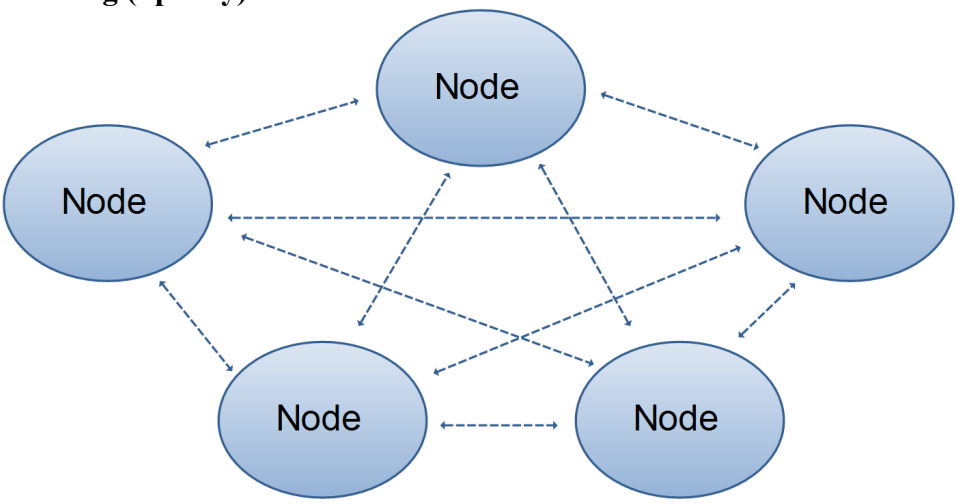
Point-to-Multipoint transmitting



Relay transmitting



Mesh transmitting (Specify)




D1
D2
D3


ANT1
ANT2


RJ45


ANT2
ANT1