

ISTD9 Technical Specification

Power supply

Description	min	typ	max	Unit
Supply Voltage	8		32	V DC
Current Consumption @+12V, charging battery			700	mA

Internal Battery

Description	min	typ	max	Unit
Capacity		2400		mAh
Chemistry	Li-Ion			

Digital Input

Description	min	typ	max	Unit
Number of Input			5	pcs
Input impedance			10	k Ω
Input voltage	1		36	V DC
Input voltage threshold			1	V DC

Digital Output

Description	min	typ	max	Unit
Open-drain output			2	pc
Voltage level			42	V DC
Current			3	A

Analog Input

Description	min	typ	max	Unit
Input voltage range	0		36	V DC
Input impedance	60			k Ω

Physical Interfaces

Description	min	typ	max	Unit
CAN Bus			2	pcs
RS232			1	pc
RS485			1	pc
UART (+3V3 logical level)			1	pc
1-Wire			1	pc

Supported Protocols: MOSBUS-RTU, CANBUS, CANOpen, ISO J1939, DS.

GPRS/LTE

Description	min	typ	max	Unit
GSM/GPRS Protocl Stack	3GPP Release 99			
GSM/GPRS Power Class	Class 4 (+33dBm) for 850/900 Band Class 1 (+30dBm) for 1800/1900 Band Class 3 (+23dBm) for LTE Cat M1			
Supported Bands	GSM 850MHz E-GSM 900MHz DCS 1800MHz PCS 1900MHz LTE Band 2 1900MHz LTE Band 3 1800MHz LTE Band 4 1700MHz LTE Band 5 850MHz LTE Band 8 900MHz LTE Band 12 700MHz LTE Band 13 750MHz LTE Band 20 800MHz			
Antenna	internal/external			
Data Download Speed			85.6	kbps
Data Upload Speed			42.8	kbps

External Antenna can be connected with SMA (Male) connector.

GNSS

Description	min	typ	max	Unit
Supported GNSS	GPS, SBAS, QZSS, GLONASS			
Receiver Sensitivity			-166	dBm
Number of Receiver Channels			72	pcs
Time to first fix (cold start)		TBD		sec.
Time to first fix (hot start)		TBD		sec.
Possition update rate			1	Hz
Antenna	internal/external			

External Antenna can be connected with SMA (Male) connector.

Environment

Description	min	typ	max	Unit
Operating temperature	-20		+60	$^{\circ}$ C
Environment Protection			IP44	