

# 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	kΩ
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			kΩ

## 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	°C
Environment Protection			IP44	