

E-LINTER Goldfinch ETH+Wi-Fi DB9 Stick Datasheet

V201026-R



Revision history

Date	Author	Version	Description
2020/10/26	Baowei	V201026R	Initial version



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1. Brief

Goldfinch is a data logger stick with DB9 interface designed by E-LINTER for photovoltaic inverter communication and power terminal communication. The stick uses DB9 interface to connect to the equipment, with low cost and easy installation. The stick uses all-industrial-grade chips to ensure stability.

The Goldfinch stick provides two communication methods: Wi-Fi and Ethernet. The Wi-Fi protocol supports 802.11 b/g/n standards and supports WPA/WPA2/WPA2-Enterprise encryption mode. At the same time, the Goldfinch stick has 10Mbps and 100Mbps self-adaptation Ethernet interface, the Ethernet communication effectively compensates for application scenarios that do not have Wi-Fi network signal coverage. The stick supports remote firmware upgrades, and developers can continue to upgrade after the product is released to facilitate product maintenance.

Goldfinch has made a special design for the photovoltaic industry, using dual data buffers for sending and receiving, and the data buffer is up to 3KB, which improves the reliability of data sending and receiving. It adopts high-quality outdoor materials, its anti-ultraviolet rays reach F1 grade, its flame retardant grade reaches UL94 V-0, and it has an IPX7 protection grade, which can be directly used outdoors.



2. Features

- RS-232 communication
- Wi-Fi support AP+STA dual mode
- Ethernet and Wi-Fi dual mode
- 10Mbps/100Mbps adaptive Ethernet
- Automatic switch network between Wi-Fi and Ethernet
- Automatic time synchronization when connected to internet
- Support remote OTA for gateway
- Support remote OTA for inverter
- Support local setting parameters for inverter by smart phone
- Support remote setting parameters for inverter by smart phone
- Support data breakpoint resume
- Flame retardant grade: UL94 V-0
- UV protection rating: F1
- Degree of protection: IPX7



3. Order information

Table 3-1 order information

Part Number	Description
EESE-D200-00	DB9 interface, RS-232 communication, With Ethernet, With Wi-Fi



4. Pin and Size

4.1. RS-232 definition

Pin define as following Figure 4-1:

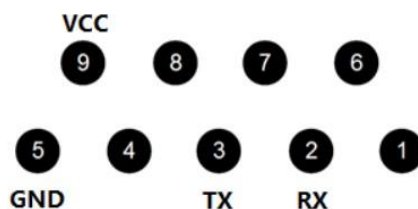


Figure 4-1 Pin define & layout

Table 4-1 pin information

Pin	Pin Name	Pin Type	Description
9	VCC	Power	DC 5V - 12V
5	GND	GND	Ground
3	TX	RS-232 TX	RS-232 send signal
2	RX	RS-232 RX	RS-232 receive signal

4.2. Size information

The size parameters of Turtledove are shown in Figure 4-2 and Figure 4-3, with unit mm.

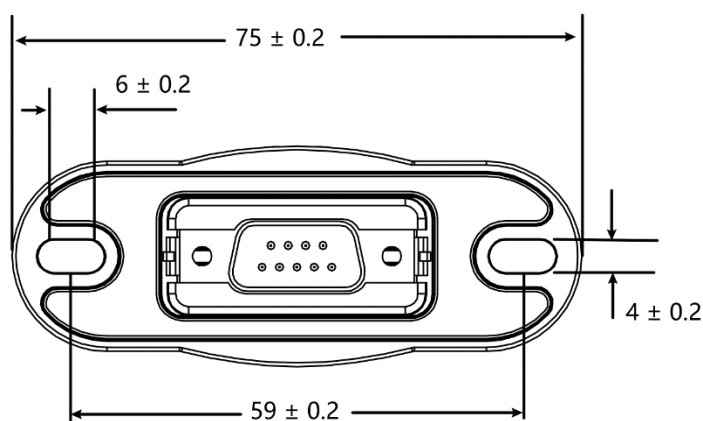


Figure 4-2 size information (Top view, unit: mm)

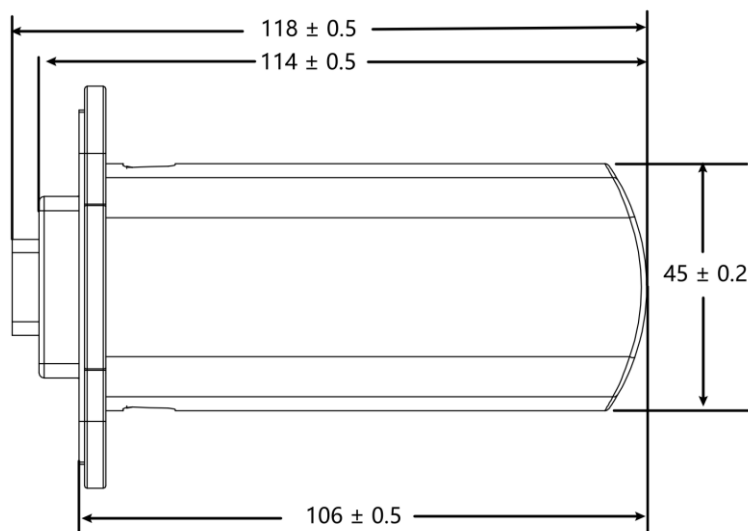


Figure 4-3 size information (Front view, unit: mm)



5. Electrical Characteristics

5.1. Absolute Maximum Ratings

Stresses beyond the absolute maximum ratings listed in the table below may cause permanent damage to the device. These are stress ratings only, and do not refer to the functional operation of the device.

Table 5-1 Absolute Maximum Ratings

Characteristics	Min	Max	Units
Power supply (IPC/JEDEC J-STD-020)	4.7	16.0	V
Operating temperature	-20	60	°C
Storage temperature	-45	95	°C

5.2. Wi-Fi Radio

Table 5-2 Wi-Fi Radio

Parameter	Condition	Min	Type	Max	Unit
Center frequency of operating channel	--	2412	-	2484	MHz
Output impedance *	--	-	50	-	Ω
RF transmit power	11n, MCS7	12	13	14	dBm
	11b mode	17.5	18.5	20	dBm
RX Sensitivity	11b, 1Mbps	-	-98	-	dBm
	11b, 11 Mbps	-	-89	-	dBm
	11g, 6 Mbps	-	-92	-	dBm
	11g, 54 Mbps	-	-74	-	dBm
	11n, HT20 , MCS0	-	-91	-	dBm
	11n, HT20 , MCS7	-	-71	-	dBm
	11n, HT40 , MCS0	-	-89	-	dBm
	11n, HT40 , MCS7	-	-69	-	dBm
RX Adjacent Channel Rejection	11g, 6 Mbps	-	31	-	dB
	11g, 54 Mbps	-	14	-	dB
	11n, HT20 , MCS0	-	31	-	dB
	11n, HT20 , MCS7	-	13	-	dB



6. Specification

Table 6-1 specification

Electrical Characteristics	
Power Supply	DC 5V – 12V
Current consumption	Max. 500mA; Avg. 100mA
Wi-Fi	
Standard	802.11 b/g/n
Security	WPA/WPA2/WPA2 /WPS
Work mode	Station/AP/Station + AP
Others	802.11 n(2.4 GHz), up to 150Mbps
Ethernet	
Speed	10Mbps/100Mbps
Interface	
Physical	DB9
Electrical	RS-232
Parameters	9600bps 8/N/1 (Default)
Antenna	
Wi-Fi	Built-in
LED indication	
DEV	Communication with inverter indication
NET	Communication with cloud platform indication
Mechanical parameters	
Size	118.0 x 75.0 x 29.0 mm (without package)
Weight	About 63g
Installation	Plug and dial
Environment	
Operating temperature range	-20°C -- +60°C
Relative humidity (no condensation)	0% -- 100%
Others	
Degree of protection	IPX7 (After installed)
Flame retardant grade	UL94 V-0
UV protection rating	F1