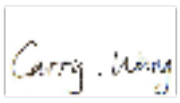
Customer Code :

DATASHEET

DAPU P/N:**CC107C-D128-10.00MHz**

Customer P/N:

DAPU			Customer Approval
Drew	Audited	Approved	
			
Date: 2018.1.30			Stamp, please! Thanks!

Guangdong Dapu Telecom TechnologyCo.,Ltd

Bldg13-16,.N.Ind.Zone,SSL Industry Park,DongguanCity, Guangdong Province, China

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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	Carry wang	2018.1.30

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1. Description

The CC107C-D128-10.00MHz is a high holdover performance, high integration clock module with advanced compensation algorithm. It can achieve better than 1E-12 frequency stability and ±1.5usholdover capabilityover 24 hours.

The CC107C-D128-10.00MHz provides messages to improve the reliability and maintainability of the network.

The CC107C-D128-10.00MHzhas a built-in GNSS Receiver as the timing reference.

2. Features

- Built-in GNSS receiver, GPS/GLONASS/BeiDou/QZSS supported.
- Timing accuracy ≤20ns.
- Better than 1.5us over 24hour@±5℃ variation without SyncE.
- Reference clock could be derived from GNSS or configured as SyncE.
- Firmware could be updated remotely.
- Operation temperature -40ºC~85ºC.

3. Pin Definition

3.1. SMA Connector

A SMA-KWE connector is placed on the top of the PCB for GNSS RF input.

3.2. Connector between Timing Card and PTP Card

A connector, 61083-064402LF,is the interface between the clock cared and main board, placed on the bottom of the PCB. The pin definition of the connector is as table 1.

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PIN	ROW1	I/O	ROW2	I/O	PIN
1	VCC5V0	I	VCC5V0	I	2
3	GND	-	GND	-	4
5	1PPS_OUT	O	VCC5V0	I	6
7	TOD_OUT	O	GND	-	8
9	GND	-	INT	O	10
11	GND	-	RESERVED3	I/O	12
13	TXD1	O	GND	-	14
15	TXD2	O	GND	-	16
17	GND	-	RXD1	I	18
19	GND	-	RXD2	I	20
21	10M-1	O	GND	-	22
23	GND	-	GND	-	24
25	GND	-	SYNCE CLOCK	I	26
27	GND	-	GND	-	28
29	LOCK	O	10M-2	O	30
31	LOCK_DISABLE/ENABLE	I	GND	-	32
33	GND	-	TIMING_CARD_TYPE	O	34
35	GND	-	TIMING_ONLINE	O	36
37	NC	I	GND	-	38
39	NC	I	GND	-	40
41	GND	-	NC	I	42
43	GND	-	NC	I	44
45	NC	I	GND	-	46
47	NC	I	GND	-	48
49	GND	-	NC	O	50
51	GND	-	NC	O	52
53	RESET	I	GND	-	54
55	RESERVED1	I/O	RESERVED2	I/O	56
57	GND	-	GND	-	58
59	VCC5V0	I	VCC5V0	I	60

Table 1 Pin Definition of connector P9

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4. Electrical Characteristics

GNNS timing modules Input	Parameters	Min.	Typ.	Max.	Unit.	Test Condition
	Connector	SMA-KWE				
Supply Voltage	Parameters	Min.	Typ.	Max.	Unit.	Test Condition
	Supply Voltage	4.75	5.0	5.25	V	
	Current Consumption			3000	mA	
	Steady Consumption		900		mA	During steady state operation @25℃
	Connector	Refer to Table 1				
1 PPS Output	Parameters	Min.	Typ.	Max.	Unit.	Test Condition
	Waveform	HCMOS				
	High-Level Output Voltage(V_{OH})	2.7			V	
	Low-level Output voltage (V_{OL})			0.4	V	
	Pulse Width	0.1	100	400	ms	
	Phase accuracy	-20		20	ns	
	Connector	Refer to Table 1				
TOD	Parameters	Min.	Typ.	Max.	Unit.	Test Condition
	Waveform	HCMOS				
	High-Level Output Voltage(V_{OH})	2.7			V	
	Low-level Output voltage (V_{OL})			0.4	V	
	Connector	Refer to Table 1				
10MHz Output	Parameters	Min.	Typ.	Max.	Unit.	Test Condition
	Waveform	HCMOS				
	High-Level Output Voltage(V_{OH})	2.7			V	
	Low-level Output voltage (V_{OL})			0.4	V	

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	Duty Cycle	45	50	55	%	
	Connector	Refer to Table 1				

	Parameters	Min.	Typ.	Max.	Unit.	Test Condition
Serial Interfaces	Rx high-level Input Voltage (VH)	2.7			V	
	Rx low-level Input Voltage (VL)			0.4	V	
	Tx high-level Output Voltage(VH)	2.7			V	
	Tx low-level Output Voltage (VL)			0.4	V	
	Serial Protocol	115200-N-8-1				
	Connector	Refer to Table 1				

	Parameters	Min.	Typ.	Max.	Unit.	Test Condition
Interrupt	High-Level Output Voltage(V_{OH})	2.7			V	
	Low-level Output voltage (V_{OL})			0.4	V	
	Signal indication	High:Active Low:Passive				
	Connector	Refer to Table 1				

	Parameters	Min.	Typ.	Max.	Unit.	Test Condition
TimingCard Online	High-Level Output Voltage(V_{OH})	2.7			V	
	Low-level Output voltage (V_{OL})			0.4	V	
	Signal indication	High:Absent Low:Present				
	Connector	Refer to Table 1				

	Parameters	Min.	Typ.	Max.	Unit.	
Reset	High-LevelOutput Voltage(V_{OH})	2.7			V	
	Low-level Output voltage (V_{OL})			0.4	V	
	Signal indication	Low:Active				
	Connector	Refer to Table 1				

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Lock Signal Output	Parameters	Min.	Typ.	Max	Unit.	Test Condition
	High-Level Output Voltage(V_{OH})	2.7			V	
	Low-level Output voltage (V_{OL})			0.4	V	
	Connector	Refer to Table 1				
Lock Disable/Enable Signal Input	Parameters	Min.	Typ.	Max	Unit.	
	High-Level Output Voltage(V_{OH})	2.7			V	
	Low-level Output voltage (V_{OL})			0.4	V	
	Signal indication	High: Lock Enable Low: Lock Disable				
	Connector	Refer to Table 1				
Timing Card Type Signal Output	Parameters	Min.	Typ.	Max	Unit.	
	High-Level Output Voltage(V_{OH})	2.7			V	
	Low-level Output voltage (V_{OL})			0.4	V	
	Signal indication	High: Timing Processing Card Low: Timing Card				
	Connector	Refer to Table 1				
SyncE Clock Signal Input	Parameters	Min.	Typ.	Max	Unit.	
	High-Leveloutput Voltage(V_{OH})	2.7			V	
	Low-level Output voltage (V_{OL})			0.4	V	
	Frequency	10MHz				
	Connector	Refer to Table 1				
Power LED Indication	Parameters	Description				
	Color	Green				
	Status	OFF: The system 5V power off ON : The system 5V power on				
	PCB silk-screen	D2				
Clock LED Indication	Parameters	Description				
	Color	Green				

	Status	OFF: Free Run ON: Hold Over Once per second: Locked Three times per second: Fast Capture
	PCB silk-screen	D3

Table 2 Electrical Characteristics

5. Software Description

The CC107C-D128-10.00MHz is customized for UTStarcom, has a UART interface to communicate with the mainboard. The protocol and message follow "GM30SoftwareInterfaceSpecification" from UTStarcom.

6. Inventory information

The inventory information is defined as

Name	DataType	Value Range	Prefix	Example Value	Description
Module Name	String	size:30	NAME:	Timing card	Module Name
Manufacture Factory Information	String	size:10	FAC:	DAPU	Manufactory ID
Manufacture Date	String	Size:10	DATE:	2016/01/02	Manufacture Date
MPN	String	size:32	PN:	2424446805	Part No.
Serial Number	String	size:16	SN:	1012010010603132	Serial No. first three bytes: Manufactory ID the following eight bytes:date the rest of bytes: manufactory part no
HWVersion	String	size:32	VER:	B2	Hardware Version
FWVersion	String	size:32	VER:	B2	Firmware Version
SWVersion	String	size:32	VER:	B2	Software Version

Table 3 Inventory Information

7. Mechanical Structure(mm)

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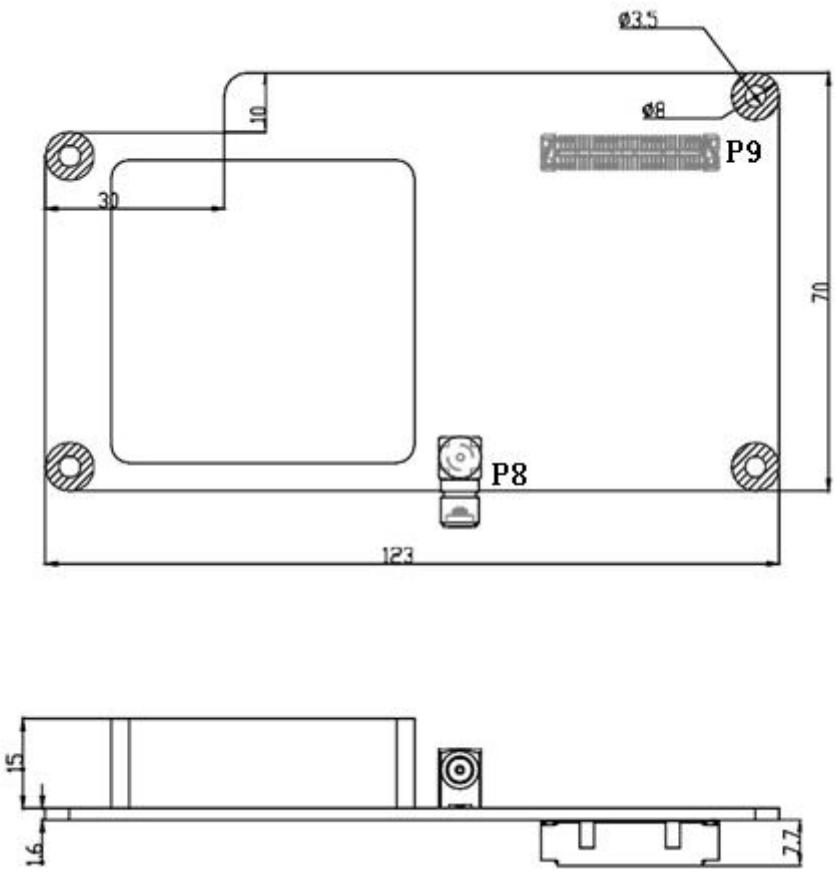

Note1: Tolerance ± 1.0mm