

PRODUCT SPECIFICATION

Model No.:DTM-712 EU

Description: Mini Mobile DVB-T Module with 2 T-NIM Diversity

Feature:

- Use DiBcom did9090M high performance NIM chip with diversity structure
- Speed over 230km/h min (at 8k, 64QAM,CR2/3.GI1/8,474MHz)
- High Doppler effect correction
- Provide antenna power supply function for pair use with mobile active antenna
- Stores Over 1000 TV & radio programs
- Channel list editing
- Favorite channel list editing
- Support USB Interface
- PIG (Picture in Graphic) support
- video /YC output
- On screen channel information
- USB supports p3/mp4(avi/mpg/dat/vob)/jpeg
- OSD Teletext (DVB ETS 300 706) and subtitle function support (EU model)
- VBI Teletext support (EU model)
- Fast scan for high speed driving and cross difference area
- Wide DC power input

1. Technical Specification

Tuner:

RF Input	UHF: 470 MHz ~ 862MHz VHF: 174 MHz ~ 230MHz
Input Impedance	75Ω
Signal Level	-78.5dBm ~ -25dBm
Connector Type	F type terminal x 2
Channel Band Width	6M/7M/8M

Demodulation

Standard	DVB-T EN300 744
Constellation	QPSK , 16QAM, 64QAM
Guard Interval	1/32,1/16,1/8.1/4
FEC	1/2,2/3,3/4,5/6,7/8
COFDM Carrier Mode	2K And 8k Non Hierarchical /Hierarchical

Video Decoder

Standard	MPEG-2 MP@ML
Transport Stream	ISO/IEC 13818-1 MPEG-2
Video Aspect Ratio	4.3 /16.9
Video System	PAL / NTSC
Video Output	1 ± 0.3Vpp
Video Resolution	750*576@25fps/720*480@30fps

Audio Decoder

Standard	ISO/IEC 11172-3
Audio Decoder	MPEG-1/2 Layer I And II

Audio Channel	R/L/ST
Audio Output	1Vpp 47Kohm Adjustable With E Volume

Connector:

CN102 (GENERAL I/O)

NO	I/O	NAME	DESCRIPTION
1	I	+7-12V IN	DC +7-12V Input
2	-	GND	Ground
3	O	C	C of YC (S-VIDEO) 0.3Vpp 75 ohm load
4	O	Y	Y of YC (S-VIDEO) 1Vpp 75 ohm load
5	O	CVBS	Video Output 1Vpp 75 ohm load
6	-	GND	Ground
7	O	L out	Audio Output L Channel
8	O	R out	Audio Output R Channel
9	-	GND	Ground
10	-	GND	Ground
11		IR(IN)	Remote Command Input
12	I/O	RX	UART / RS-232 input
13	I/O	TX	
14	I/O	SCL	I2C Clock
15	I/O	SDA	I2C Data

CN103 (USB I/O)

NO	I/O	NAME	DESCRIPTION
1	I	+5V IN	DC +5 Input
2	i/o	D -	USB D-
3	i/o	D+	USB D+
4	-	GND	GND

CN104 (SD CARD I/O)

NO	NAME	DESCRIPTION
1	GND	
2	SD WP	
3	R MS CLK	
4	R MS BS	
5	GND	
6	R MS D0	
7	R MS D1	
8	R MS D2	
9	GND	

10	GND	
11	R MS D3	
12	MS INS	
13	SD CD	
14	CARD RST	
15	+3.3V	
16	GND	

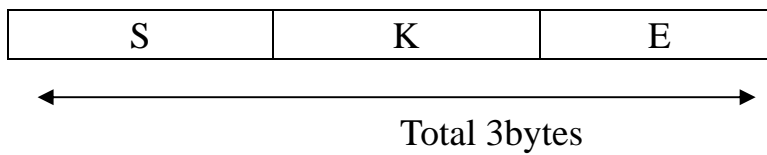
General:

MPEG II Chip	SUNPLUS 1002 With 32bit RISC ARC CPU 108MHz
Flash Memory	8 Mega bit
SDRAM	64 Mega bit
Operating Temperature	-10°C ~ +70 °C
Storage Temperature:	-20°C ~ +80°C
Power Supply	DC +7V ~12V ±10%
Power Consumption	Running : 3.8W Max , Standby :2W Max
Dimension	40(L)*80(W)*12(H) mm
Weight	N.W.: 51g±10%

2. UART COMMUNICATION SPEC

UART Configure	
Baud rate	115.2/57.6Kbps
Data Bit	8bits
Stop Bit	1bit
Parity Bit	none

Communication Protocol



S: start code_1byte

K: key data (hex_1byte)

E: end_1byte

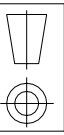
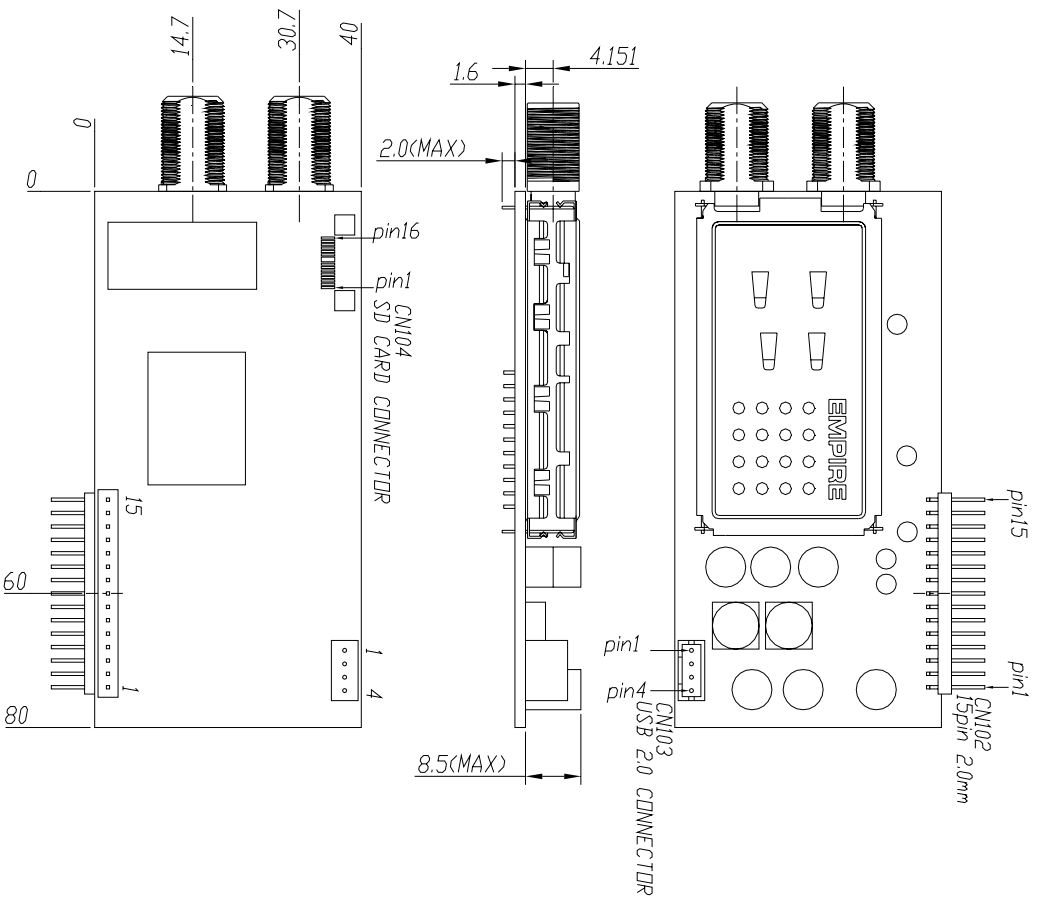
ex) Menu Key select->hex data: A5852A

S=0xA5, K=0x85, E=0x2A

Basic R/C Key Data		
Item NO.	R/C Key Description	Value
1	Power on	0X8A
2	Mute	0X8C
3	0	0X90
4	1	0X91
5	2	0X92
6	3	0X93
7	4	0X94
8	5	0X95
9	6	0X96
10	7	0X97
11	8	0X98
12	9	0X99
13	CH up/up	0X80
14	CH down/ down	0X81
15	Vol. Down/left	0X83
16	Vol. Up/right	0X82
17	Page up	0X9C
18	Page down	0X9D
20	Menu	0X85

21	Exit	0X87
22	Info	0X89
23	EPG	0X9B
24	TV/AV	0XC0
25	TELETEXT	0X8E
26	Subtitle	0XC4
27	Favorite/red	0X84
28	TV-Radio/green	0X8B
29	Back/yellow	0X88
30	Pause/blue	0X86
31	Audio language	0X9E
32	Fast scan	0X9A

3. Dimension



CN104		CN102	
No.	NAME	No.	NAME
1	GND	1	+7~12V
2	SD WP	2	GND
3	R MS CLK	3	C
4	R MS BS	4	Y
5	GND		
6	R MS D0		
7	R MS D1		
8	R MS D2	5	CVBS
9	GND	6	GND
10	GND	7	L DUT
11	R MS D3	8	R DUT
12	MS INS	9	GND
13	SD CD	10	GND
14	CARD RS	11	IR IN
15	+3.3V	12	RX
16	GND	13	TX
		14	SCL
		15	SDA
			I ² C Data

No.	NAME
1	+5V
2	DM
3	DP
4	GND

TOLERANCE			SUNSHINE (ZH) CO. LTD		
UNIT: MM	F	G	H	NAME: PCB	MODEL NO: DTM-712
< 8	±0.05	±0.10	±0.10	PART NO:	SCALE: FIT
< 8~25	±0.08	±0.15	±0.15	COLOR:	FINISH:
< 25~80	±0.12	±0.20	±0.25	MATERIAL:	DATE: 2008/2/1
< 80~250	±0.25	±0.30	±0.40	SHEET 1 OF 1	DRAWING NO:
< 250~800	±0.50	±0.60	±0.80	APPROVED:	CHECKED:
				DRAWN: HEHAD	REVISION: 00