

PS-MGPS-VME

High field reliability
 GPS Wireless Interlock Board
 for Korean Police Standard

FEATURES

General Features

- 12 Parallel GPS channel fast tracking.
- VME BUS Backplane Interface.
- GPS Baseband processor based on ARM7TDMI
- Dual Path DTE interface function.
(Via VME bus and RS232C Async. port.)
- Meets for korean police standard

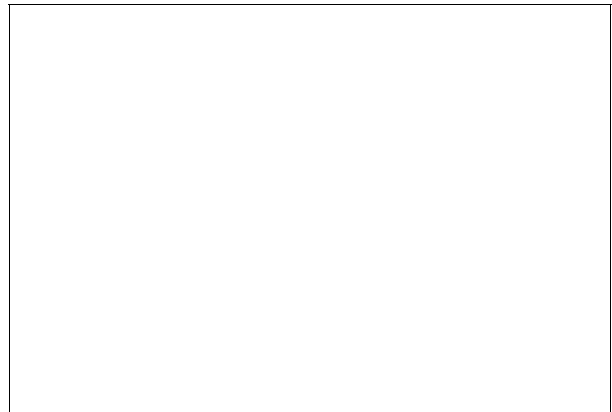
Special Features

- Cold Start under 45 seconds.
- Battery Backup-ed RTC included.
- Easy Install and easy monitoring feature.
- Superior urban canyon performance.
- Enclosure protected RF circuit for dust and moisture prevent.

SPECIFICATIONS

General Specifications

- GPS Tracking channel : 12ch-Parallel
- Sensitivity : -145 dBm
- Open area startup dly.: 45sec(Cold start)
: 30sec(Warm start)
- Backplane Interface : VME Bus.
- VME access AM code : 29h, 2Dh
29h : Short supervisory Access mode.
2Dh: Short non-privileged Access mode.
- Reacquisition Time : 0.1 sec typical.
- GPS Time Accuracy : 200ns , KMT
- Operating Power : +5V/400mA (typ.)
- Operating Temperature: -34°C ~ +74°C
- Operating Humidity : 95% (max.)



BUS Interface Specifications

- VME bus interface
: 16bit short I/O mode
(AM code 29h/2Dh)
- Base Address
: Option Slot #1 (ID Setting : 8)
; FFFF0100h - FFFF02FFh
: Option Slot #2 (ID Setting : 9)
; FFFF0300h - FFFF04FFh
- DTACK delay
: 180ns - 350ns

RESET Sources

- Face Plate Reset Push-button
- Watch-dog circuit timeout (self reset)

I/O Map Specifications

- RD :Start address : FFFF0100h/FFFF0300h

ADDRESS	DATA	REMARK
FFFF0100/FFFF0300	Device	01h:GPS Board
FFFF0101/FFFF0301	GPS Flag	01h:Set 00h:Not set
FFFF0102/FFFF0302	GPS Count-L	00h(L)/00h(H) :not valid
FFFF0103/FFFF0303	GPS Count-H	ex) 8 sat. valid 08h(L)/00h(H)
FFFF0104/FFFF0304	Hour-L	ex) 23hour: 03h(L)/02h(H)
FFFF0105/FFFF0305	Hour-H	
FFFF0106/FFFF0306	Min-L	ex) 48min: 08h(L)/04h(H)
FFFF0107/FFFF0307	Min-H	
FFFF0108/FFFF0308	Sec-L	ex) 59sec: 09h(L)/05h(H)
FFFF0109/FFFF0309	Sec-H	
FFFF010A/FFFF030A	Day-L	ex) 31th: 01h(L)/03h(H)
FFFF010B/FFFF030B	Day-H	
FFFF010C/FFFF030C	Month-L	ex) December: 02h(L)/01h(H)
FFFF010D/FFFF030D	Month-H	
FFFF010E/FFFF030E	Year-L	ex) 2006: 06h(L)/20h(H)
FFFF010F/FFFF030F	Year-H	

- GPS COUNT-H BYTE의 b3는 NEW-SEC FLAG.(0.5초 ON)
NEW-SEC FLAG가 1일 때 DATA를 읽어 낼 것을 권고함.

DIP SWITCH configuration

- DSW1 (RS232 Port Function Select)

SWITCH ID		REMARK
8BIT DIP SW.	(L)10001000(R)	Police Stand. DCE
	(L)10000001(R)	Police Stand. DTE
	(L)00110011(R)	NMEA-1803-DCE (F.Set) (GPS Satellite monitoring software interface ftn. female—direct—female RS232 cable required.)
	(L)00111100(R)	NMEA-1803-DTE

* 0: SW OFF , 1: SW ON

- DSW2 (RS232 Port Speed Select)

SWITCH ID		REMARK
2BIT DIP SW.	(L)00(R)	(2400bps)
	(L)01(R)	9600bps (Factory Setting)
	(L)10(R)	(19200bps)
	(L)11(R)	(38400bps)

* 0: SW OFF , 1: SW ON

SIO pin configuration

- SIO Connector (9P Male RS232 Conn.)

SWITCH ID	FTN	REMARK
UT9Pin Male RS232 Conn.	1	-
	2	RXD
	3	TXD
	4	-
	5	GND
	6	-
	7	-
	8	-
	9	-

ID switch description

ID setting	BASE ADDR	REMARK
10 STAGE	0	FFFF0000H -
	1	FFFF0020H -
	2	FFFF0040H -
	3	FFFF0060H -
BINARY ROTARY SWITCH	4	FFFF0080H -
	5	FFFF00A0H -
	6	FFFF00C0H -
	7	FFFF00E0H -
	8	FFFF0100H Option SLOT #1
	9	FFFF0300H Option SLOT #2
REMARK	No physical slot position restriction.	

Display function description

- TIME (2-DIGIT 7-Segment)

Display Sequence (A>B>C>D Rolling)		Display Contents
TIME 7-SEG	stage A	Hour (00~23)
	stage B	Min (00~59)
	stage C	Sec (00~59)
	stage D	(display off)

* Each stage display delay : 1 sec. (typ.)

- S-CNT (1-DIGIT 7-Segment)

		Display Contents
S-CNT 7-SEG	01~12 Satellite Valid	1~9/A(10)/B(11)/C(12)
	NO Satellite Valid	[F] Display

Police Standard Mode SIO Protocol

BYTE	DATA	REMARK
1	STX1	7Eh
2	STX2	7Eh
3	LEN	13h
4	DEV ID.	F0h
5	DEV TYPE	01h (GPS)
6	Hour	00h~23h
7	Min	00h~59h
8	Sec	00h~59h
9	Year-H	ex) 2006:
10	Year-L	20h(H)/06h(L)
11	Month	01h~12h
12	Day	01h~31h
13	GPS Flag	00h : not set 01h : set
14	SCNT	00h : non gps others : valid sat. cnt
15	LRC	XOR (LEN~SCNT)

* DATA TYPE IS BASED ON BCD.

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