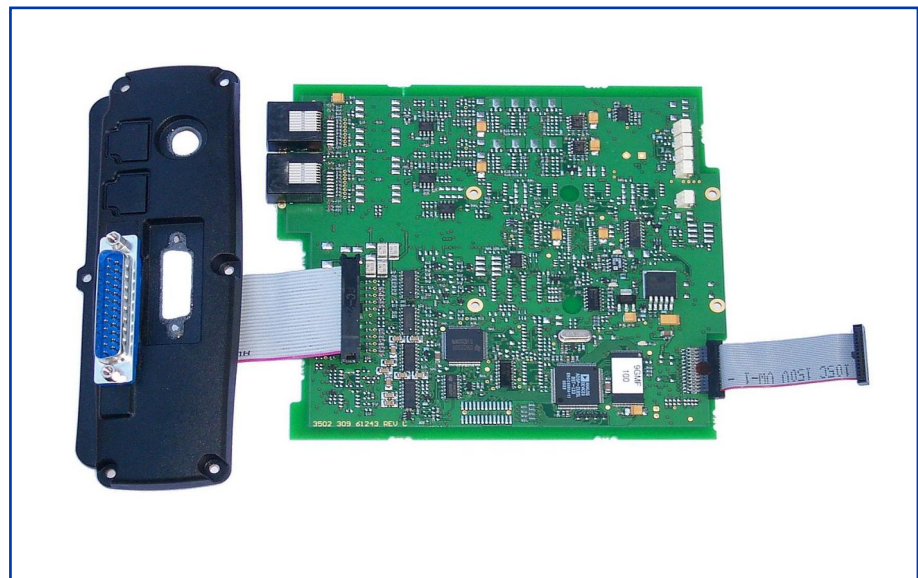


DSP CONTROLLED MULTI I/O PCB

The MA-DMAP board extends the SRM9000 radio series into new application areas, by providing extensive control over radio functionality and external interfaces. The MA-DMAP is fitted with a number of audio, serial and digital I/O ports, which can be configured to suit a wide variety of mobile radio applications. The board is also designed to accept and interface to a GPS receiver module.

The board's DSP processor also provides a 'C' programming environment, and together with our supplied C application modules, allows for easy development of specific applications by end users.



The MA-DMAP kit

- Fits into the existing options slot inside the SRM9000 chassis
- Allows Dual-Control-Head operation
- Allows Dual-Transceiver operation
- 8 digital I/O ports
- 2 serial I/O ports, RS232, RS485 or TTL
- 2 Audio channels, with 2 or 4-wire E&M ports
- Includes connector and interface for GPS option
- DSP controlled for maximum flexibility
- Customisable software application modules available

FREQUENTLY ASKED QUESTIONS

What Radios support the MA DMAP?

PMR and Trunk versions of either: SRM9005 / 9010 / 9020 / 9025 / 9030.

What Interfaces are available?

The MA-DMAP has two async serial ports (RS232 levels on DB25 and 0/5V levels on RJ45 connectors) capable of speeds up to 38.4k baud. There is an 8-bit input/output port for parallel I/O. The board can also be fitted with an optional GPS receiver. In addition the board is also capable of being fitted with a dual-CODEC for audio I/O and processing.

Pin	DB25 Function	Pin	DB25 Function
1	GND (Supply)	16	RS232 TxD2 *3
2	RS232 TxD1 *1	17	RS232 RxD2 *4
3	RS232 RxD1 *2	18	Parallel IO #1
4	RS232 RTS1	19	Parallel IO #2
5	RS232 CTS1	20	RS323 DTR1 *5
6	RS232 DSR1 *5	21	Parallel IO #3
7	GND (Supply)	22	RS232 RING1 *5
8	RS232 DCD1 *5	23	Parallel IO #6
9	Parallel IO #4	24	Parallel IO #8
10	Parallel IO #5	25	Analog OUT #3
11	Parallel IO #7		NOTES:
12	Analog IN #3		*1 - these lines are driven by same signal.
13	+VE (Switched)		*2 - these lines have wire-OR function.
14	5V TxD1 *1		*3 - these lines are driven by same signal.
15	5V RxD1 *2		*4 - these lines have wire-OR function.
			*5 - not used or driven.

Pin	DB15 Function
1	GND (Supply)
2	GND (Supply)
3	Ignition Sense IP
4	+VE Supply
5	+ VE Supply
6	Speaker ve
7	Input #0
8	Output #0
9	GND (Supply)
10	GND (Supply)
11	+ VE Supply
12	+ VE Supply
13	Speaker +ve
14	Audio Input
15	Audio Output

Pin	Rear RJ-1 Function	Rear RJ-2 Function	Front RJ Function	Comment
1	Serial-1 TxData	Serial-2 TxData	TxData (Output)	0/5V levels
2	Serial-1 RxData	Serial-2 RxData	RxData (Input)	0/5V Levels
3	On/Off (Input)	On/Off (Input)	On/Off (Input)	Brief Low = toggle
4	Mic Ground	Mic Ground	Mic Ground	
5	Switched +13.8V	Switched +13.8V	Switched +13.8V	250mA max
6	Audio-1 Output	Audio-2 Output	Handset Audio	
7	GROUND	GROUND	GROUND	
8	Audio-1 Input	Audio-2 Input	Mic Audio (Input)	

Where do I get my Application Software?

If you wish to carry out your own development and produce your own applications, the MA-DMAP board DSP processor can be programmed in 'C'. Please refer to "Development Environment Documentation" GPIF User Application Environment Version 1, available on the TMC website.

The following applications have been proven and tested to extend the capabilities of your SRM9000 series of radios, and are available from the TMC website.

Application Note A9k-505 - Serial and Parallel input/output. This capability gives serial control of the radio. Parallel I/O lines allow the radio to be custom set with special software. The programmer can also set and clear specific radio actions or control the radio by initiating status and selcall sends.

Application note A9k-811- Dual control heads connected to one radio transceiver.

Application note A9k-821- Dual transceivers sharing a common control head.

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