

SD and SDHC Cards supported by the MID:COM 8000

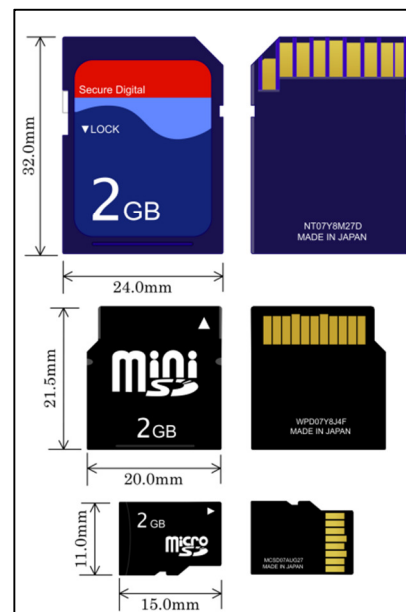
The MID:COM 8000 supports only SD Cards or only SDHC Cards, it does not support both in the same system. The specific type of card supported by a particular system depends on several factors including the 8000 CPU Module Version and the 8000 Main Software Version.

Secure Digital Formats

- 1) **SD** Standard-Capacity (*ok, depending on Main .. see below*)
- 2) **SDHC** High-Capacity (*ok, depending on Main .. see below*)
- 3) **SDXC** eXtended-Capacity (*not supported*)
- 4) **SDIO** (*not supported, combines I/O and data storage*)

Form Factor (see illustration)

- “**original**” size SD/SDHC (*ok, depending on Main .. see below*)
- “**mini**” size (*not supported directly, may be supported in an SD adapter*)
- “**micro**” size (*not supported directly, may be supported in an SD adapter*)



Capacity

- **SD** = 1 MB to 2 GB (*ok, depending on Main .. see below*)
- **SDHC** = 4 GB to 32 GB (*ok, depending on Main .. see below*)
- **SDXC** = 32 GB to 2 TB (*SDXC not supported*)

Midcom 8000 Main Software Versions and Cards Supported

Main Version	Supported	Type	Manufacturer	Capacity	Speed Class	CPU Module
SM82D	YES	SD	SanDisk	2 GB or less	"blank"	Green PCB
SM82D	YES	SD	SanDisk	2 GB or less	"blank"	Black PCB
SM82D	NO	SDHC				
SM82D	NO		other brands			
SM82D	NO				any #	
SM82D	NO					CyberCard
Main Version	Supported	Type	Manufacturer	Capacity	Speed Class	CPU Module
M482D	YES	SD	most brands	2 GB or less	none, 2, 4	Green PCB
M482D	NO	SDHC				
M482D	NO				faster than 4	
M482D	NO					Black PCB
M482D	NO					CyberCard
Main Version	Supported	Type	Manufacturer	Capacity	Speed Class	CPU Module
HCM582E	YES	SDHC	most brands	4 GB or more	up to 10	Green PCB
HCM582E	NO	SD				
HCM582E	MAYBE				faster than 10	
HCM582E	NO					Black PCB
HCM582E	NO					CyberCard

UPGRADING THE MID:COM 8000 TO SUPPORT SD CARDS WITH SPEED CLASS 2 or 4

In order to support the newer SanDisk SD Cards with Speed Class 2 or Speed Class 4, the Main SIP Stick must be replaced. The new Main Sip Stick must be programmed with M482D software (which cannot be done internally in the MID:COM 8000).

UPGRADING THE MID:COM 8000 TO SUPPORT SDHC CARDS

In order to support the newer SDHC Cards, the Main SIP Stick must be replaced. The new Main Sip Stick must be programmed with HCM582E software (which cannot be done internally in the MID:COM 8000).

MID:COM 8000 HARDWARE/SOFTWARE SD/SDHC MEDIA COMBINATIONS

1) IF YOUR CPU HAS THE BLACK ADAPTER

- A) Keep looking for SanDisk brand SD cards 2GB or smaller
- B) Update your CPU to the green adapter (See option 3)

2) IF YOUR CPU HAS THE GREEN ADAPTER

- A) Update your MAIN sipstick to M482D software (707-0027 *Specify M482D Software*)
 - i. This will allow you to use any brand of SD card as long as it is still just an SD card and is 2GB or smaller
- B) Update your MAIN sipstick to HCM582E software (707-0027 *Specify HCM582E Software*)
 - i. This will allow you to use SDHC cards and any brand of SDHC card as long as they are SDHC cards and not SD cards
 - ii. ***Note: SD cards will no longer work with this software***

3) IF YOU ARE BUYING A NEW CPU WITH GREEN ADAPTER TO REPLACE YOUR OLD CPU WITH BLACK ADAPTER

- A) Order your CPU with the MAIN software of M482D (707-0007SD)
 - i. This will allow you to use any brand of SD card as long as it is still just an SD card and is 2GB or smaller
- B) Order your CPU with the MAIN software of HCM582E (707-0007SDHC)
 - i. This will allow you to use SDHC cards and any brand of SDHC card as long as they are SDHC cards and not SD cards
 - ii. ***Note: SD cards will no longer work with this software***

4) IF YOUR CPU HAS THE CYBERCARD SLOT

- A) Order your CPU upgrade kit with the MAIN software of M482D (708-0056)
 - i. This will allow you to use any brand of SD card as long as it is still just an SD card and is 2GB or smaller
- B) Order your CPU upgrade kit with the MAIN software of HCM582E (708-0056SDHC)
 - i. This will allow you to use SDHC cards and any brand of SDHC card as long as they are SDHC cards and not SD cards
 - ii. ***Note: SD cards will no longer work with this software***

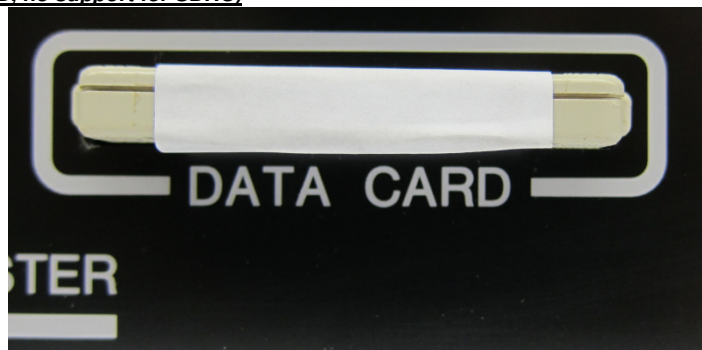
5) IF YOU ARE ORDERING AN 8000 AND CURRENTLY DO NOT USE 8000'S

- A) Buy an E:Count + RoadWarrior instead

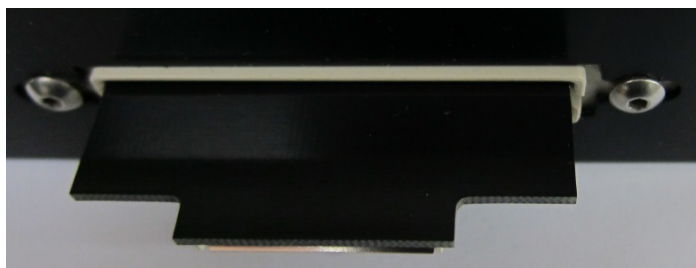
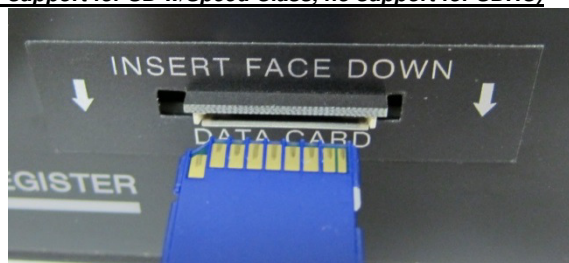
6) IF YOU ARE ORDERING AN 8000 BECAUSE YOU CURRENTLY HAVE 8000'S

- A) Order your system with either SD (for the M482D software) or SDHC (for the HCM582E software) at the end of the part number

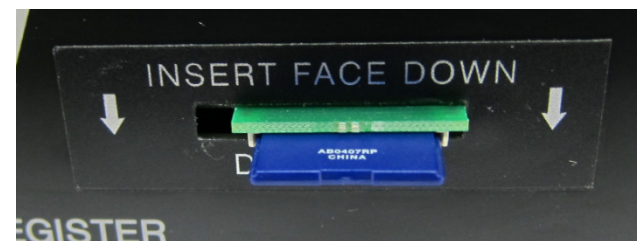
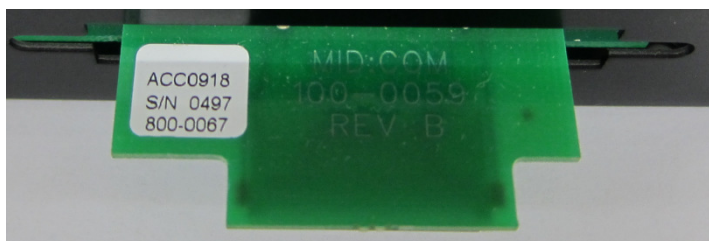
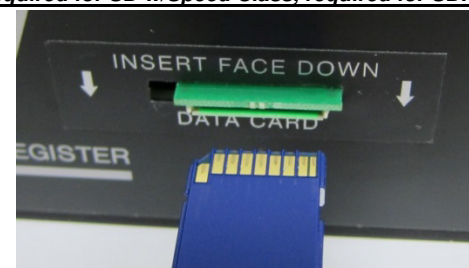
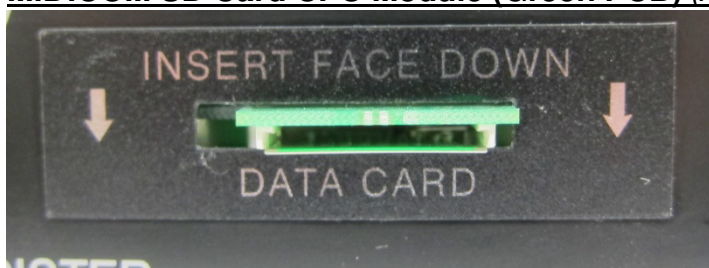
MID:COM CyberCard CPU Module *(no support for SD, no support for SDHC)*



MID:COM SD Card CPU Module (Black PCB) *(no support for SD w/Speed Class, no support for SDHC)*



MID:COM SD Card CPU Module (Green PCB) *(required for SD w/Speed Class, required for SDHC)*



Manufacturer

- **SD Cards**
 - **SM82D** requires cards made by **SanDisk** due to the high quality control at **SanDisk**.
 - **M482D** offers improved support for non-compliant SD Cards and allows the use of other manufacturers media.
- **SDHC Cards**
 - Using **HCM582E** MID:COM has tested the SDHC functions with many manufacturer's' media, we recommend that a national brand be used.
- **Other Manufacturers' cards may unofficially be supported depending on the particular card and other factors.**
 - If there is a question about a specific brand or model send us a sample and we will test it.

Logos



Official SD Logo



Official SDHC logo



Official SDXC logo *(not supported)*

Speed Class





A card's speed is measured by how quickly information can be read from, or written to, the card. In applications that require sustained write throughput, such as video recording, the device might not perform satisfactorily if the SD card's class rating falls below a particular speed. For example, a high-definition camcorder may require a card of not less than Class 6, suffering dropouts or corrupted video if a slower card is used. Digital cameras with slow cards may take a noticeable time after taking a photograph before being ready for the next, while the camera writes the first picture.

The newer families of SD cards improve card speed by increasing the bus rate (the frequency of the clock signal that strobes information into and out of the card). Whatever the bus rate, the card can signal to the host that it is "busy" until a read or a write operation is complete. Compliance with a higher speed rating is a guarantee that the card limits its use of the "busy" indication.










MID:COM 8000 Speed Classes Supported

- **SD Card CPU Modules Shipped Before 7/8/2009:**
 - CPU Modules were shipped with 8000 Main Software Version *SM82D*.
 - ***SM82D supports only SanDisk-brand SD cards with no 'Speed Class'.***
- **SD Card CPU Modules Shipped After 7/8/2009 but Before 5/1/2013:**
 - CPU Modules were shipped with 8000 Main Software Version *M482D*.
 - ***M482D supports only SD cards with Speed Class 2, 4, or no 'Speed Class'.***
- **SDHC Card CPU Modules Shipped After 5/1/2013:**
 - CPU Modules were shipped with 8000 Main Software Version *HCM582E*.
 - ***HCM582E supports only SDHC cards.***










SD Speeds, Rating, and Speed Class

Rating	Speed (MB/s)	Speed Class	Main Software Versions	Class
6x	0.9	n/a	Supported by SM82D, M482D, HCM582E	 Class 2
10x	1.5	n/a	Supported by SM82D, M482D, HCM582E	 Class 4
13x	2.0	2	Supported by M482D, HCM582E	 Class 6
26x	4.0	4	Supported by M482D, HCM582E	 Class 10
40x	6.0	6	Supported by HCM582E only	
100x	14.6	10	Supported by HCM582E only	

SAMPLE IMAGES OF SUPPORTED and UNSUPPORTED CARDS

Image	Description	SM82D	M482D	HCM582E
	Standard SD Card No Speed Class 2 Gigabyte Capacity	YES	YES	NO <i>(not SDHC)</i>
	Ultra II SD Card No Speed Class 2 Gigabyte Capacity	YES	YES	NO <i>(not SDHC)</i>
	Standard SD Card Speed Class 2 2 Gigabyte Capacity	NO <i>(Invalid Speed Class)</i>	YES	NO <i>(not SDHC)</i>
	Standard SD Card No Speed Class 2 Gigabyte Capacity	NO <i>(Not SanDisk brand)</i>	YES	NO <i>(not SDHC)</i>
 	Standard SD Card (microSD in SD Adapter) No Speed Class 2 Gigabyte Capacity	NO <i>(Not SanDisk brand)</i>	YES	NO <i>(not SDHC)</i>
	Standard SD Card No Speed Class 2 Gigabyte Capacity	NO <i>(Not SanDisk brand)</i>	YES	NO <i>(not SDHC)</i>
 	Standard SD Card (microSD in SD Adapter) No Speed Class 2 Gigabyte Capacity	NO <i>(Not SanDisk brand)</i>	YES	NO <i>(not SDHC)</i>

(continued)

Image	Description	SM82D	M482D	HCM582E
Notice that the following cards are ALL SDHC cards - look closely at the logo and the name.				
	Standard SDHC Card Speed Class 2 4 Gigabyte Capacity	NO (Invalid Speed Class) (Non-SD Card) (Invalid Capacity)	NO (Non-SD Card) (Invalid Capacity)	YES
	Ultra-II SDHC Card Speed Class 4 8 Gigabyte Capacity	NO (Invalid Speed Class) (Non-SD Card) (Invalid Capacity)	NO (Invalid Speed Class) (Non-SD Card) (Invalid Capacity)	YES
	Extreme-III SDHC Card Speed Class 6 8 Gigabyte Capacity	NO (Invalid Speed Class) (Non-SD Card) (Invalid Capacity)	NO (Invalid Speed Class) (Non-SD Card) (Invalid Capacity)	YES
	HD Video SDHC Card Speed Class 16 32 Gigabyte Capacity	NO (Invalid Speed Class) (Non-SD Card) (Invalid Capacity)	NO (Invalid Speed Class) (Non-SD Card) (Invalid Capacity)	NO (Invalid Speed Class)
	Ultra micro-SDXC Card 64 Gigabyte Capacity	NO (Invalid Type) (Non-SD Card)	NO (Invalid Type) (Non-SD Card)	NO (Invalid Type) (Non-SDHC Card)
	Memory Stick Pro Duo 16 Gigabyte Capacity	NO (Invalid Type) (Non-SD Card)	NO (Invalid Type) (Non-SD Card)	NO (Invalid Type) (Non-SDHC Card)
	XD Picture Card 512 Megabyte Capacity	NO (Invalid Type) (Non-SD Card)	NO (Invalid Type) (Non-SD Card)	NO (Invalid Type) (Non-SDHC Card)
	Micro SD Card 64 Megabyte Capacity	NO (Invalid Type) (Non-SD Card)	NO (Invalid Type) (Non-SD Card)	NO (Invalid Type) (Non-SDHC Card)
	Memory Stick Micro 16 Gigabyte Capacity	NO (Invalid Type) (Non-SD Card)	NO (Invalid Type) (Non-SD Card)	NO (Invalid Type) (Non-SDHC Card)

SDHC Cards Tested

All of these SDHC cards have been tested and are verified to work with **HCM582E**:

