

## Hardware Features

### Chip Type

Supplier  
Chip Codes  
Electrical Characteristics  
Operational Temperature Characteristics  
Memory Size available for program and data

### Industrial Grade

Starchip  
SCM392G  
1.6V to 5.5V  
-40° to 105°C  
136K/256K

### Standard Grade

Samsung  
S3FS9FG  
1.6V, 3V and 5V  
-25° to 85°C  
340K/440K

### NVRAM characteristics

Endurance cycles (min) @ 25°	Min. 200MM read/write cycle	Min. 500K read/write cycle
Data retention (min) @ 25°	25 Years	25 Years
Vibration	Passes JESD22-B103	
Sector/Bank erase time	1.5ms/3ms	1.5ms/3ms
Page write/erase time	1.5ms/0.4ms	1.5ms/0.4ms

## Software Features

### Platform

Technology	2G/3G/4G/LTE	2G/3G/4G/LTE
UICC	Release 8	Release 8
Java Card	2.2.1 or higher	2.2.1 or higher
Global Platform	2.2.1	2.2.1

### Supported Applications

SIM	Release 4	Release 4
USIM	Release 8	Release 8
ISIM	Release 8	Release 8
HPSIM	Release 8	

### OTA Capabilities

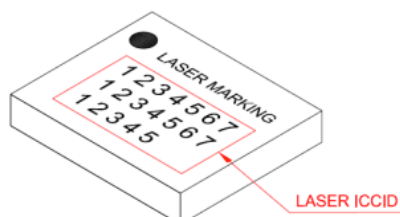
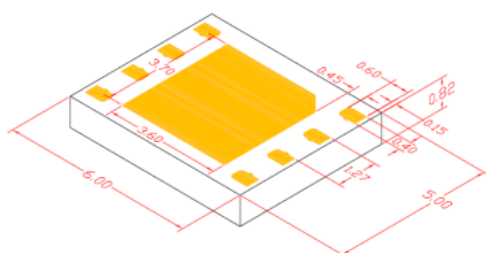
Remote File Management	Release 8	Release 8
Remote Applet Management	Release 8	Release 8

## SIM Card Physical Characteristics

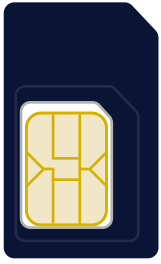
### Embedded Form Factor (MFF2)

Module Format	MFF2 (QFN8) embedded.
Size	6 x 5mm*, (height: 0.75-0.82mm)
Standard	TS 102.671 - standardized format
Fitting	Soldered to circuit board
Transportation	On trays/reels/boxes

### Technical Details (MFF2)



## SIM Card Physical Characteristics



### **2FF - Mini SIM**

Height: 25mm  
Width: 15mm  
Thickness: 0.76mm



### **3FF - Micro SIM**

Height: 15mm  
Width: 12mm  
Thickness: 0.76mm



### **4FF - Nano SIM**

Height: 12.3mm  
Width: 8.8mm  
Thickness: 0.67mm