

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

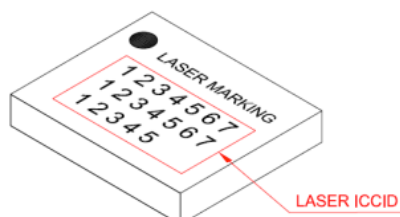
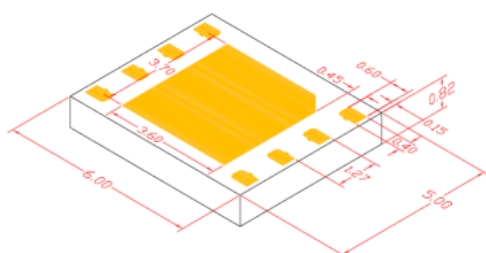
Remote File Management	Release 8	Release 8
Remote Applet Management	Release 8	Release 8

SIM Card Physical Characteristics

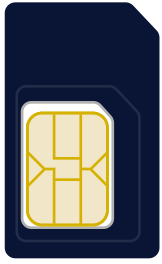
Embedded Form Factor (MFF2)

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

Embedded SIM QNF8 Pinout

