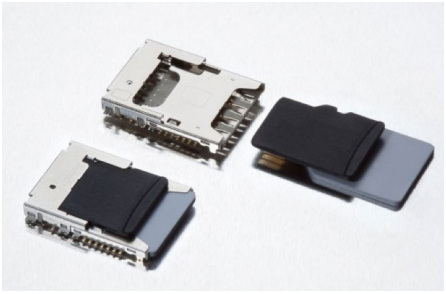
molex®

Space-saving microSD/micro-SIM connector combines two formats in a single unit for easy memory card access in mobile applications such as Smart Phones and Tablet PCs

microSD /micro-SIM Combo Connector, Push Pull, 2.28mm Height, With Detect Switch, 8-Circuit Card Type

104168 Top Mount



microSD /micro-SIM Combo Connector, shown above with and without cards inserted

Features and Benefits

Compact size with small footprint and low profile height	Provides optimum PCB real estate and vertical space savings
Free insertion and withdrawal of microSD card	Eliminates need to turn off power or remove battery
Anti-stubbing contact terminal design	Prevents contact stubbing and ensures smooth insertion and withdrawal of card
Card polarization features	Prevent incorrect insertion of card
Multiple PCB hold-down points (SMT and Through-hole)	Facilitate mating for more efficient operator assembly
Anti-card-sticking design	Assure secure PCB retention
Wide vacuum area	Prevents microSD card from being stuck in case of wrong insertion into micro-SIM slot

Markets and Applications

› Mobile Equipment
- Smart Phones
- Tablet PCs

Smart Phone

Tablet PC

Specifications

REFERENCE INFORMATION
Packaging: Embossed Tape, Reel
Use With: microSD and (micro-SIM) cards
Designed In: mm
RoHS: Yes,
Halogen Free: Yes

ELECTRICAL
Voltage (max.): 10V
Current (max.): 0.5A
Contact Resistance:
100 milliohms max (microSD)
100 milliohms max (micro-SIM)
200 milliohms max (microSD Switch)
Dielectric Withstanding Voltage:
500V AC
Insulation Resistance:
50 Megaohms min.

PHYSICAL
Housing: LCP, Natural (Ivory), UL94 V-0
Contact terminals:
Copper Alloy
Switch terminals:
Phosphor Bronze
microSD shell: SUS
micro-SIM shell: SUS
Plating:
Contact and switch terminals:
Contact Area — Gold
Solder Tail Area — Gold
Base — Nickel

MECHANICAL
Durability (min.):
10,000 Cycles (microSD)
5,000 Cycles (micro-SIM)

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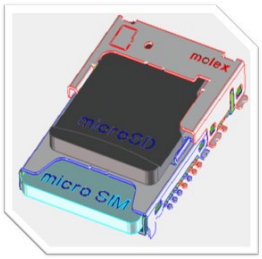
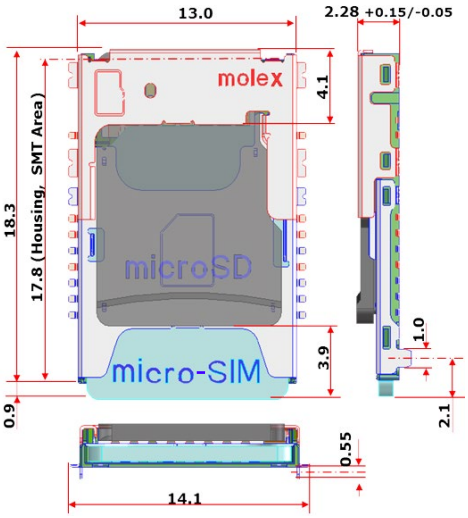
Additional Product Features



Upper: microSD slot
Bottom: micro-SIM slot

Dimensional Overview

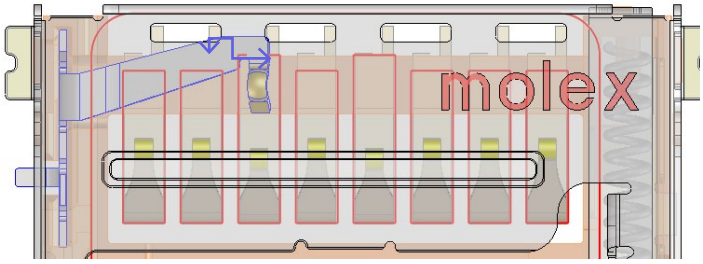


Molex's microSD/micro-SIM connector offers a lower profile and narrower depth than the main competitive version for an overall volume space savings of about 15 percent.

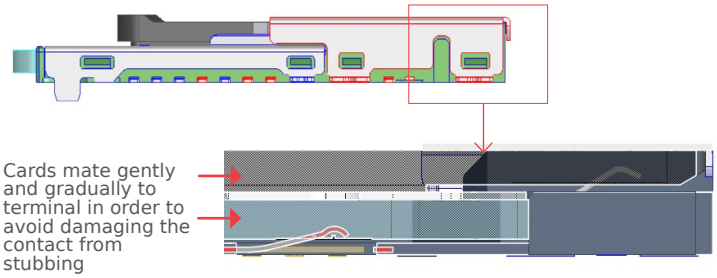
Combination Detect Switch/Grounding Contact

Card Insertion Condition	Card Detect Switch	Switch Terminal is at #6 mSD circuit
Without Card	(Open)	
Card Insertion	(Closed)	

A card detect switch also provides a grounding function. When a microSD card is inserted, the switch terminal becomes electrically connected with the sixth ground pad of card.



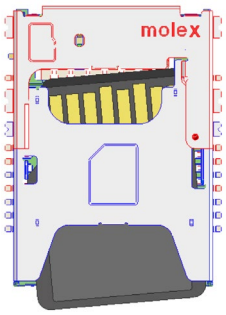
Anti-stubbing Terminal



Cards mate gently and gradually to terminal in order to avoid damaging the contact from stubbing

The microSD/micro-SIM terminal design has the contact beam sloping in the opposite direction from where the card is inserted. This prevents any terminal damage from the card stubbing into the terminal during insertion. The design also provides smooth insertion and withdrawal of cards.

Anti-Card-Sticking Design



If users wrongly insert a microSD card into the micro-SIM slot, the card could become stuck. In this case users can access and remove the incorrect card through the open marked area shown above.

Ordering Information

Order No.	Description	PCB Mounting (Lead type)	Detect Switch	Height (mm)	Width (mm)	Depth (mm)	Packing
104168-1620	microSD/ micro-SIM Combo Push Pull H=2.28	Top, (SMT+ 2points Through Hole)	microSD: Yes micro-SIM: No	2.28	13.0	18.3	Embossed tape 1 Reel : 1,200pcs

www.molex.com/link/microsdcombo.html