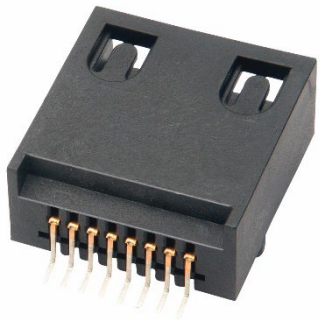
SR4220SM

Board-Mount Receptacles

The power of memory. Secured.

The SR4220SM board-mount receptacle mates with all Datakey SlimLine™, Extended SlimLine, and RUGGEDrive™ memory tokens (see token datasheets for more details). The SR4220SM receptacle features a right-angle, board-edge design with surface-mount contacts. The receptacles can be pick-and-placed from their tray and are suitable for use in a reflow oven process.

All Datakey SlimLine receptacles feature "gold dome" contacts that perform reliably over a wear life of at least 50,000 insertion/removal cycles and employ a wiping mechanism to remove debris or build-up on the token's contacts each time a token is inserted or removed. Also, SR4220SM receptacles include a detent mechanism that contributes to token retention and gives users tactile and audible confirmation when an inserted token is fully engaged. The token/receptacle system provides a Last-On/First-Off (LOFO) contact that is used by system designers to detect when a memory token has been inserted or removed (contact ATEK Access Technologies for token detection details for RUGGEDrive memory tokens)[2]. The SR4220SM receptacle is a modification of the SR4210SM receptacle, where the mounting flange has been removed for space savings. Since the mounting flange has been removed, special care must be taken in the design of the mounting of these receptacles to ensure that excessive stress is not placed on the leads.



MECHANICAL	
Operating Life[4]	50,000 Insertion/Removal Cycles Minimum
Insertion Force[4]	400 gf Minimum / 2 kgf Maximum
Removal Force[4]	300 gf Minimum / 2 kgf Maximum
Mass	~5 grams
ELECTRICAL	
Contact Resistance	Beginning of Life: < 100 mΩ
	End of Life: < 500 mΩ
ENVIRONMENTAL	
Storage Temperature	-40°C to +100°C
Operating Temperature	-40°C to +85°C
Relative Humidity	5% - 95% (non-condensing)
Altitude	MIL-STD-810H, Method 500.6, Proc. I & II ≤40,000 ft (12,192 m)
Mechanical Shock	MIL-STD-810H, Method 516.8, Proc. I
Vibration	MIL-STD-810H, Method 514.8, Proc. I
MATING COMPONENT(S)	
Tokens	All SlimLine and RUGGEDrive Memory Tokens
ORDERING INFORMATION[1]	
SR4220SM	606-0055-104A

1: "A" suffix on part number indicates RoHS compliance. See CE declaration below for details.
2: Customers must design to meet Datakey interface specifications to provide for future memory device compatibility. Interface specifications available at datakey.com
3: RST signal used on IIT Series only.
4: Applications where a new token is used each time can reduce retention force prematurely.

NOTES:
Conforms with Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011, and as amended by Directive 2015/863/EU, on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

CE

UKCA

PINOUT CHART[2]				RUGGEDRIVE™ LINE		
Pin #	Microwire	I²C	SPI	DFX (SPI)	DFX (SD)	UFX (USB)
1	LOFO	LOFO	/Hold	Reserved	DAT1	NC
2	Power (V_{cc})	Power (V_{cc})	Power (V_{cc})	Data Out (DO)	DAT0	+5V
3	Chip Select (CS)	SIZE / RST[3]	/Chip Select (/CS)	Ground (GND)	VSS	NC
4	Serial Clock (SK)	Serial Clock (SCL)	Serial Clock (SCK)	Serial Clock (SCLK)	CLK	DM
5	Data In (DI)	NC	Data In (SI)	Power (V_{cc})	VDD	DP
6	Data Out (DO)	Serial Add/Data (SDA)	Data Out (SO)	Data In (DI)	CMD	NC
7	Ground (GND)	Ground (GND)	Ground (GND)	/Chip Select (/CS)	DAT3	GND
8	LOFO	LOFO	LOFO	Reserved	DAT2	NC

NC = No Connection

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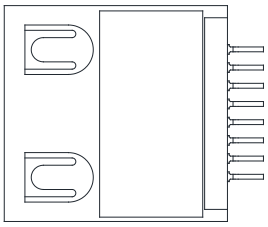

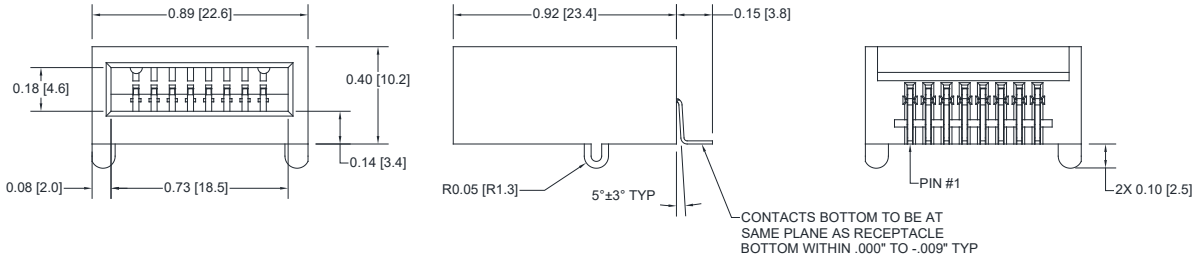

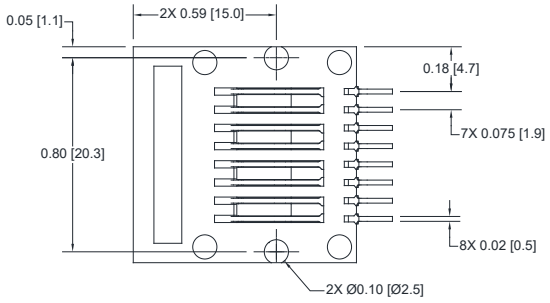

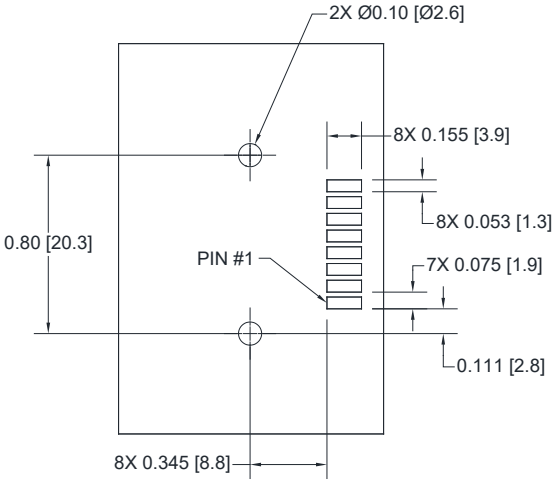

SUGGESTED SR4220SM RECEPTACLE PCB LAYOUT
(Top View)

Drawing dimensions are in inches and millimeters [mm].
Dimensions are nominal and subject to manufacturer's tolerances.

221-0207-000 Rev. D 6/26

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