

# SR4220VRT CryptoAuthentication™

## Extension Board



The power of memory. Secured.

The SR4220VRT CryptoAuthentication™ extension board allows Datakey CryptoAuthentication memory tokens to be used with Microchip's CryptoAuthentication SOIC XPRO Starter Kit (Microchip part number DM320109). Specifically, the extension board plugs into the 20-position extension port connectors (EXT1, EXT2, EXT3) on the Microchip ATSAM21-XPRO development board (included in the starter kit). Due to the width of the PCB, it is not possible to connect two of these extension boards into ports EXT1 and EXT2 at the same time. The Datakey SR4220VRT extension board may be ordered directly from ATEK or through an authorized Datakey distributor. The Microchip CryptoAuthentication starter kit may be ordered from Microchip Direct or through an authorized Microchip distributor.

Datakey CryptoAuthentication memory tokens (e.g. IAT4.5Kb) may be plugged directly into the SR4220VRT receptacle (J1). This vertically-oriented receptacle is ideal for applications where it is desired to insert the token from the top of the enclosure or where it is desired to not have the receptacle accessible from the outside of the enclosure at all. A 10-pin header connector (J2) allows for the use of a Datakey SlimLine™ panel-mount receptacle. This gives maximum flexibility for locating the receptacle.

Custom firmware is available for the ATSAM21-XPRO development board that demonstrates how the /LOFO line can be tied to an interrupt line and detect when a Datakey CryptoAuthentication token has been inserted or removed. LOFO stands for Last On First Off and is used for token detection. This custom firmware and associated files and instructions may be downloaded from the Datakey website.

| MECHANICAL                            |   |
|---------------------------------------|---|
| Operating Life (SR4220VRT receptacle) | 50,000 Insertion/Removal Cycles Min.  |
| ELECTRICAL                            |   |
| Power                                 | 3.3 V or 5.0 V Supplied Through Extension Header  |
| I <sup>2</sup> C                      | See Pinout Chart Below  |
| ENVIRONMENTAL                         |   |
| Storage Temperature                   | -18°C to +66°C  |
| Operating Temperature                 | -18°C to +66°C  |
| RoHS Compliant                        | Yes <sup>1</sup>  |
| MATING COMPONENT(S)                   |   |
| SR4220VRT Receptacle (J1)             | IAT4.5Kb, IAX4.5Kb, IAT10.5Kb and IAX10.5Kb Memory Tokens   |
| 10 Pos. Vertical Female Header (J2)   | Datakey SlimLine™ Panel-Mount Receptacles Via 10-Conductor Ribbon Cable (part number 503-0049-008A) |
| 20 Pos. RA Female Header (J3)         | Microchip ATSAM21 XPRO Extension Port   |
| ORDERING INFORMATION <sup>1</sup>     |   |
| SR4220VRT Extension Board             | 607-0088-000A   |

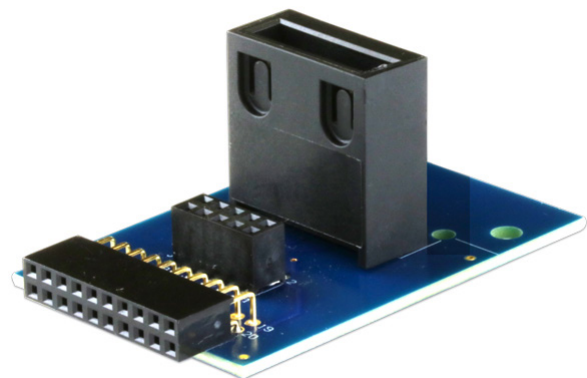
1: "A" suffix on part number indicates RoHS compliance. See CE declaration below for details.

#### NOTES:

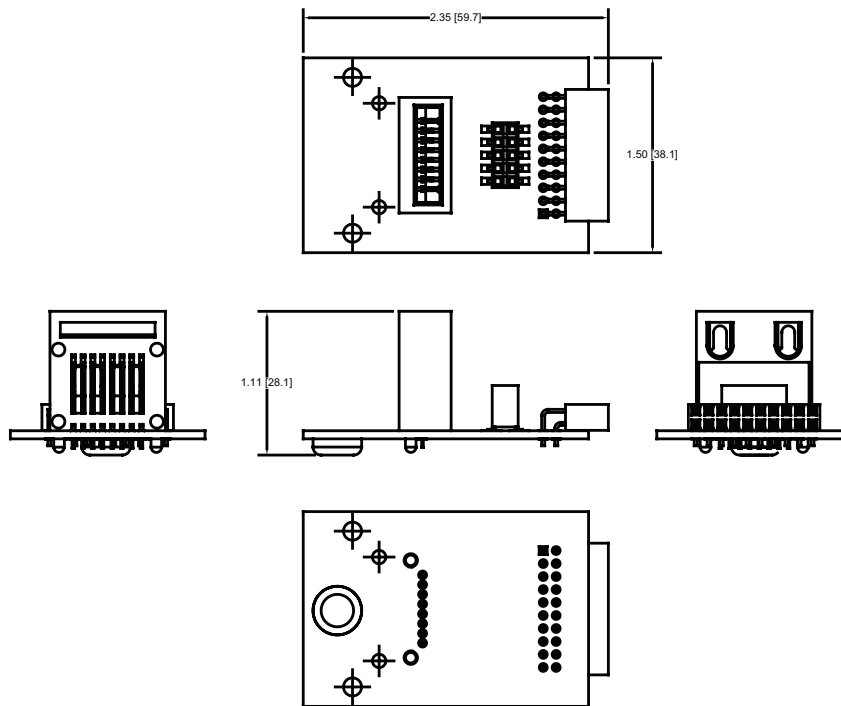
- Conforms with Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011, and as amended by Directive 2015/863/EU, on the restriction of the use of certain hazardous substances in electrical and electronic equipment.



**WARNING:** Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)



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

| PINOUT CHART            |          |          |               |            |
|-------------------------|----------|----------|---------------|------------|
| Signal I <sup>2</sup> C | EXT1Name | EXT1 Pin | SR4220VRT Pin | Header Pin |
| LOFO                    | PB06     | 5        | 1             | 10         |
| Power (Vcc)             | VCC      | 20       | 2             | 2          |
| Size                    | NC       | NC       | 3             | NC         |
| Serial Clock (SCL)      | PA09     | 12       | 4             | 7          |
| NC                      | NC       | NC       | 5             | NC         |
| Serial Add/Data (SDA)   | PA08     | 11       | 6             | 8          |
| Ground (GND)            | GND      | 2,19     | 7             | 3          |
| LOFO                    | PB06     | 5        | 8             | 10         |

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221-0217-000 Rev. A 4/20

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