

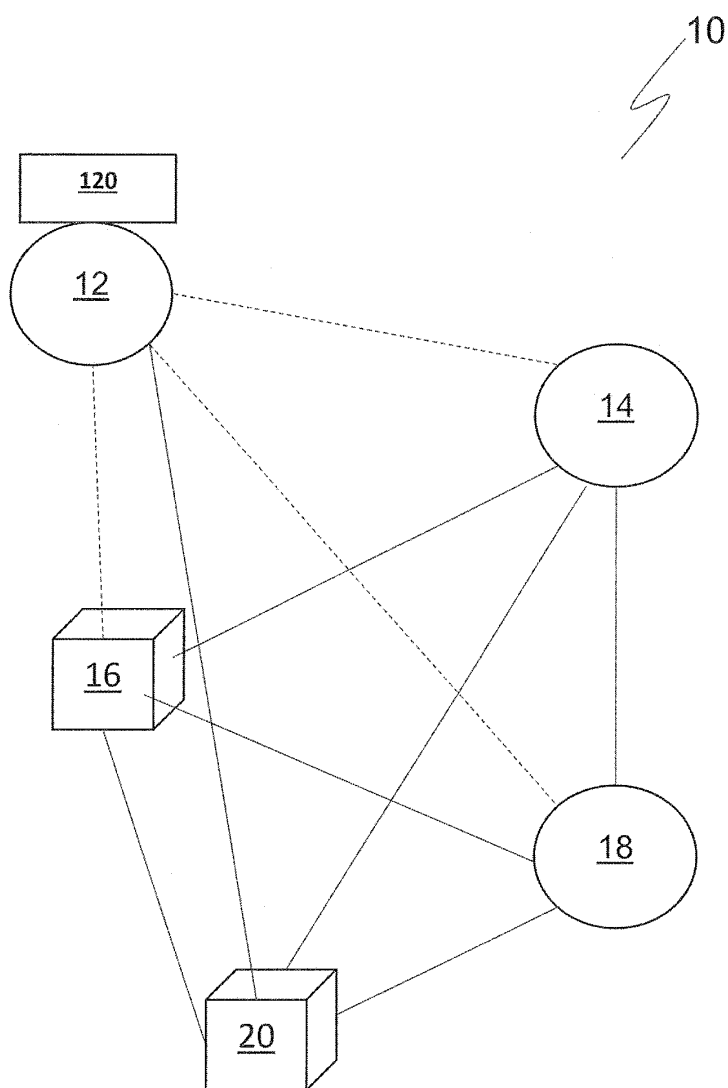


Figure. 1

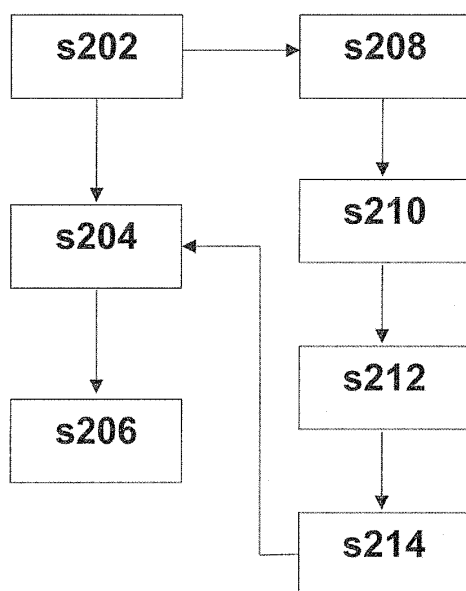


Figure. 2

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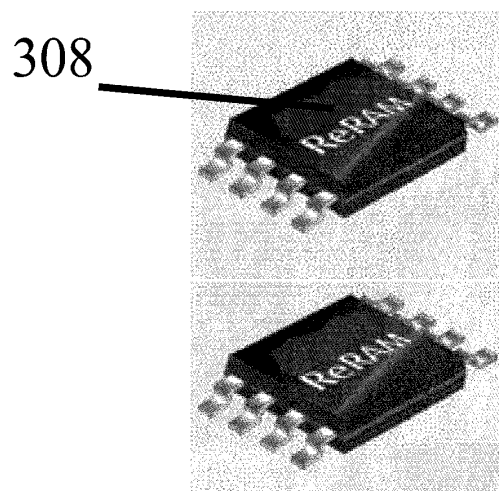
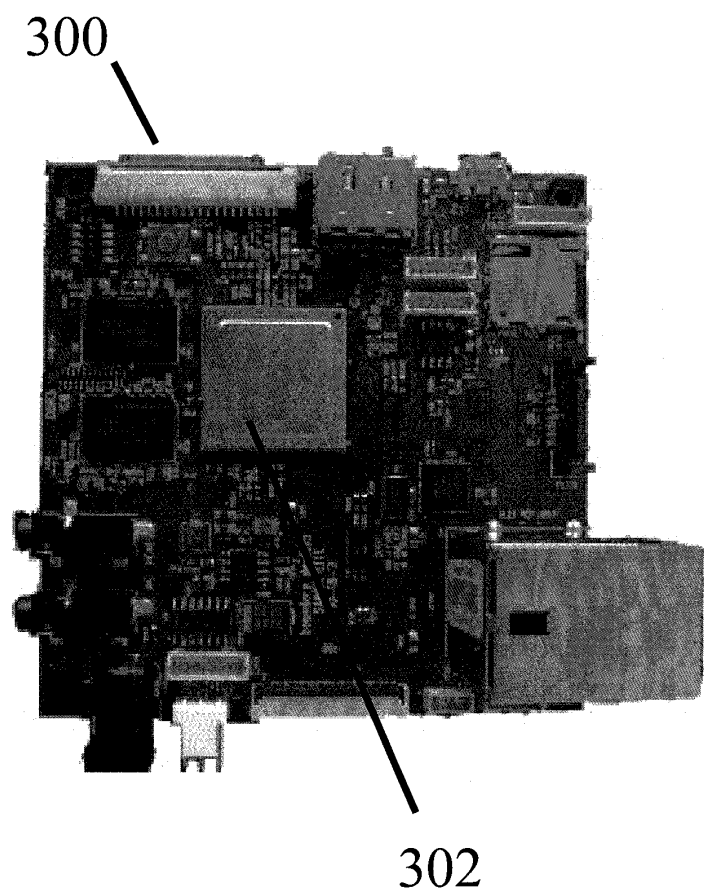


Figure. 3

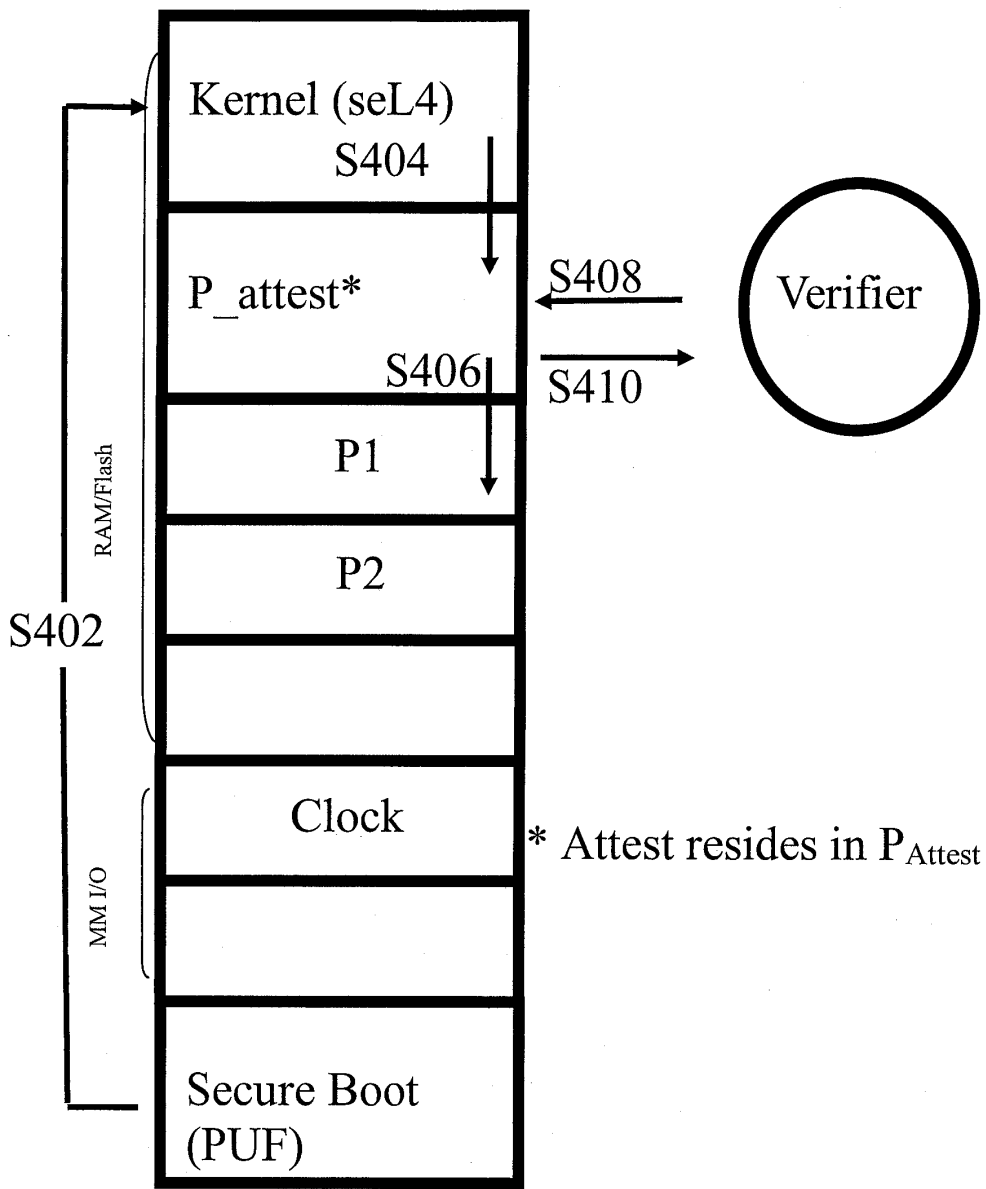


Figure. 4

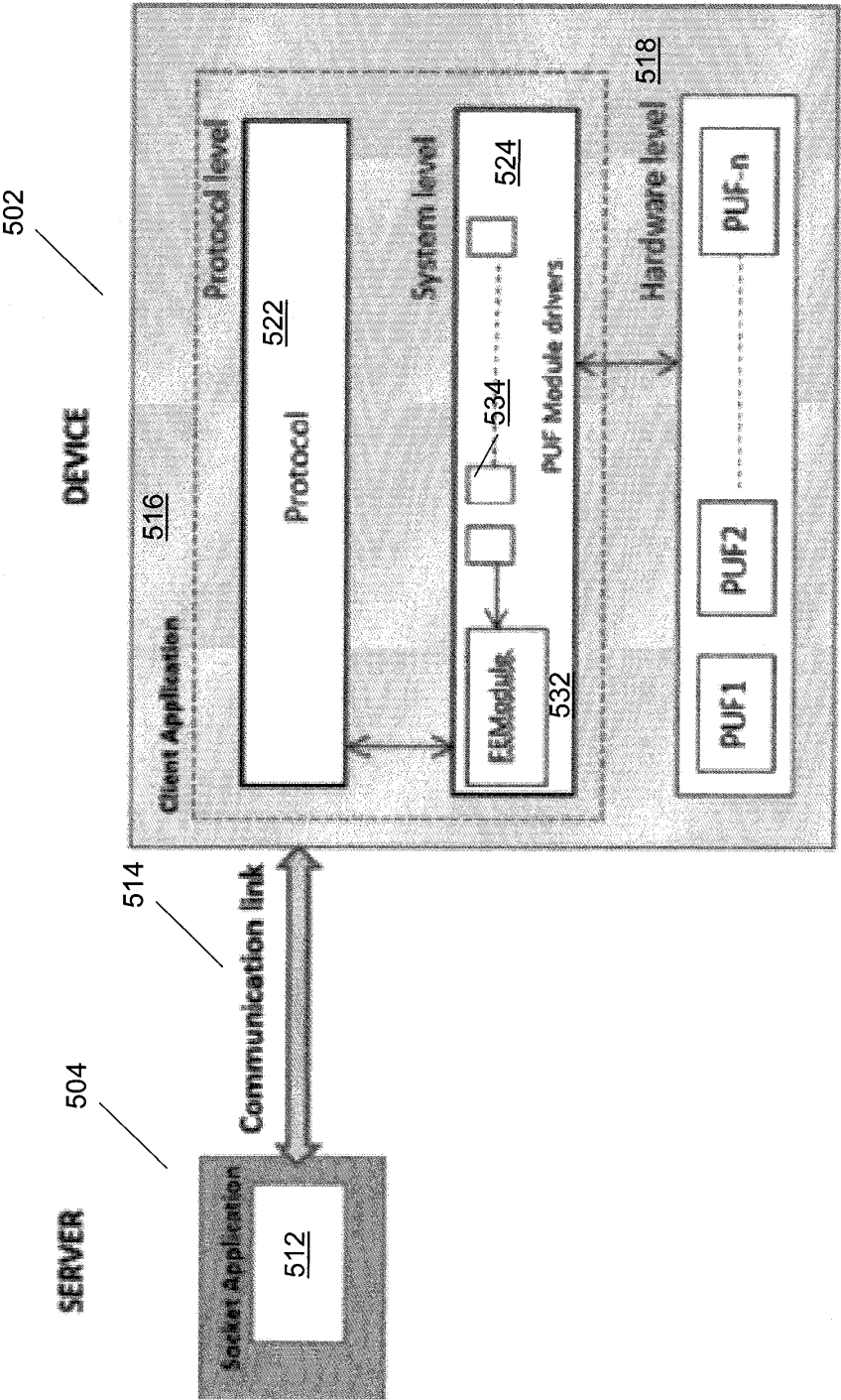
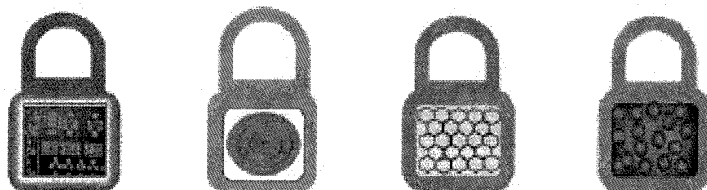


Figure. 5

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Properties	Silicon PUF	Optical PUF	Nanotech PUF	Biological PUF
Entropy	Low	Medium	High	High
Reproducibility	Yes	Yes	Yes	Yes
Reconfigurability	No	Yes	Limited	Yes
Uniqueness	Yes	Yes	Yes	Yes
CRPs	Linear	Exponential	Linear	Exponential
Cost	High	High	High	Low
Energy Consumption	High	Low	Low	Low
Reverse Engineering	Possible	Very Difficult	Difficult	Very Difficult
Volatility	Volatile	Non-volatile	Non-Volatile	Non-volatile
PUF	Weak	Strong	Strong	Strong

Figure. 6

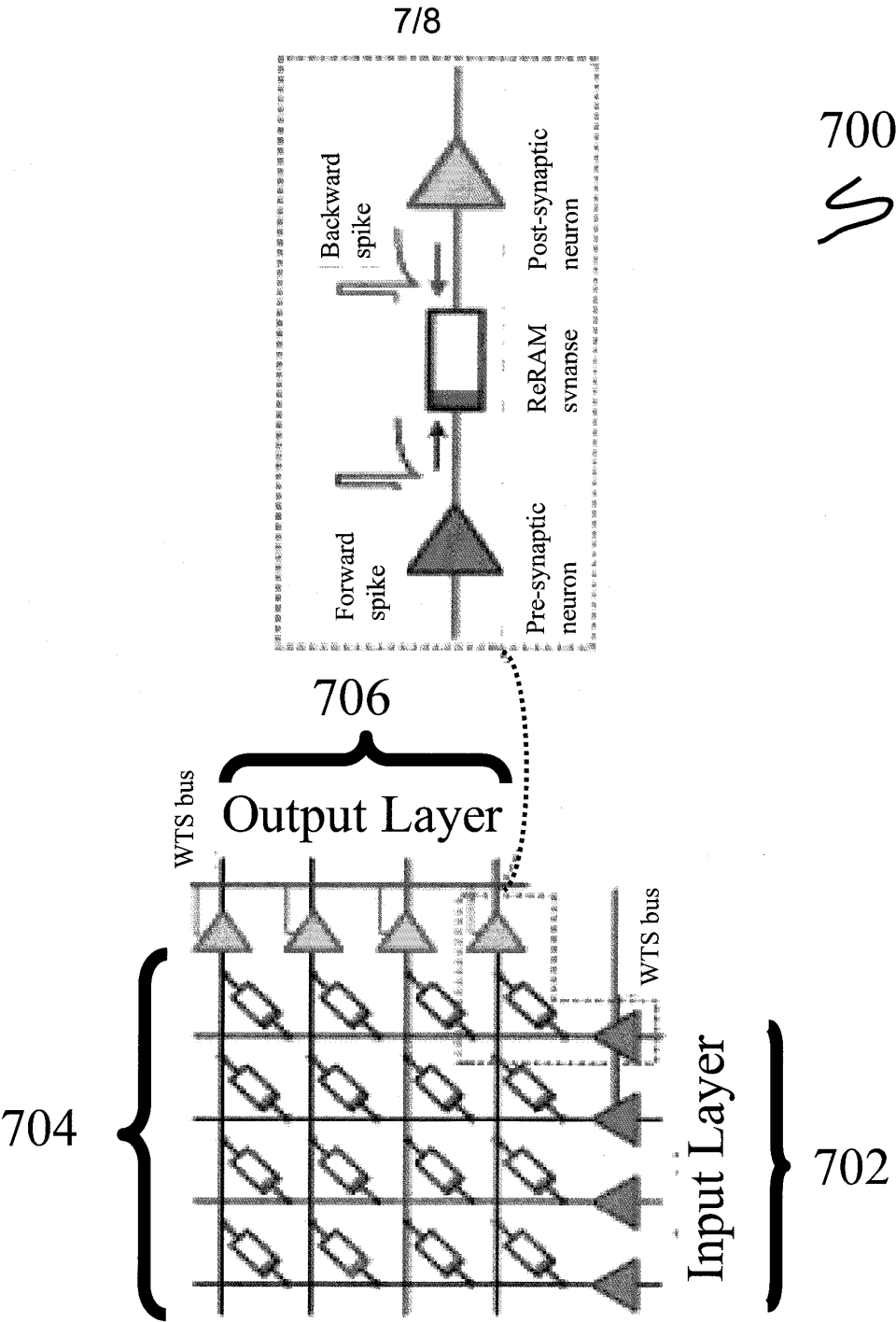


Figure. 7

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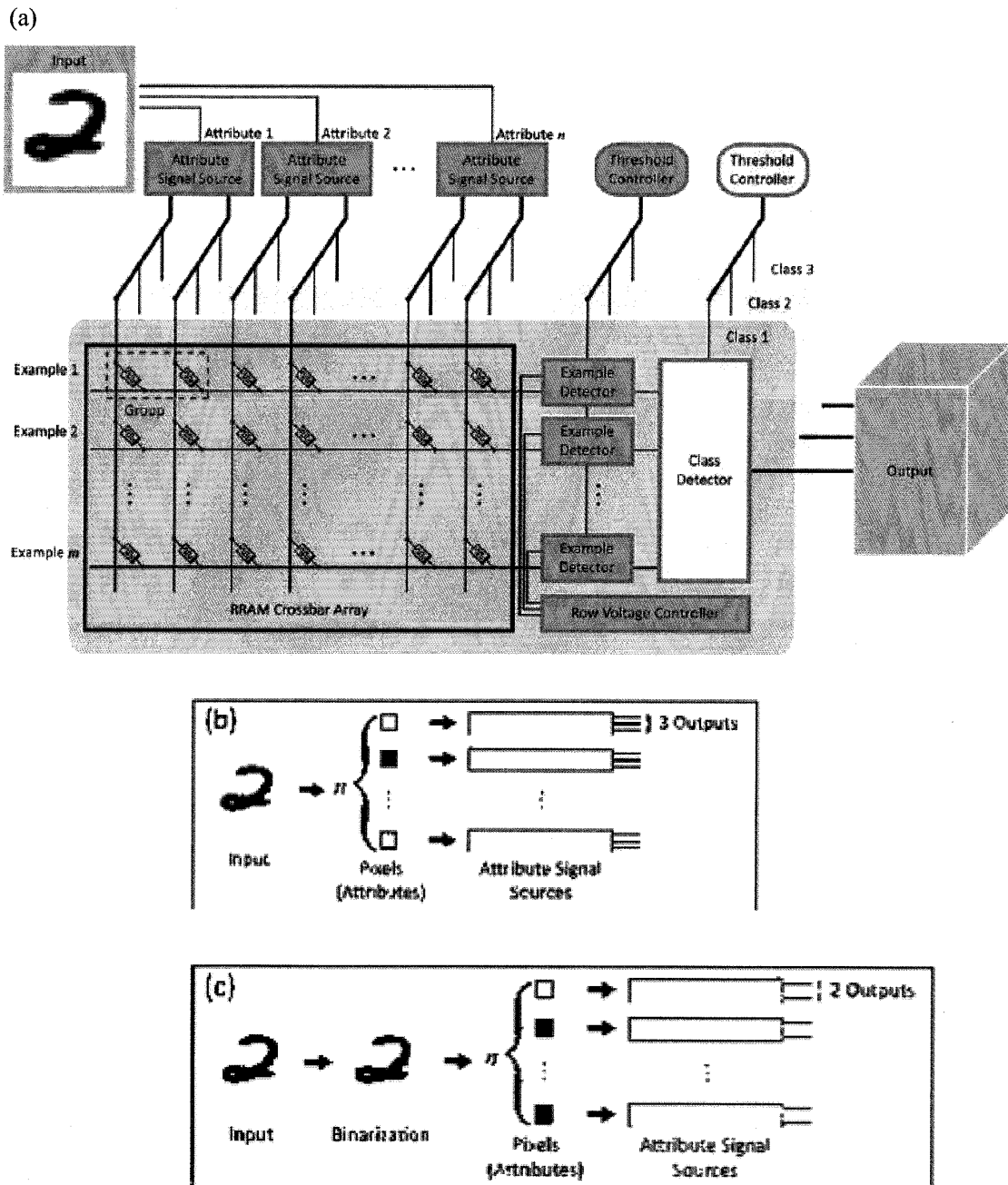


Figure. 8