CLAIMS

1. A user equipment (UE) for wireless communication, comprising:

at least one memory; and

at least one processor coupled with the at least one memory and operable to cause the UE to:

receive a non-access stratum (NAS) message that includes a UE parameter update (UPU) transparent container, the UPU transparent container including a UPU header, the UPU header including an indication of UPU header protection;

compute a UPU message authentication code (MAC) using a UPU header as at least one input for UPU protection; and

transmit an acknowledgement that indicates a UPU header verification is successful.

2. The UE of claim 1, wherein the at least one processor is operable to cause the UE to:

determine to perform the UPU header verification; and

compute the UPU MAC based at least in part on the determination to perform the UPU header verification.

3. The UE of claim 1, wherein the at least one processor is operable to cause the UE to compute the UPU MAC as UPU-MAC-I_{AUSF} using the UPU header as the at least one input for the UPU protection.

4. The UE of claim 1, wherein the at least one processor is operable to cause the UE to determine that the UPU header verification is successful.

5. The UE of claim 1, wherein the at least one processor is operable to cause the UE to generate a MAC UPU-MAC-I_{UE} that indicates the UPU header verification is successful.

6. The UE of claim 1, wherein the at least one processor is operable to cause the UE to:

determine successful verification of the UPU header protection; and

transmit a verification indication to unified data management (UDM) via an access and mobility management function (AMF) that verification of the UPU header protection is successful.

7. The UE of claim 1, wherein the at least one processor is operable to cause the UE to:

receive a capability request as to whether the UE supports the UPU header protection; and

transmit a capability response that the UE supports the UPU header protection.

8. The UE of claim 7, wherein the capability response is transmitted to an access and mobility management function (AMF) in a NAS message as at least one of an initial registration request message or a registration update request message, the NAS message forwarded by the AMF to unified data management (UDM) to indicate that the UE supports the UPU header protection.

9. A processor for wireless communication, comprising:

at least one controller coupled with at least one memory and operable to cause the processor to:

receive a non-access stratum (NAS) message that includes a UE parameter update (UPU) transparent container, the UPU transparent container including a UPU header, the UPU header including an indication of UPU header protection;

compute a UPU message authentication code (MAC) using the UPU header as at least one input for UPU protection; and

transmit an acknowledgement that indicates a UPU header verification is successful.

10. The processor of claim 9, wherein the at least one controller is operable to cause the processor to:

determine to perform the UPU header verification; and

compute the UPU MAC based at least in part on the determination to perform the UPU header verification.

11. The processor of claim 9, wherein the at least one controller is operable to cause the processor to compute the UPU MAC as UPU-MAC-I_{AUSF} using the UPU header as the at least one

input for the UPU protection.

12. The processor of claim 9, wherein the at least one controller is operable to cause the processor to determine that the UPU header verification is successful.

13. The processor of claim 9, wherein the at least one controller is operable to cause the processor to generate a MAC UPU-MAC-I_{UE} that indicates the UPU header verification is successful.

14. The processor of claim 9, wherein the at least one controller is operable to cause the processor to:

determine successful verification of the UPU header protection; and

transmit a verification indication to unified data management (UDM) via an access and mobility management function (AMF) that verification of the UPU header protection is successful.

15. The processor of claim 9, wherein the at least one controller is operable to cause the processor to:

receive a capability request as to whether the UE supports the UPU header protection; and

transmit a capability response that the UE supports the UPU header protection.

16. The processor of claim 15, wherein the capability response is transmitted to an access and mobility management function (AMF) in a NAS message as at least one of an initial registration request message or a registration update request message, the NAS message forwarded by the AMF to unified data management (UDM) to indicate that the UE supports the UPU header protection.

17. A method performed by a user equipment (UE), the method comprising:

receiving a non-access stratum (NAS) message that includes a UE parameter update (UPU) transparent container, the UPU transparent container including a UPU header, the UPU header including an indication of UPU header protection;

computing a UPU message authentication code (MAC) using the UPU header as at least one input for UPU protection; and

transmitting an acknowledgement that indicates a UPU header verification is successful.

18. The method of claim 17, further comprising:

determining to perform the UPU header verification; and

computing the UPU MAC based at least in part on the determination to perform the UPU header verification.

19. The method of claim 17, further comprising:

computing the UPU MAC as UPU-MAC-I_{AUSF} using the UPU header as the at least one input for the UPU protection.

20. A network equipment (NE) for wireless communication, comprising:

at least one memory; and

at least one processor coupled with the at least one memory and operable to cause the NE to:

receive a capability indication that a user equipment (UE) supports user equipment parameter update (UPU) header protection;

transmit a request to an authentication server function (AUSF) to apply the UPU header protection, the request including UPU data that includes UPU header information; and

transmit a UPU transparent container to the UE, the UPU transparent container including a UPU header that includes an indication of the UPU header protection.