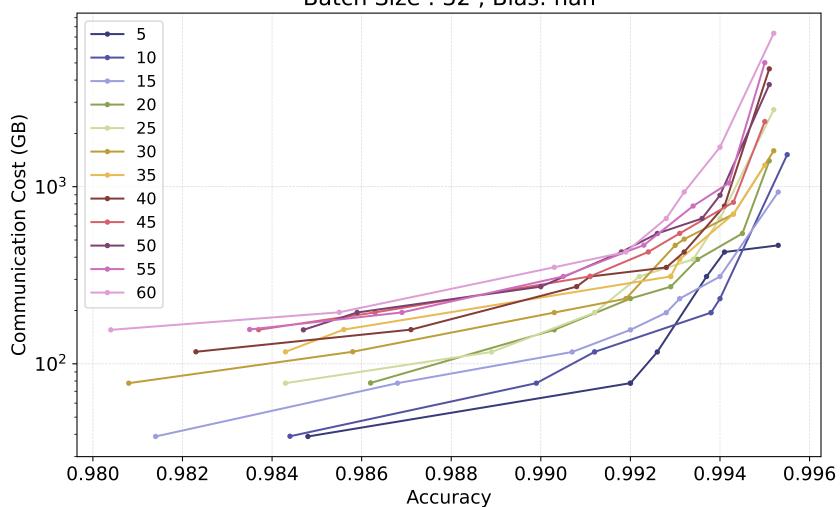
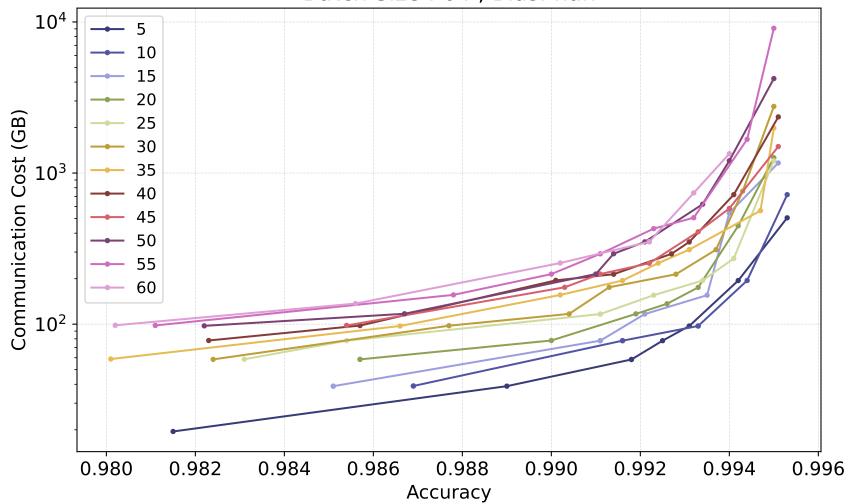
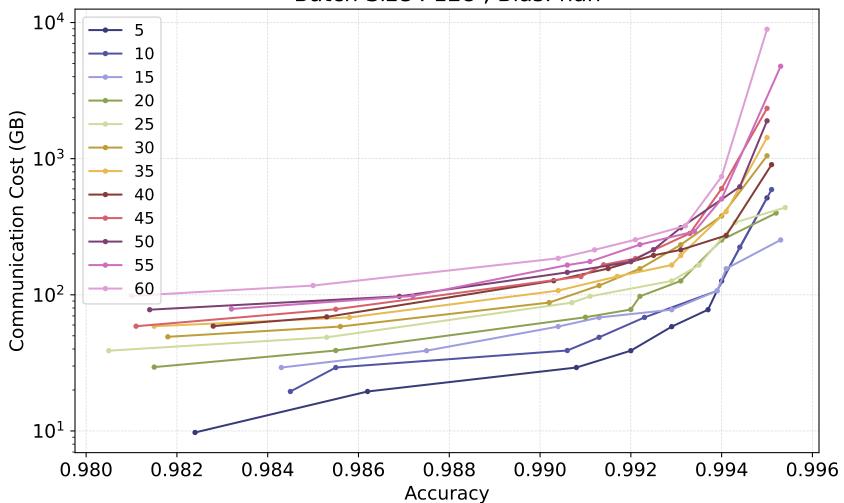
Batch Size: 32, Bias: nan



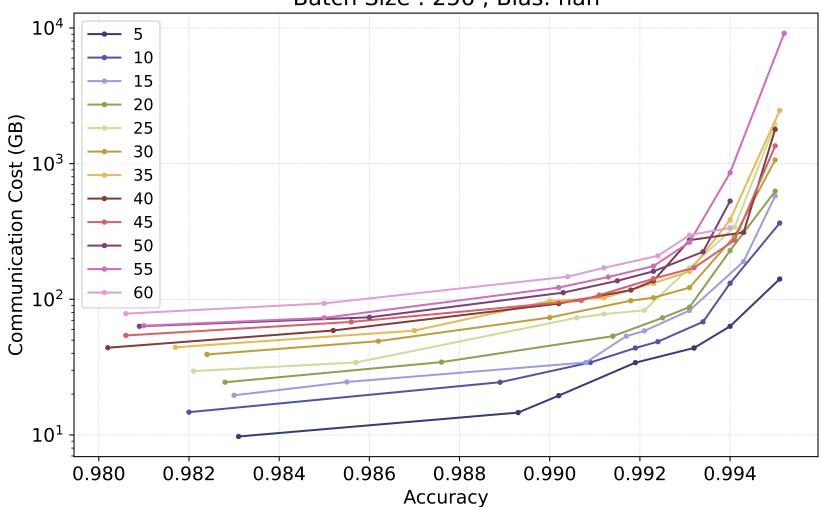
Batch Size: 64, Bias: nan



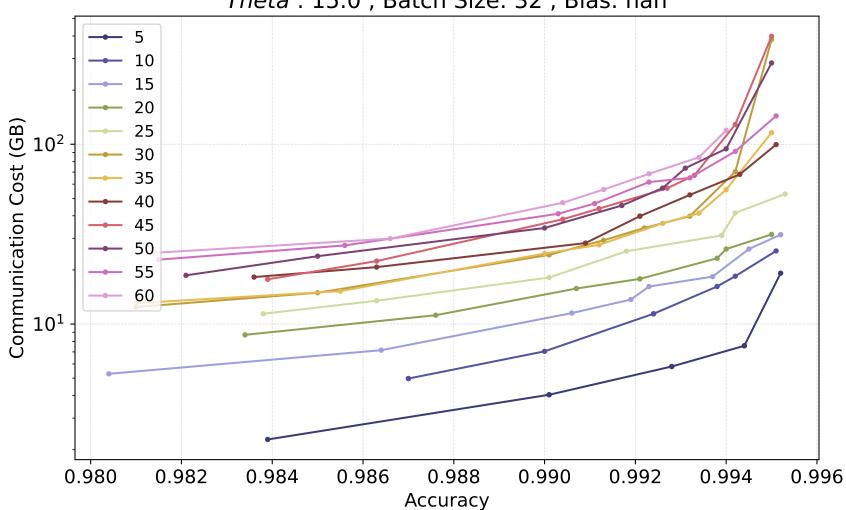
Batch Size: 128, Bias: nan



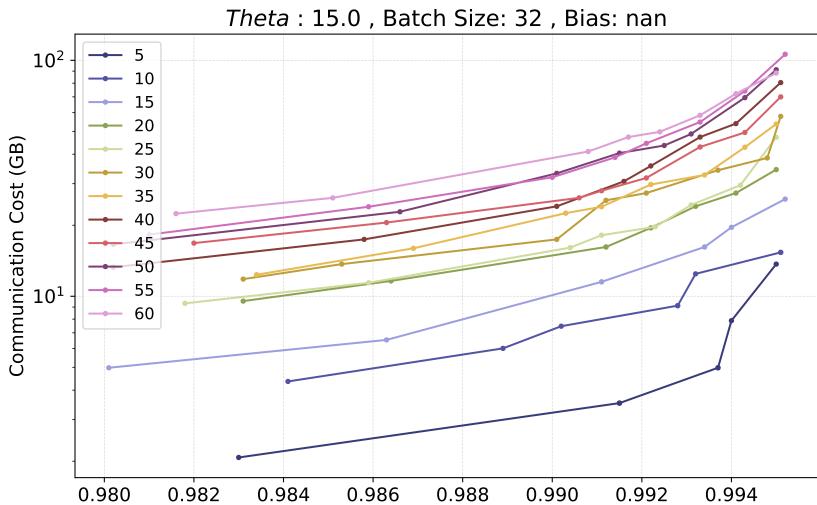
Batch Size: 256, Bias: nan



gm *Theta*: 15.0, Batch Size: 32, Bias: nan

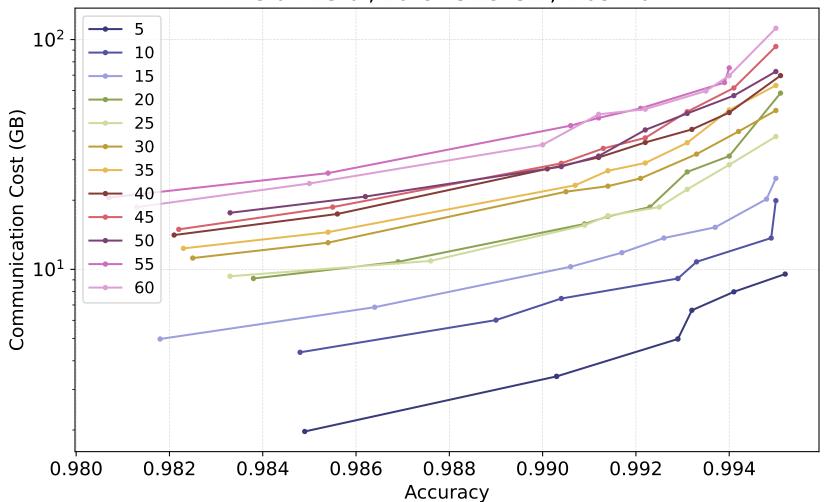


naive



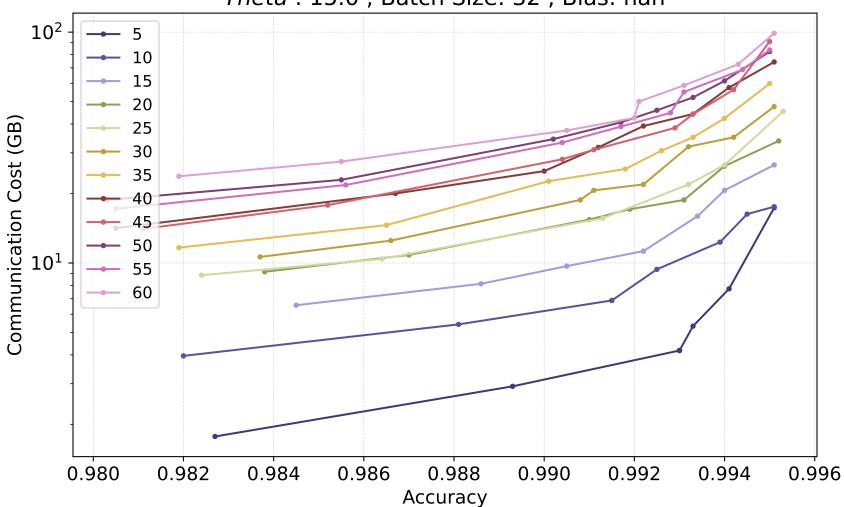
Accuracy

linear
Theta: 15.0, Batch Size: 32, Bias: nan

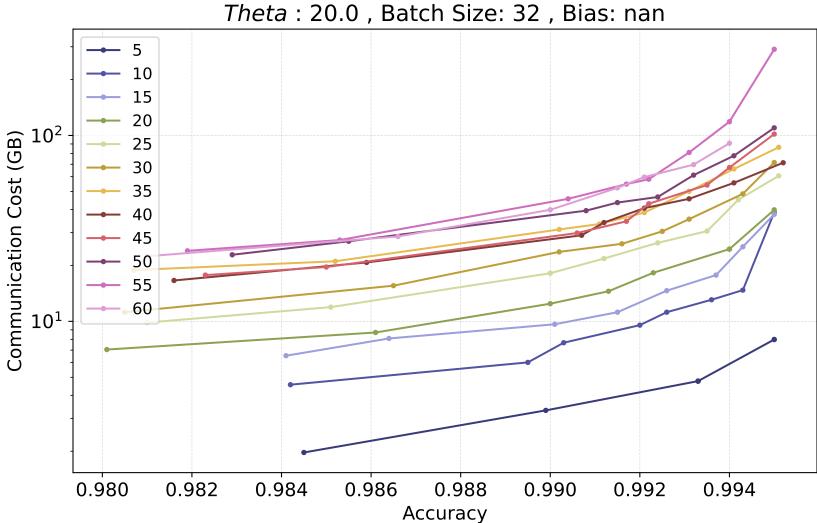


sketch

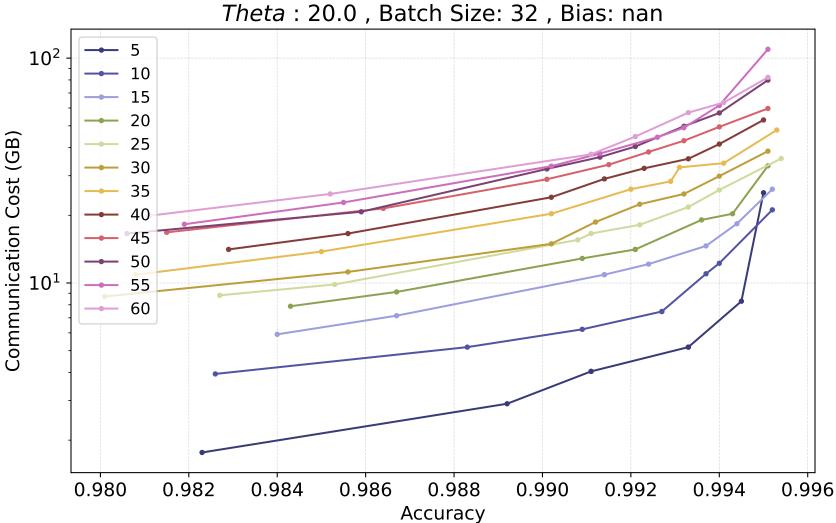
Theta: 15.0, Batch Size: 32, Bias: nan



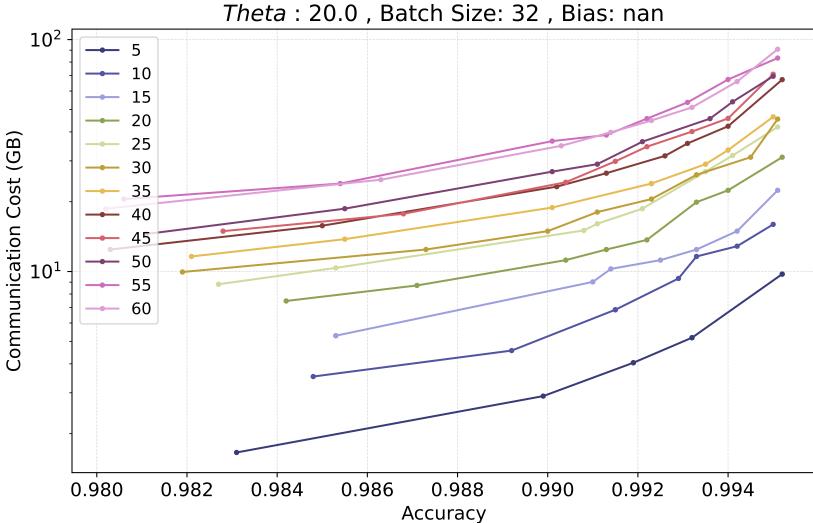
gm Vanta 200 Batab Gir



naive



linear



sketch Theta: 20.0, Batch Size: 32, Bias: nan 10² 10 15 20 Communication Cost (GB) 25 30 35 40 45 10^{1} 50 55 60

0.980

0.982

0.984

0.986

0.990

0.988

Accuracy

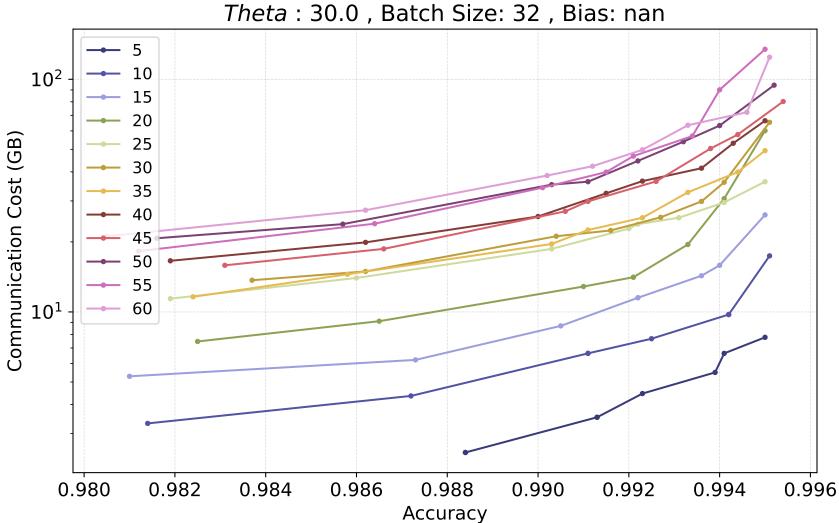
0.992

0.994

0.996

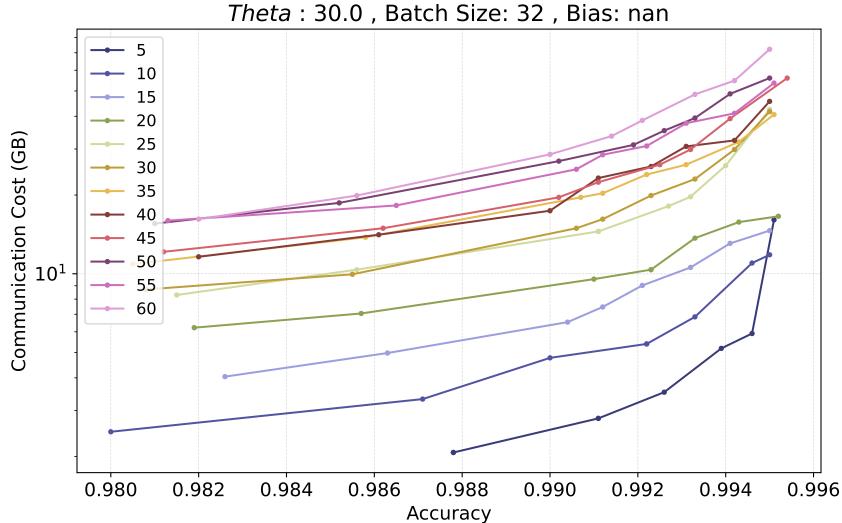
naive Theta: 25.0, Batch Size: 32, Bias: nan 10² Communication Cost (GB) 10 15 10¹ 20 25 30 35 40 45 50 55 60 0.980 0.982 0.984 0.986 0.988 0.990 0.992 0.994 0.996 Accuracy

gm Thata : 30.0 Patch Sizo

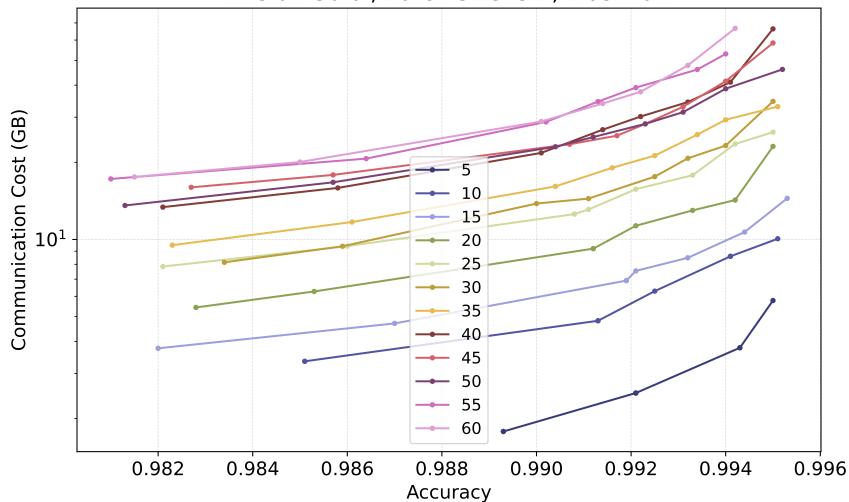


naive Theta: 30.0, Batch Size: 32, Bias: nan 10² 10 15 20 Communication Cost (GB) 25 30 35 40 45 50 10^{1} 55 60 0.980 0.982 0.984 0.986 0.988 0.990 0.992 0.994 0.996 Accuracy

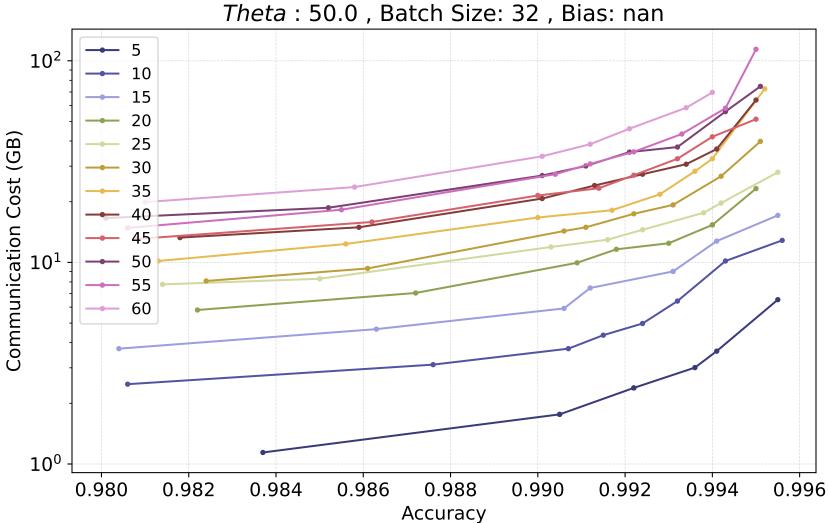
linear
Theta: 30.0 Batch Size: 32



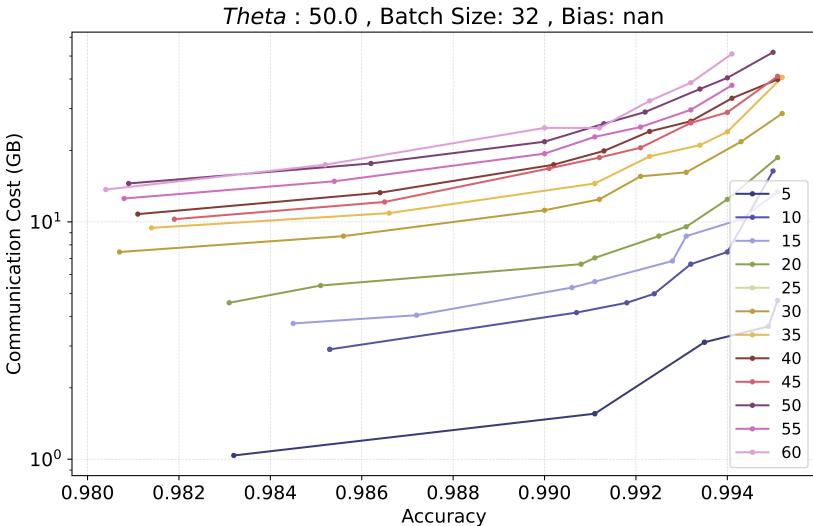
sketch *Theta*: 30.0, Batch Size: 32, Bias: nan



gm

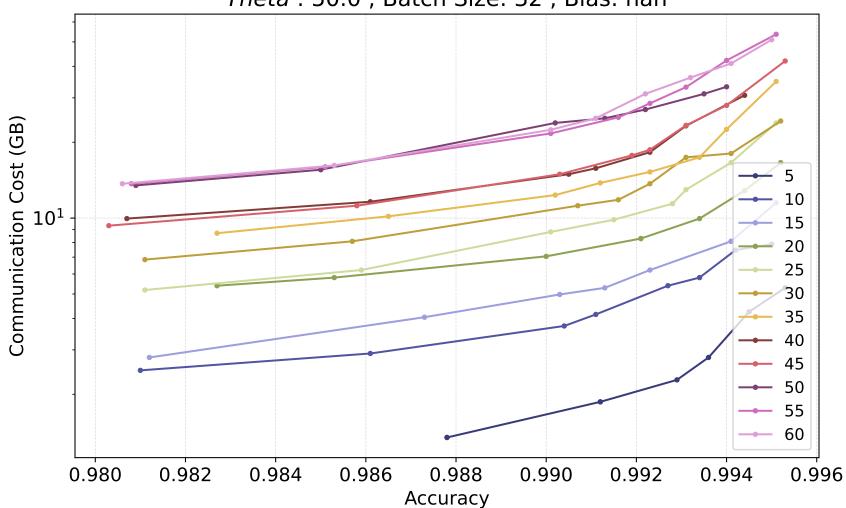


naive



linear

Theta: 50.0, Batch Size: 32, Bias: nan



sketch Theta: 50.0, Batch Size: 32, Bias: nan Communication Cost (GB) 10¹ 10 15 20 25 30 35 40 45 50

55 60

0.988

Accuracy

0.990

0.992

0.994

0.996

10⁰

0.980

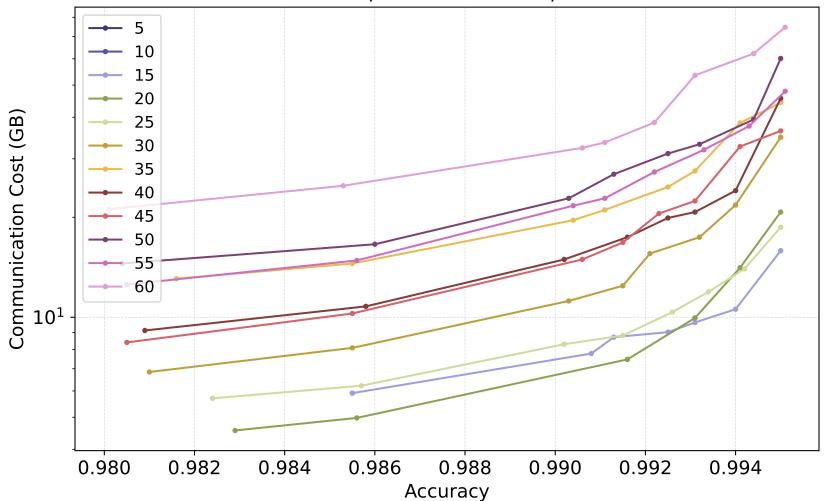
0.982

0.984

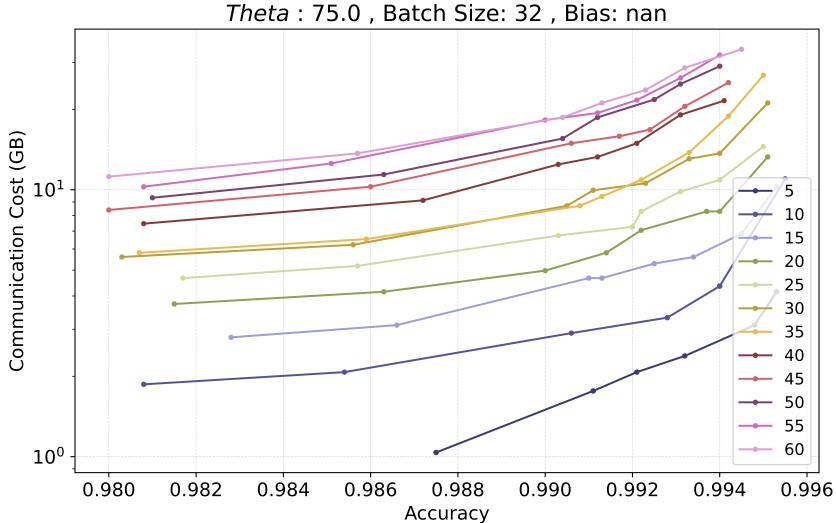
0.986

gm

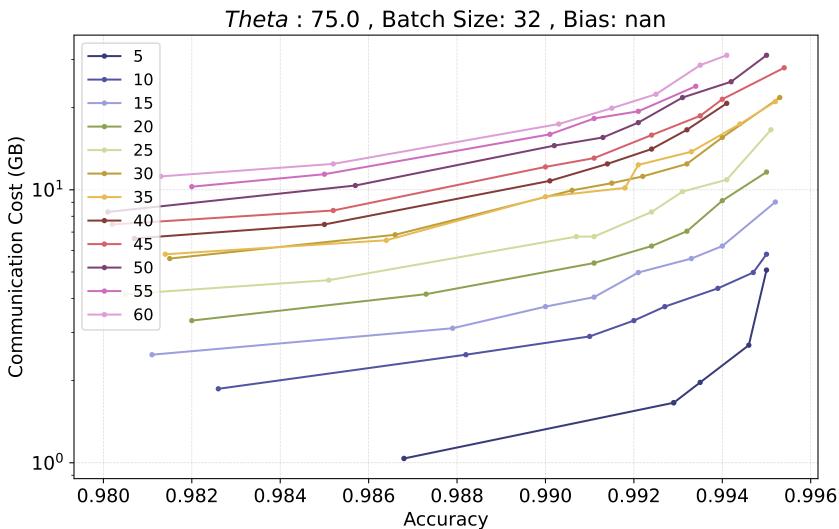




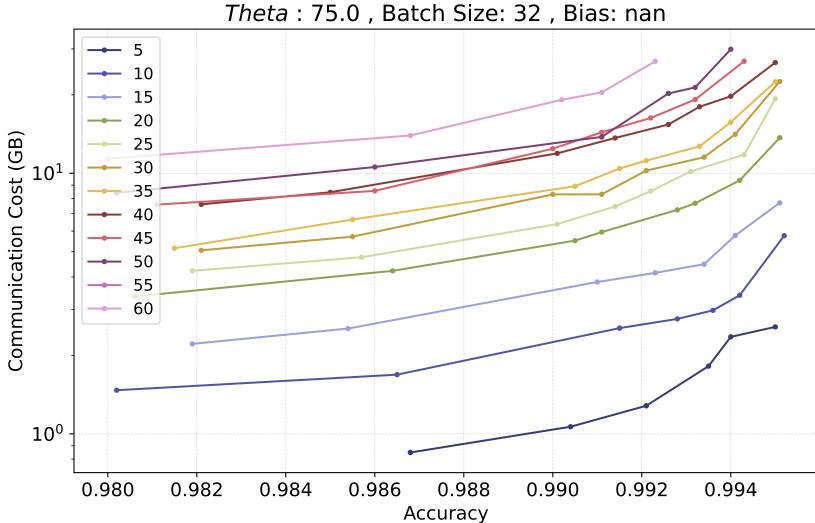
naive *Theta*: 75.0 . Batch S



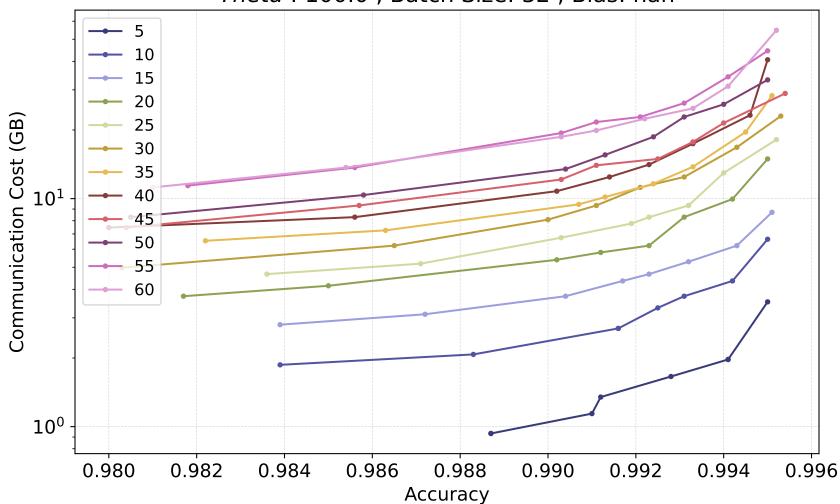
linear



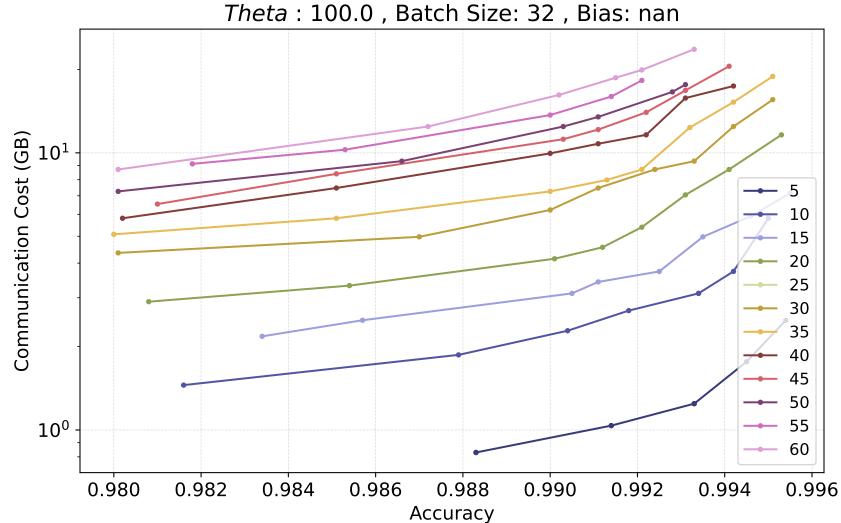
sketch



gm *Theta*: 100.0, Batch Size: 32, Bias: nan

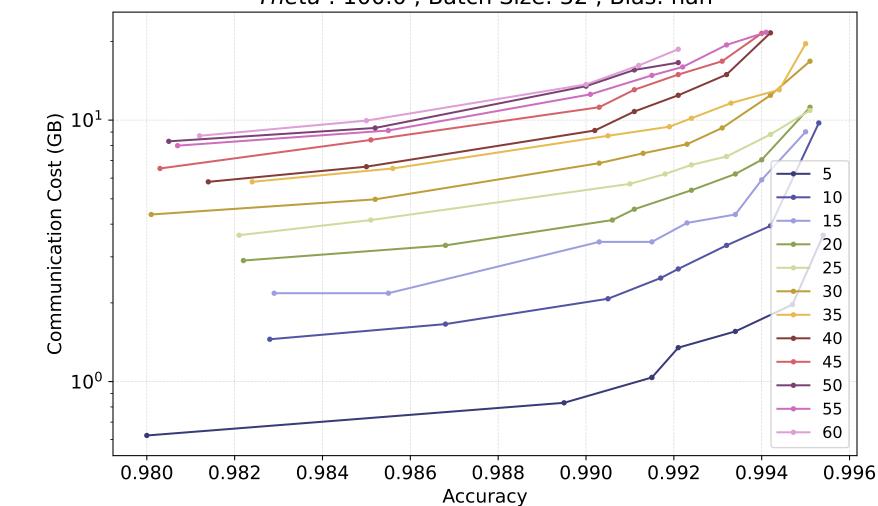


naive



linear

Theta: 100.0, Batch Size: 32, Bias: nan



sketch Theta: 100.0, Batch Size: 32, Bias: nan Communication Cost (GB) 10 15 20 25 30 35 40 45 10⁰ 50 55

0.988

Accuracy

0.992

0.990

0.994

0.980

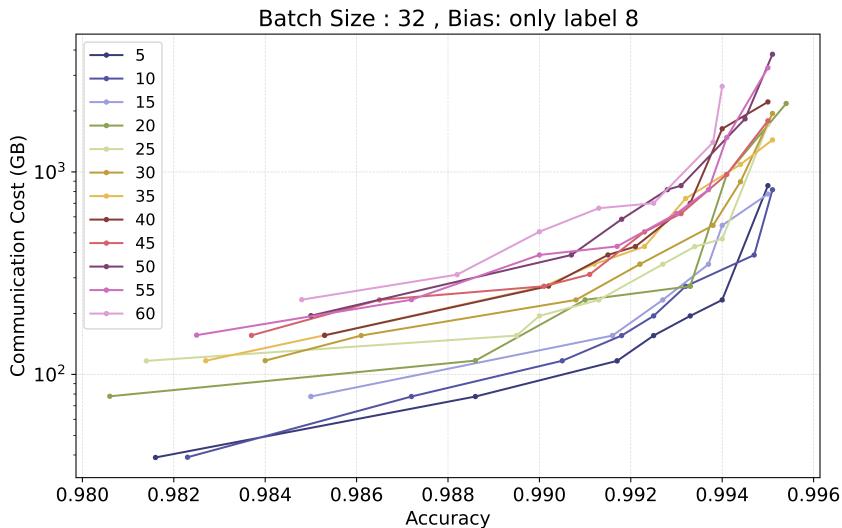
0.982

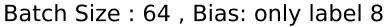
0.984

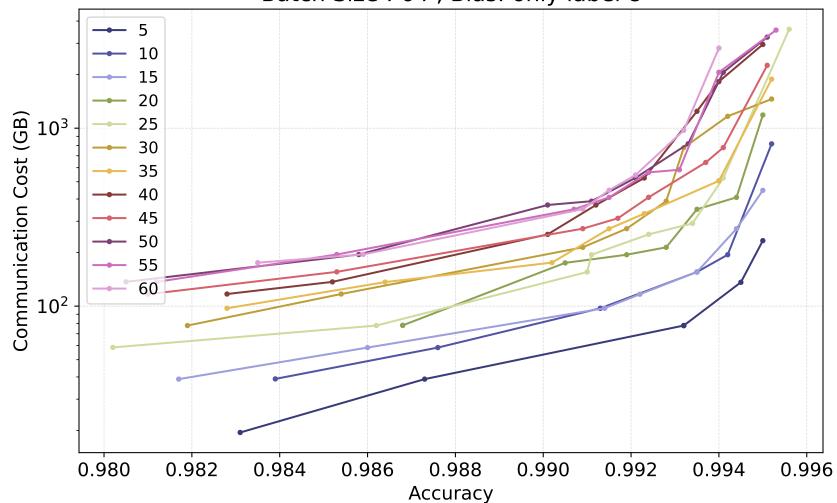
0.986

60

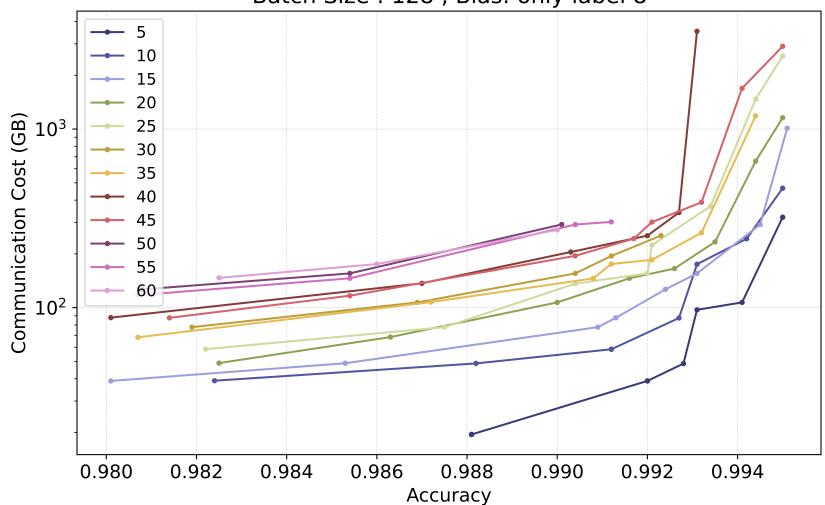
0.996

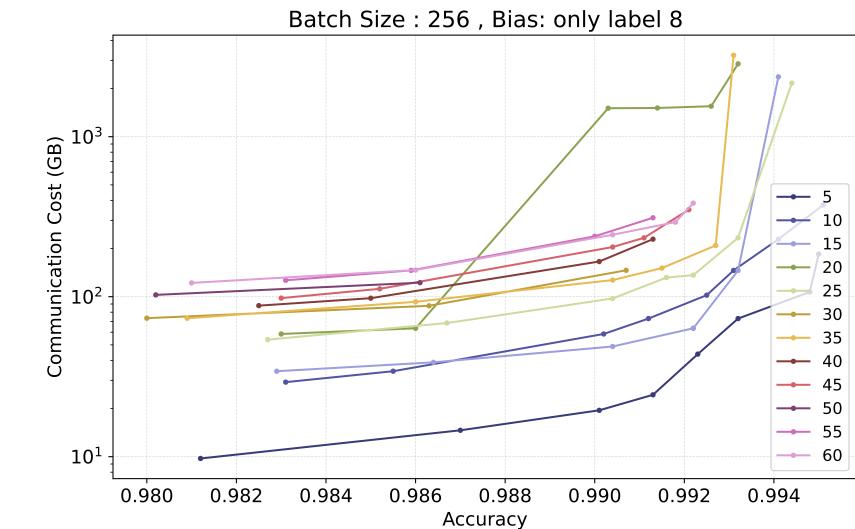




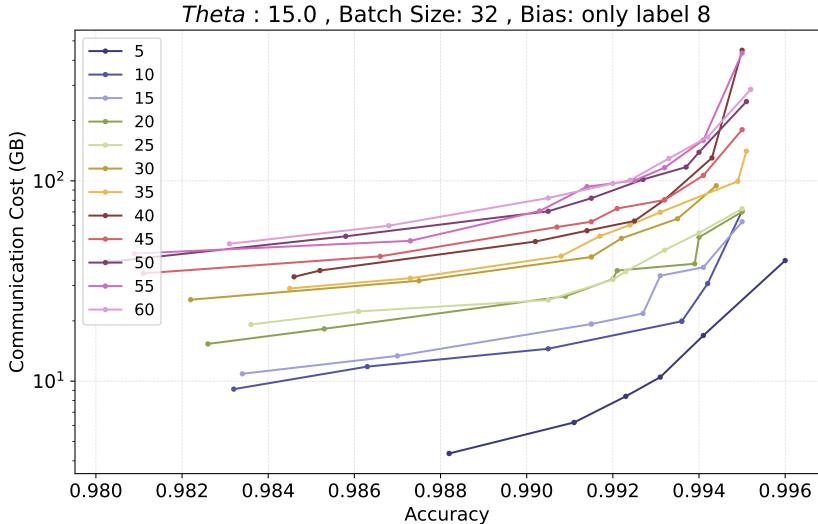


Batch Size: 128, Bias: only label 8



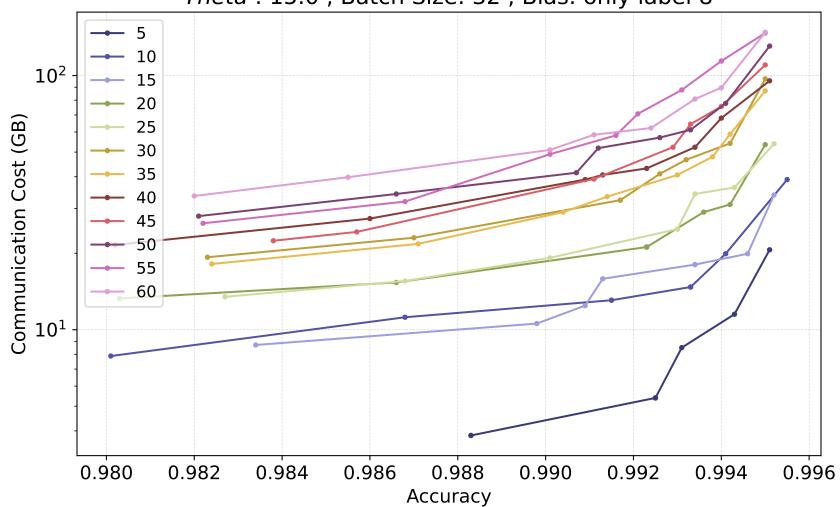


gm



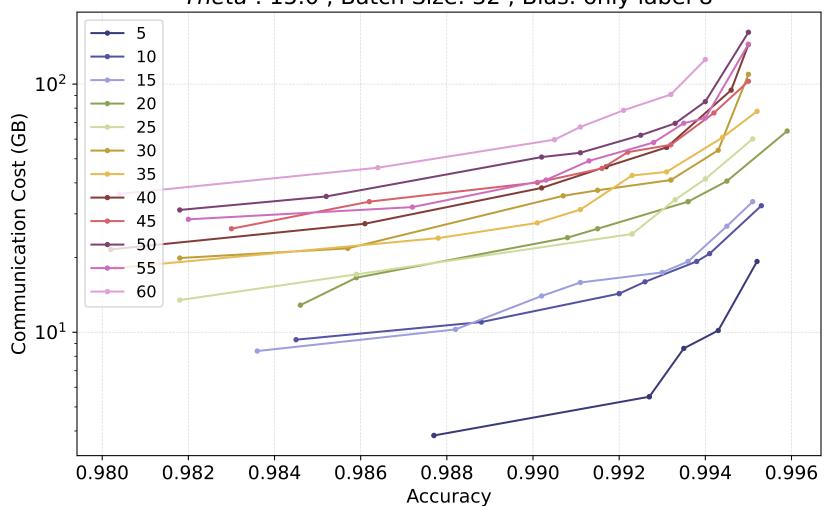
naive



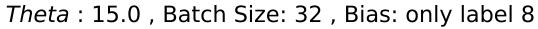


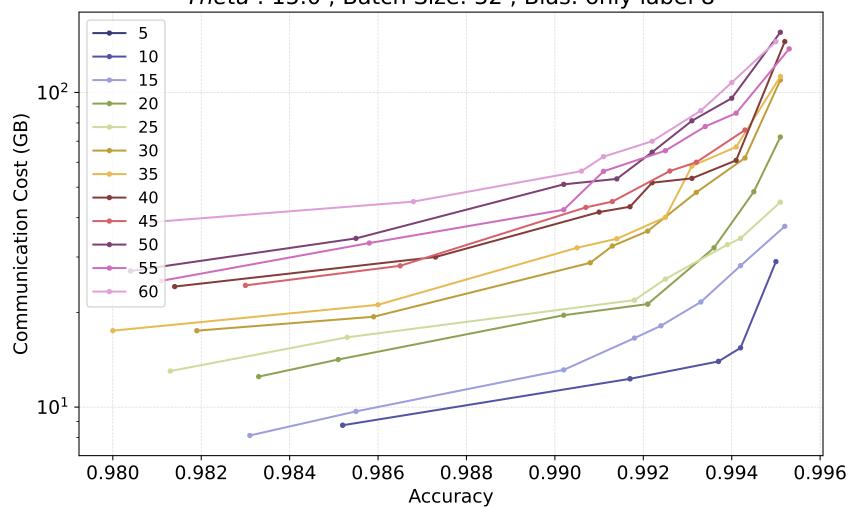
linear

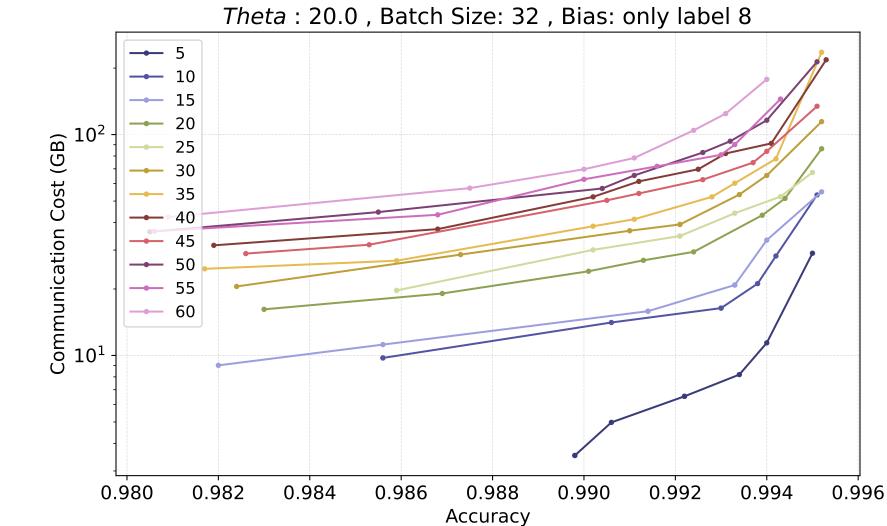
Theta: 15.0, Batch Size: 32, Bias: only label 8



sketch

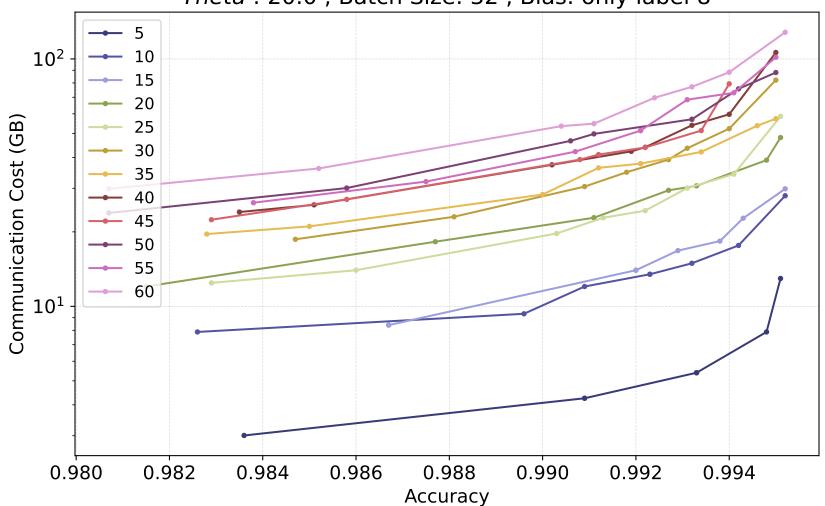




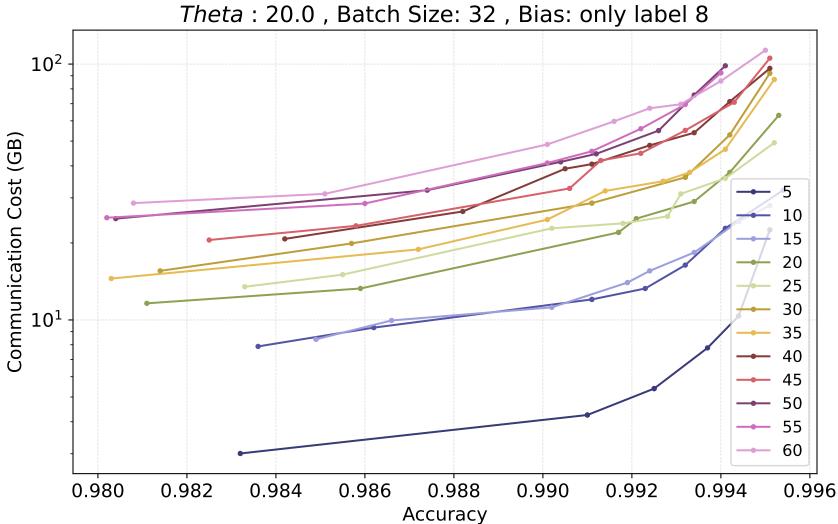


naive

Theta: 20.0, Batch Size: 32, Bias: only label 8

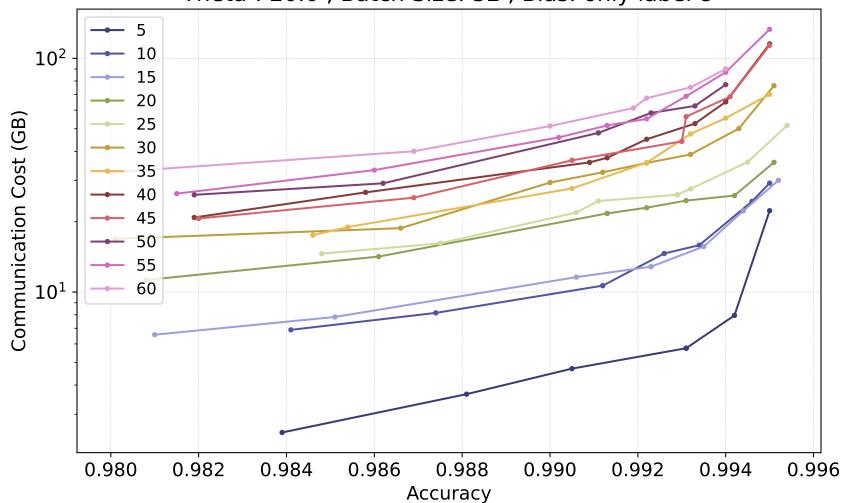


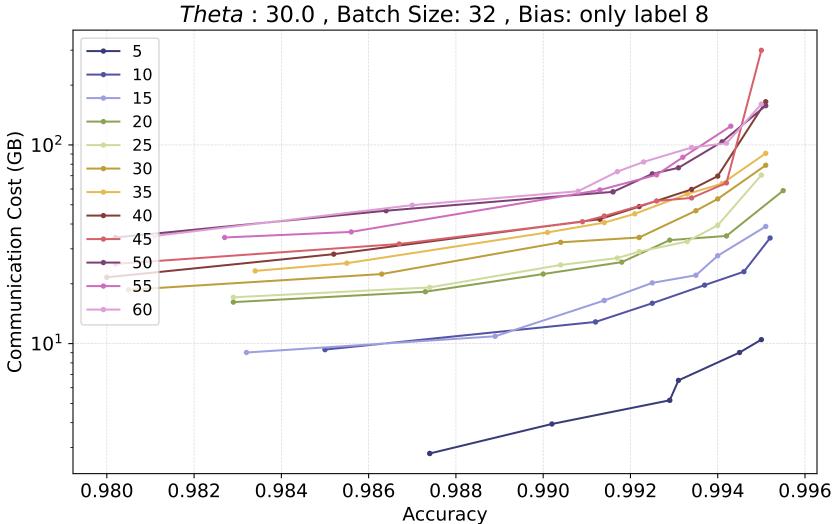
linear



sketch

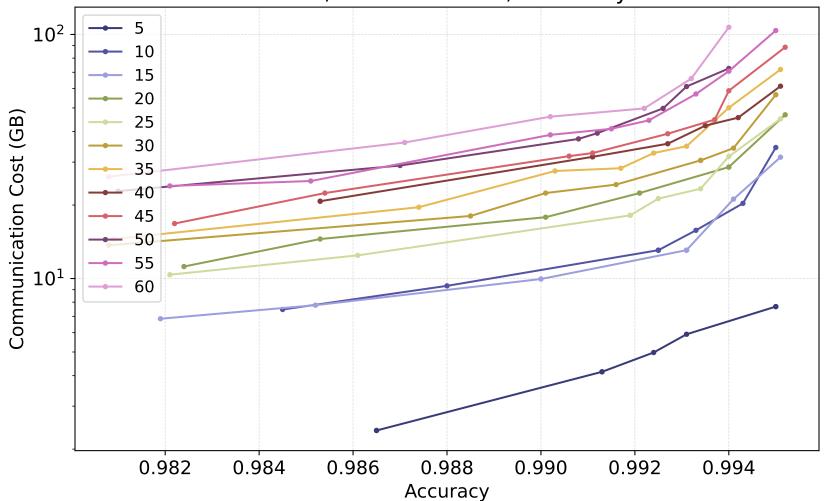
Theta: 20.0, Batch Size: 32, Bias: only label 8



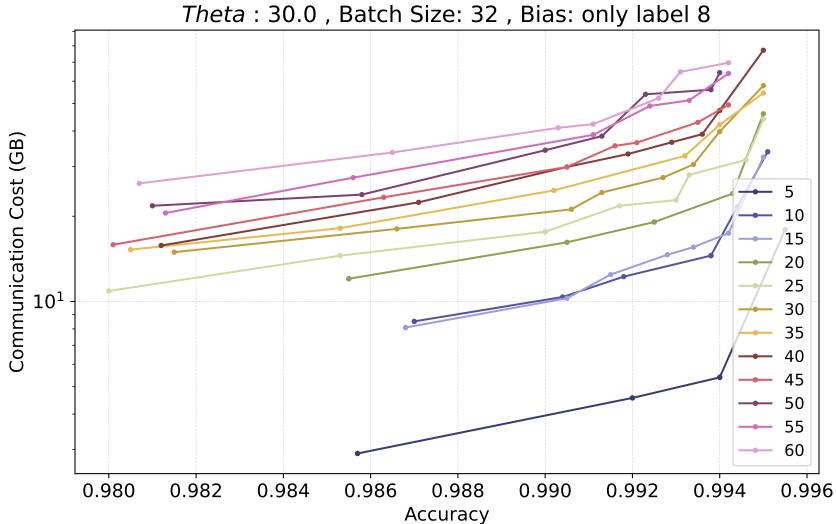


naive

Theta: 30.0, Batch Size: 32, Bias: only label 8

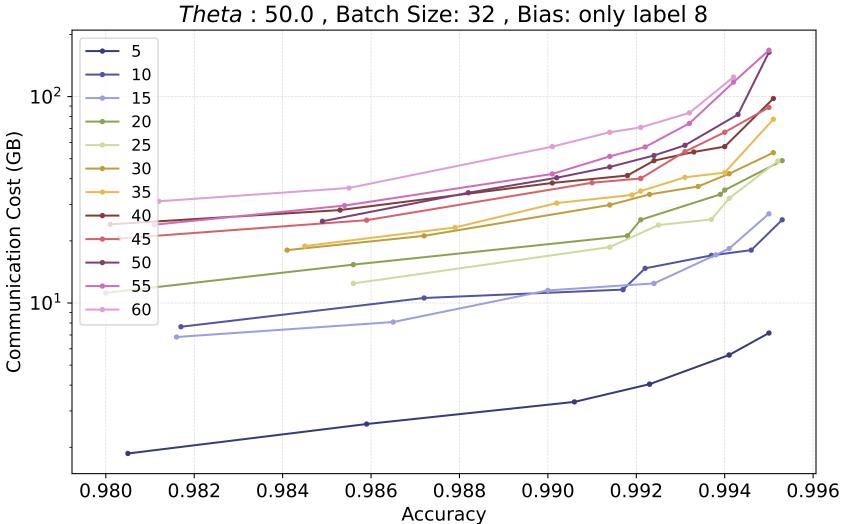


linear

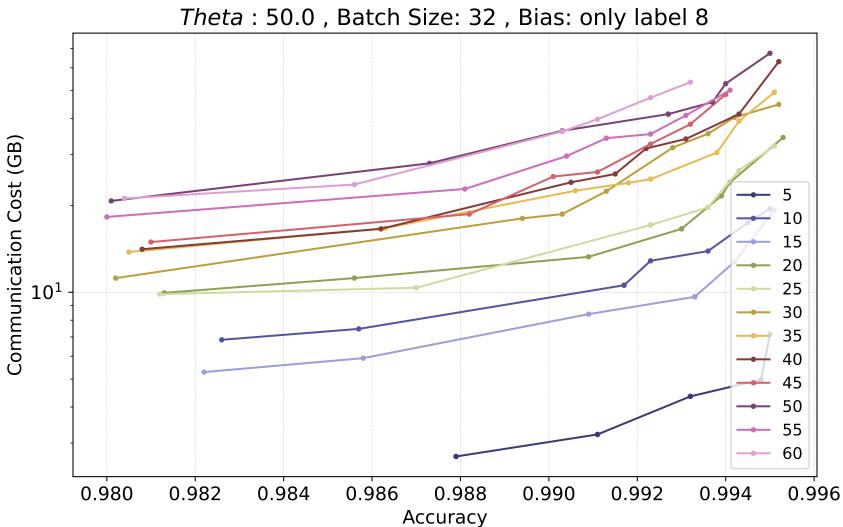


sketch

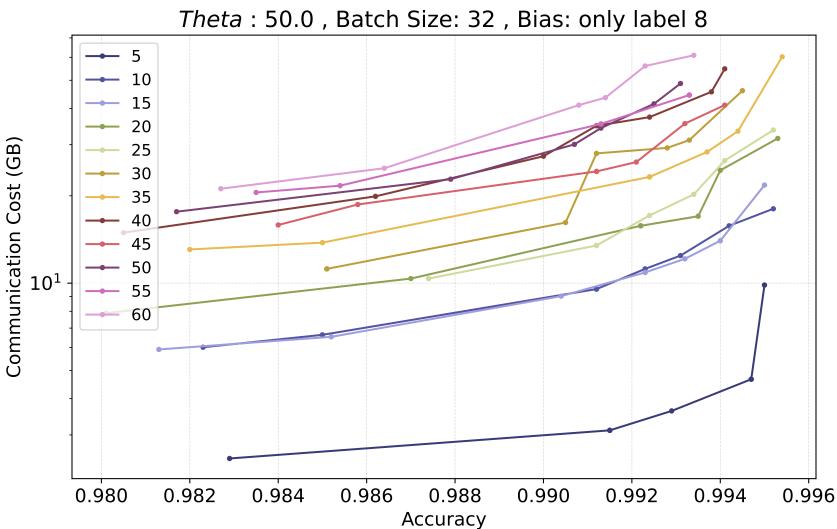
Theta: 30.0, Batch Size: 32, Bias: only label 8 10² 10 15 20 Communication Cost (GB) 25 30 35 40 45 50 55 10^{1} 60 0.980 0.982 0.984 0.986 0.988 0.990 0.992 0.994 0.996 Accuracy



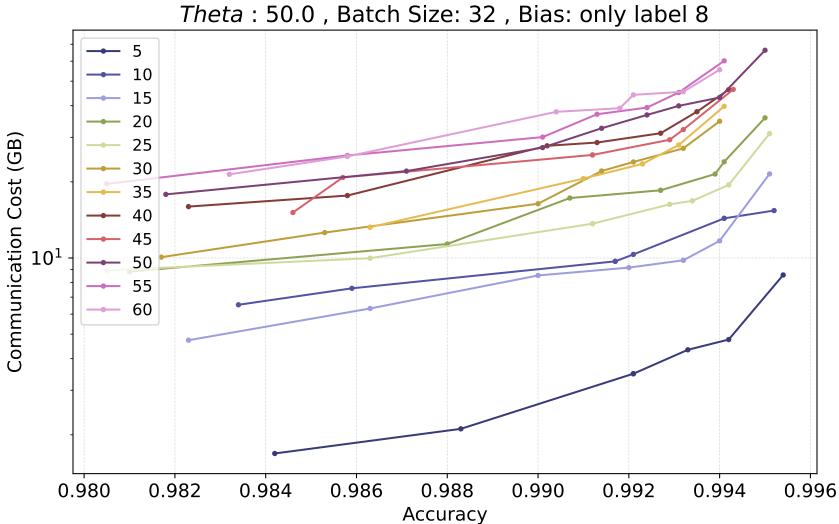
naive



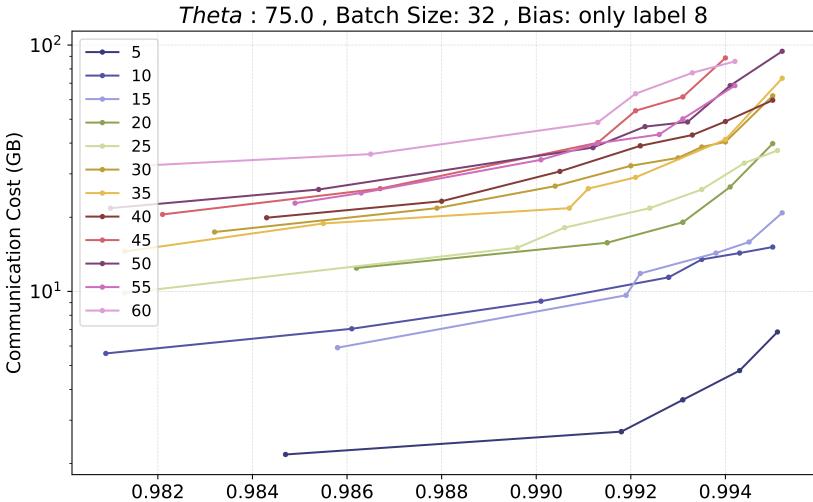
linear



sketch

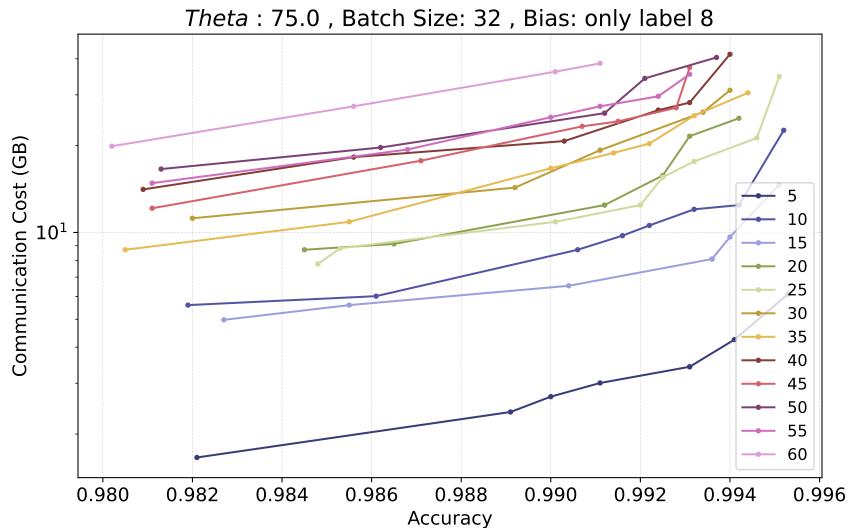


gm

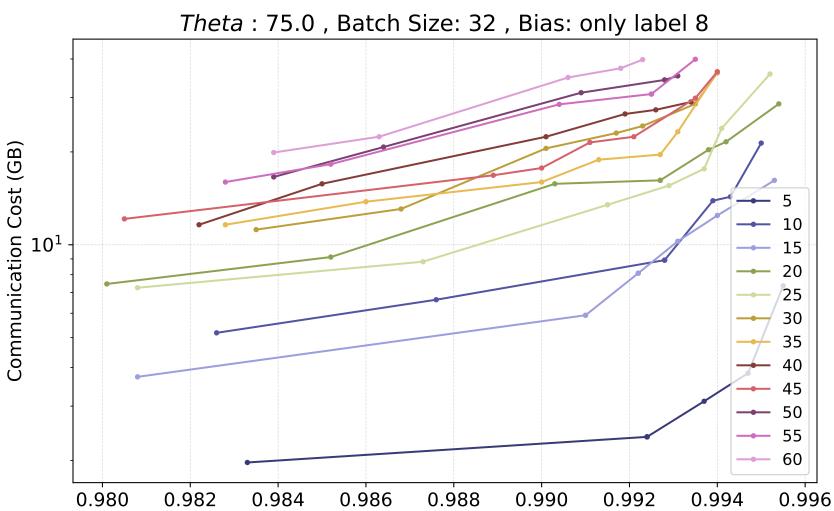


Accuracy

naive



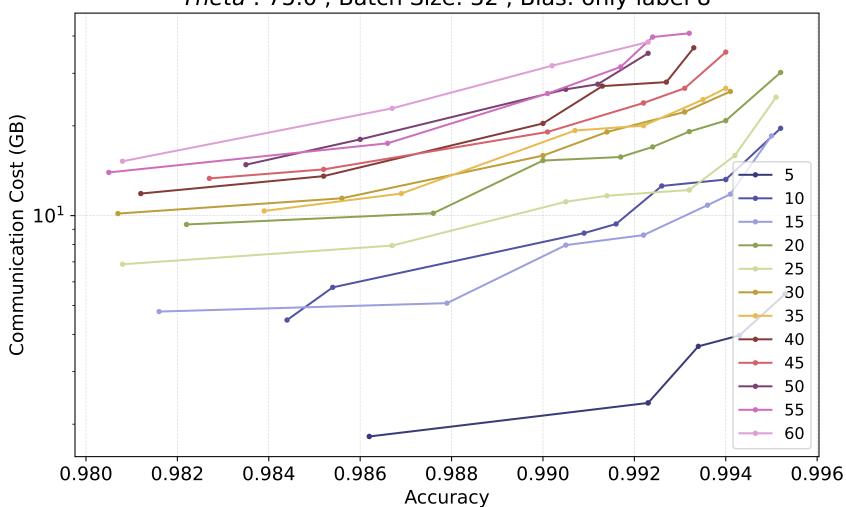
linear

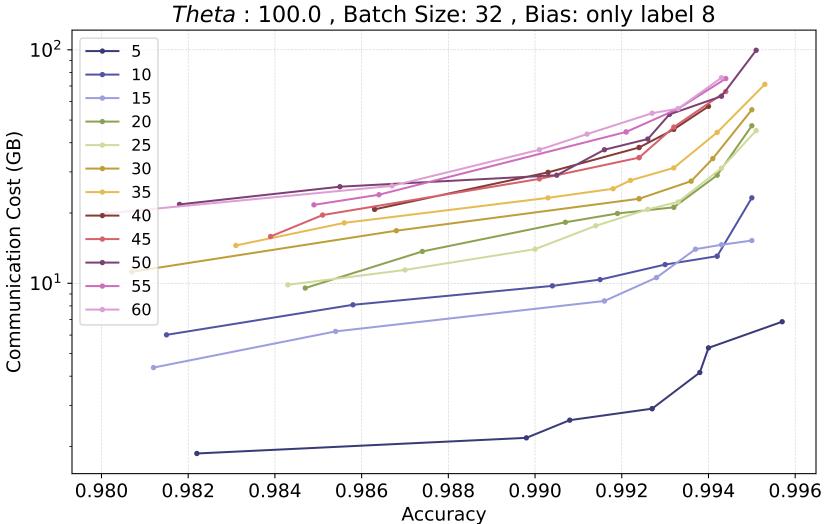


Accuracy

sketch

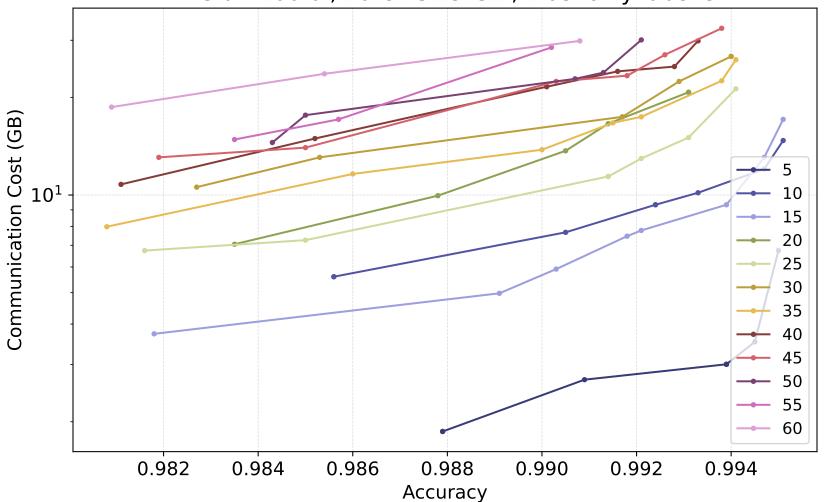
Theta: 75.0, Batch Size: 32, Bias: only label 8



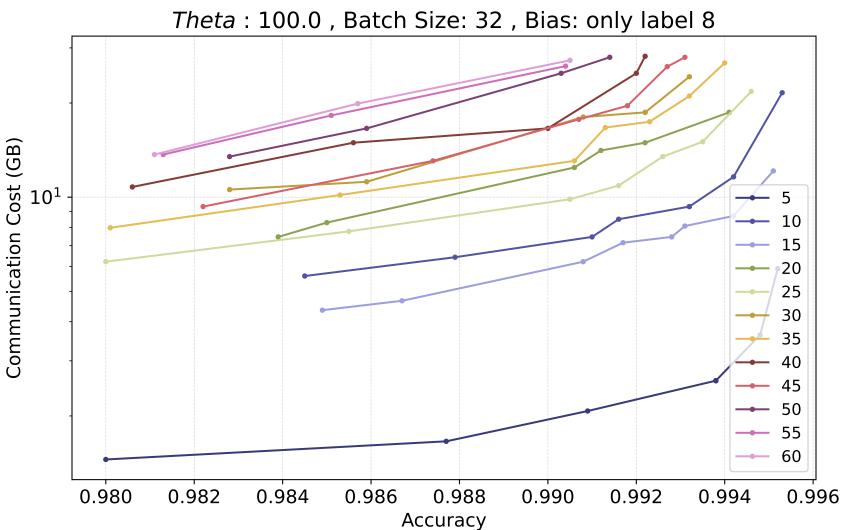


naive

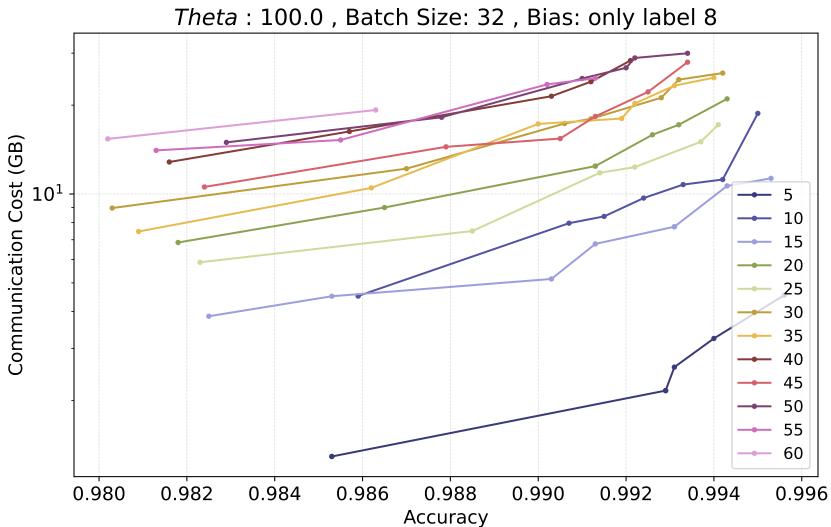


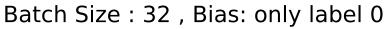


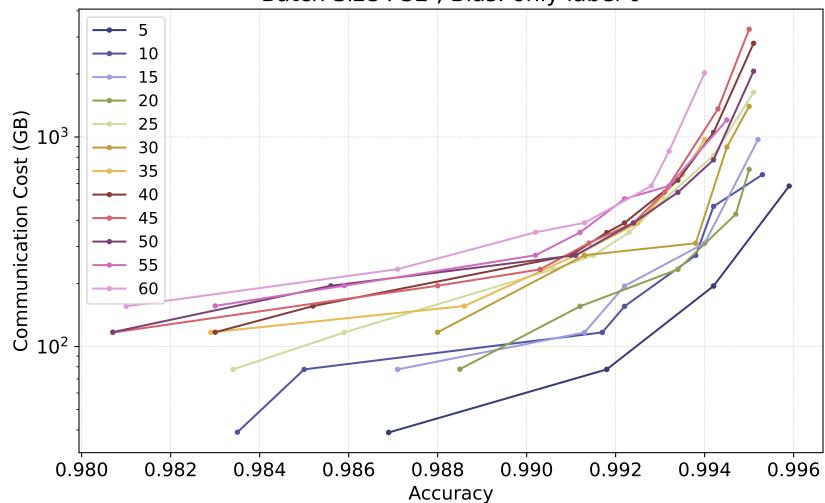
linear

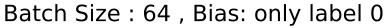


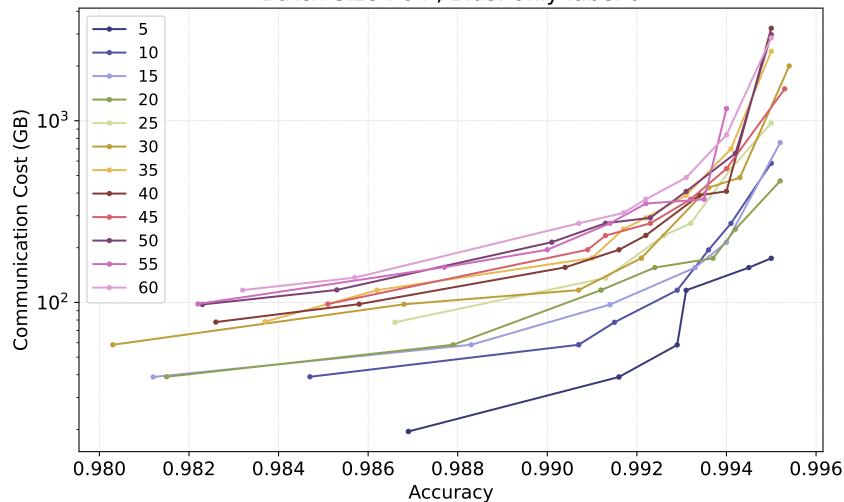
sketch



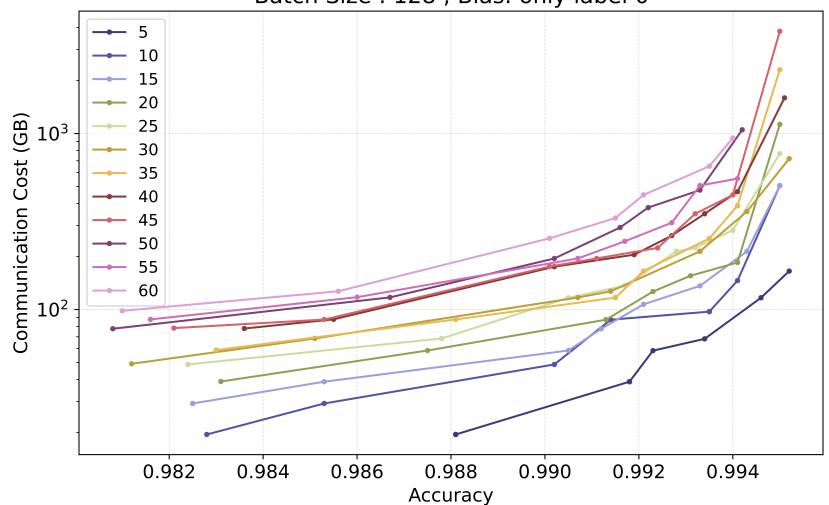


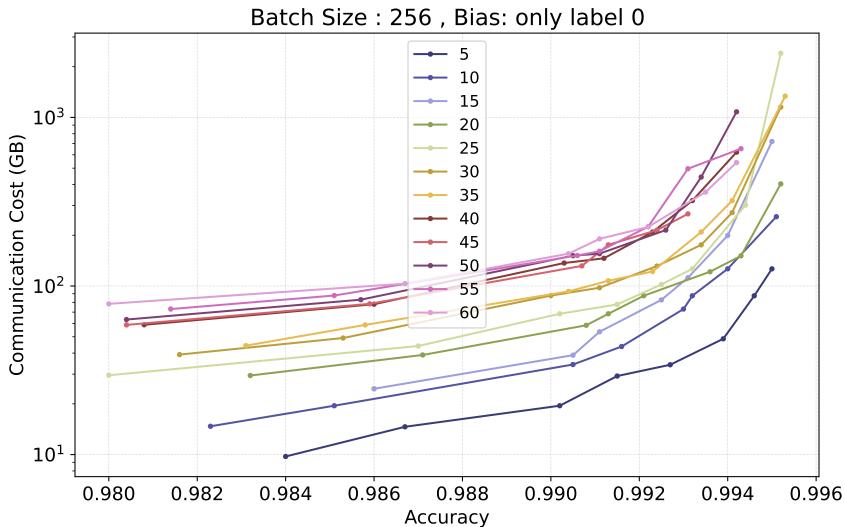




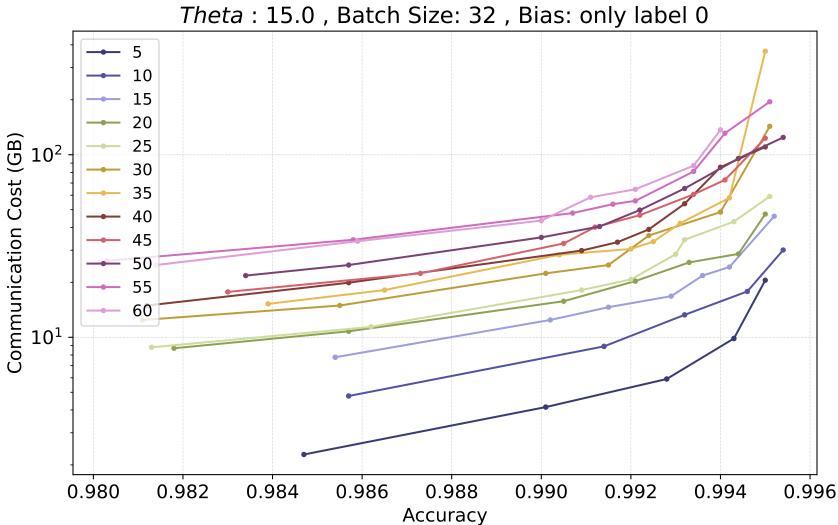


Batch Size: 128, Bias: only label 0

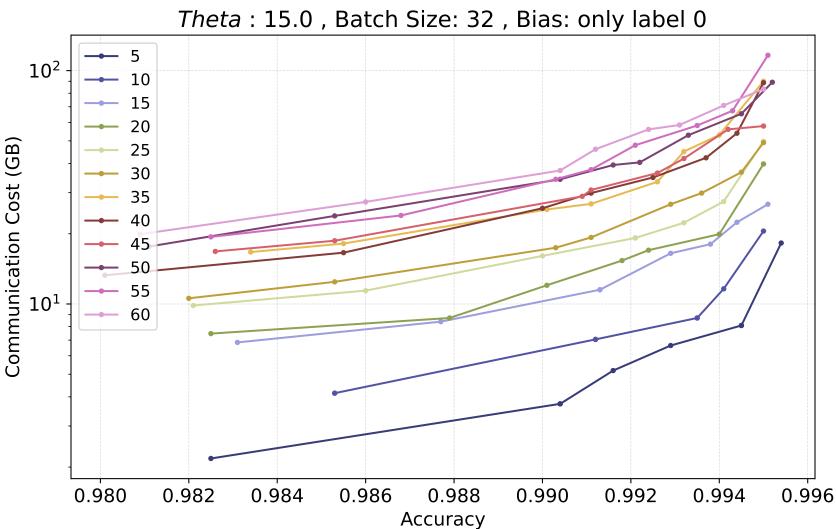




gm ota : 15.0 Batch Sizo

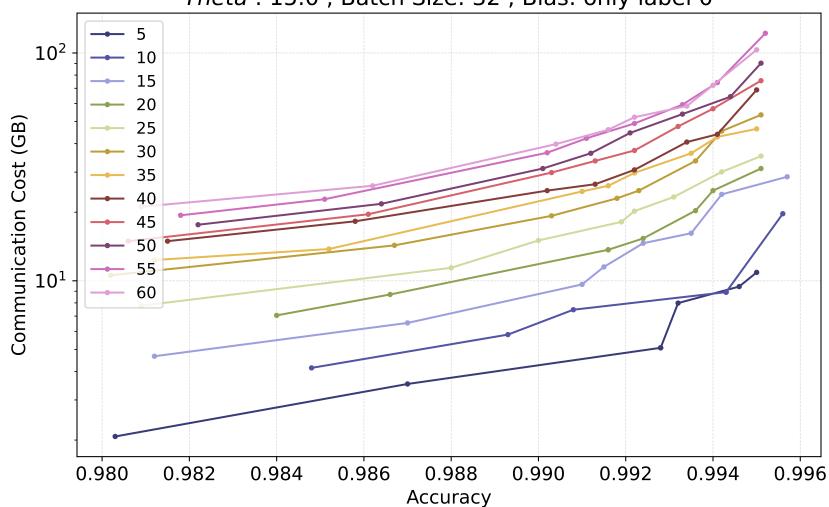


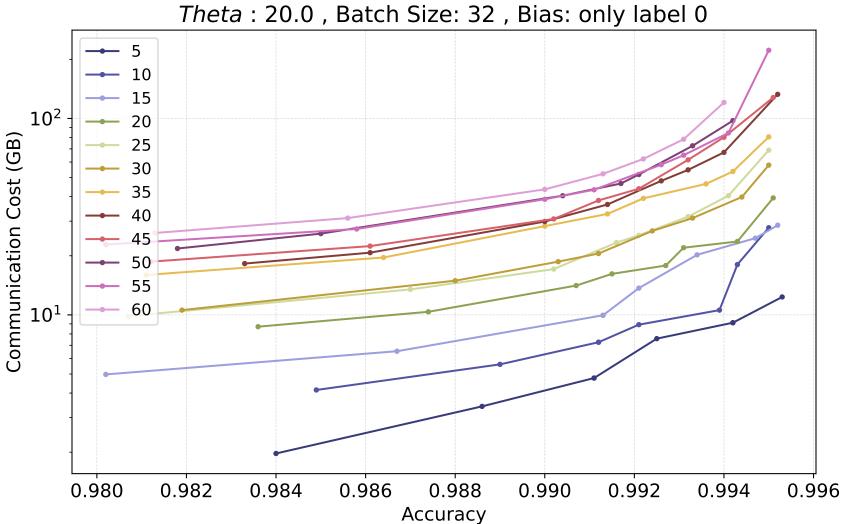
naive



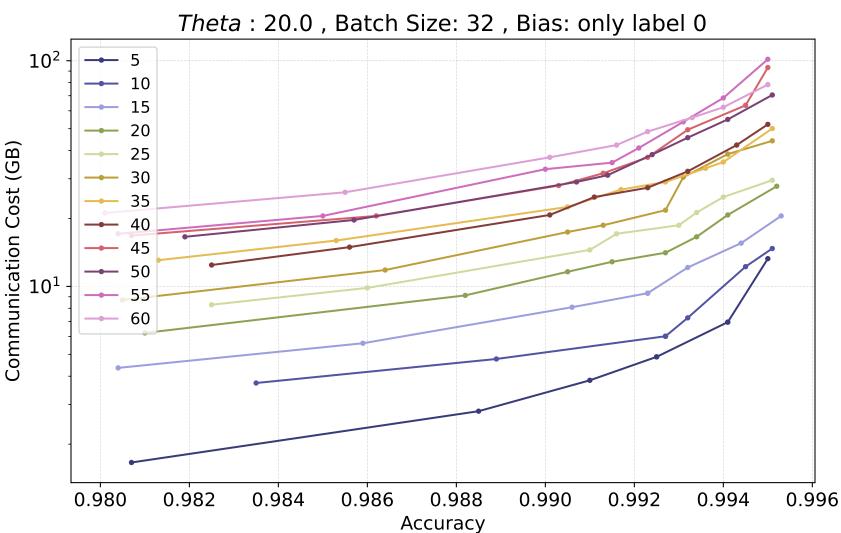
linear

Theta: 15.0, Batch Size: 32, Bias: only label 0



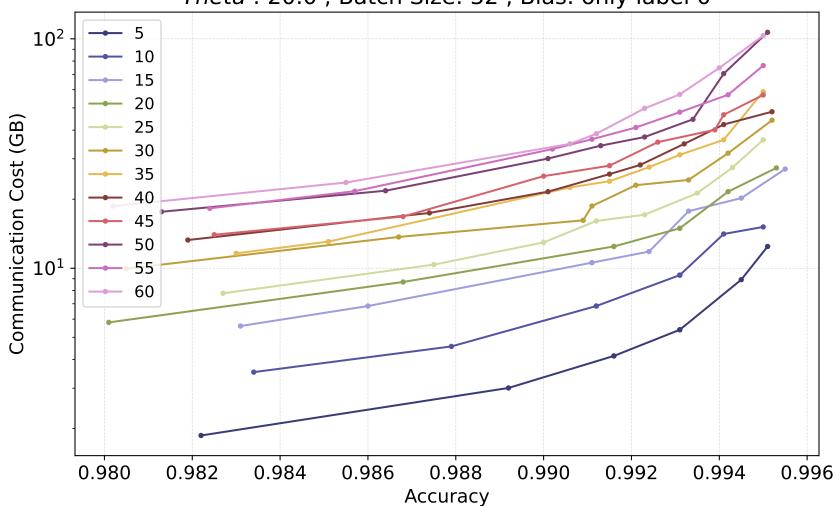


naive



linear

Theta: 20.0, Batch Size: 32, Bias: only label 0



gm Theta: 30.0, Batch Size: 32, Bias: only label 0 10² Communication Cost (GB) 10 15 20 10¹ 25 30 35 40 45 50 55

60

0.982

0.984

0.986

0.990

0.988

Accuracy

0.992

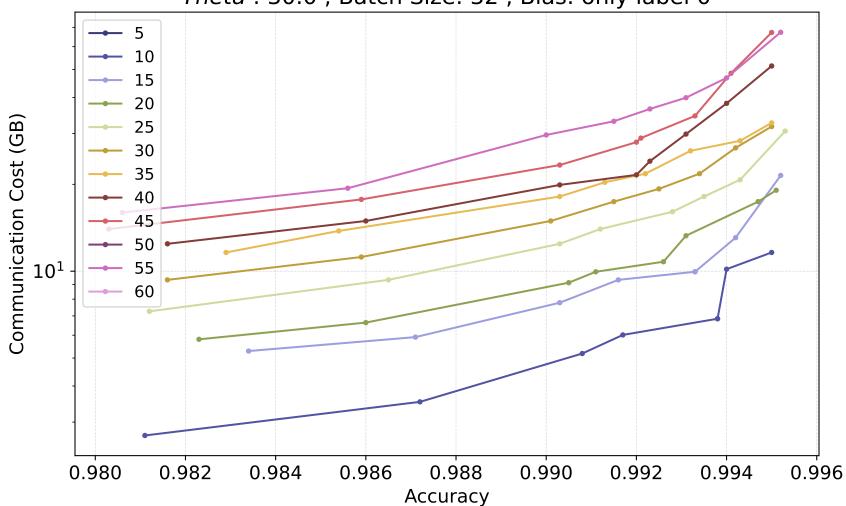
0.996

0.994

0.980

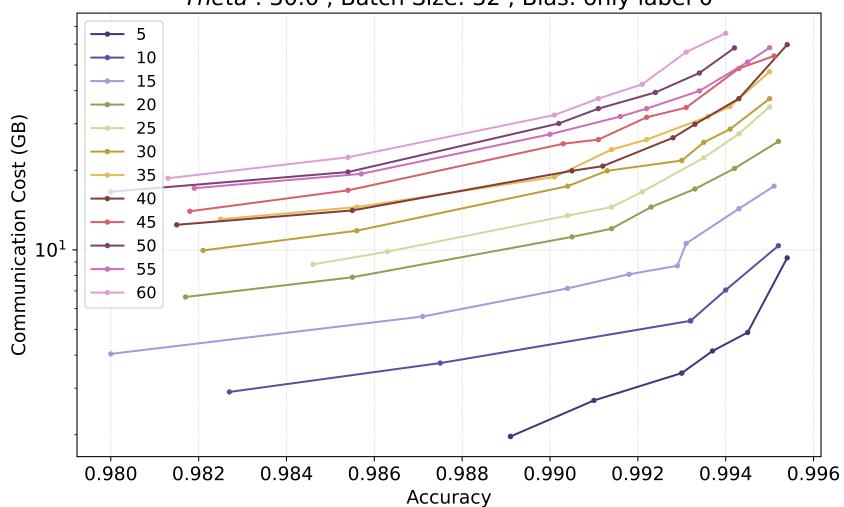
naive

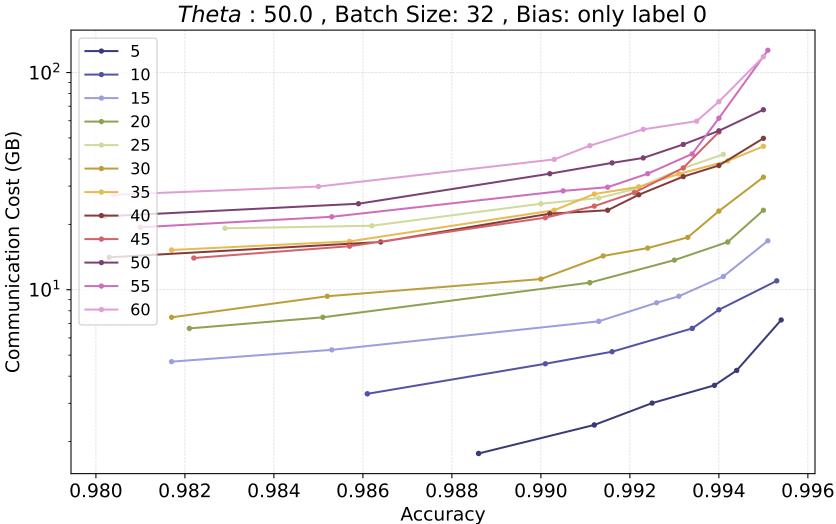
Theta: 30.0, Batch Size: 32, Bias: only label 0



linear

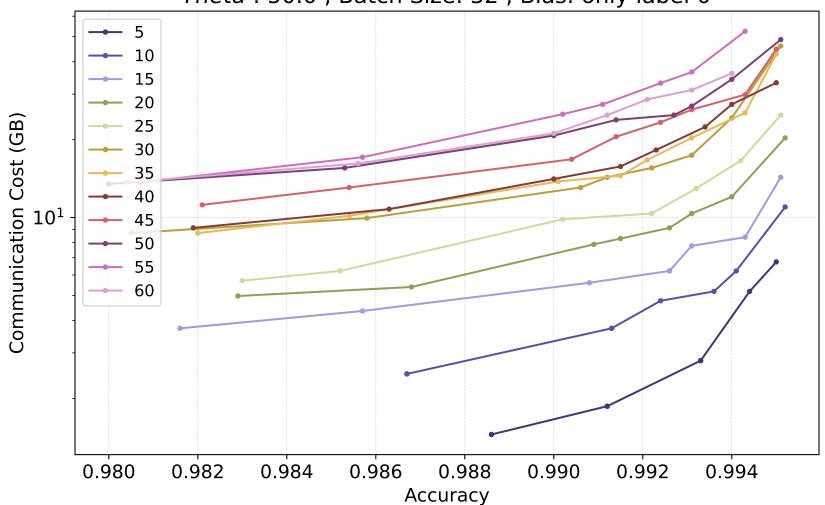
Theta: 30.0, Batch Size: 32, Bias: only label 0



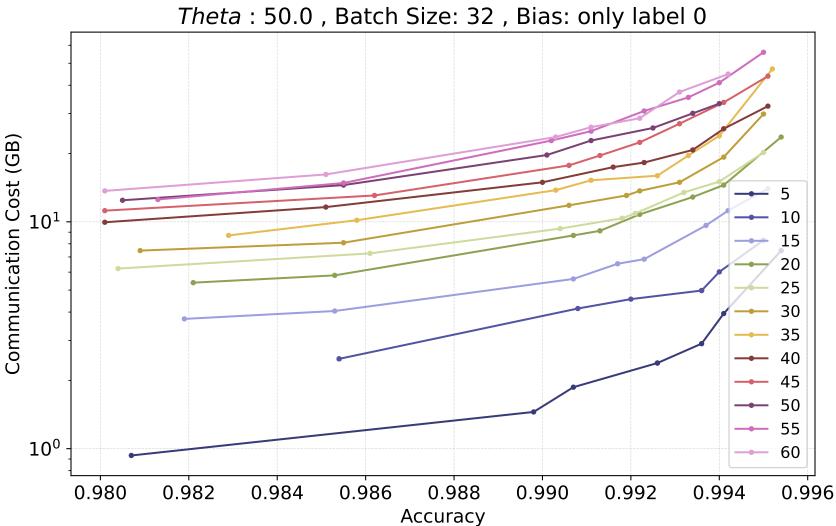


naive

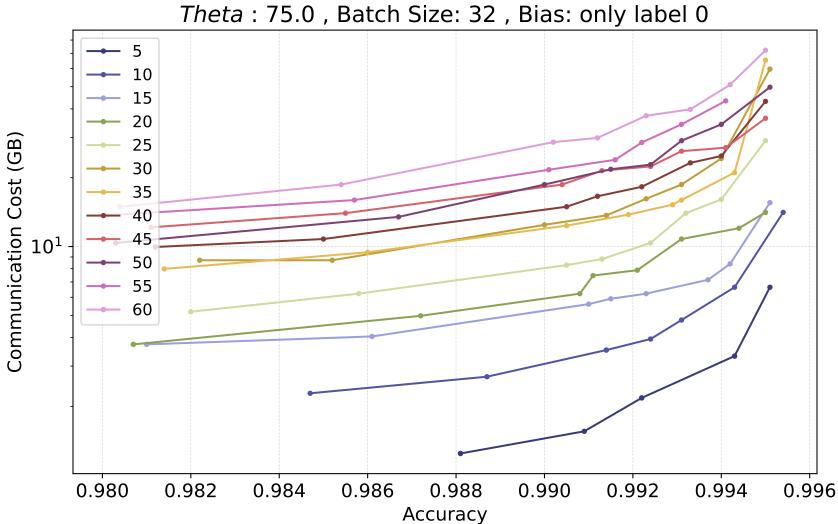




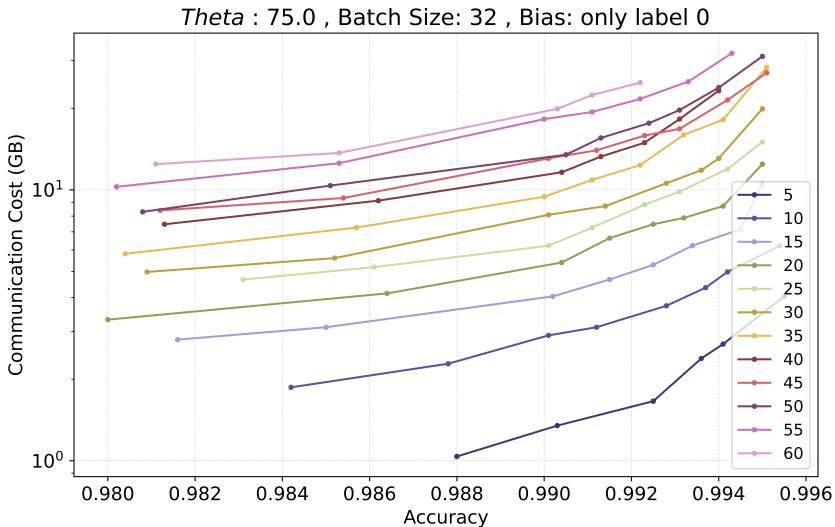
linear



gm

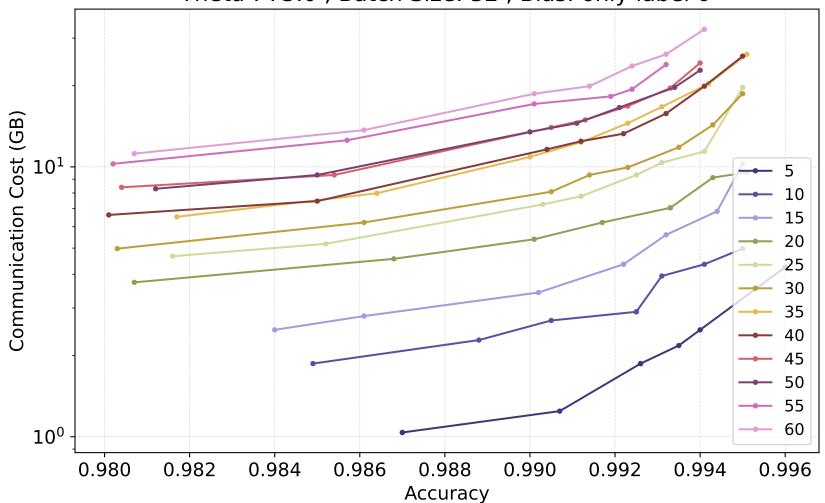


naive



linear

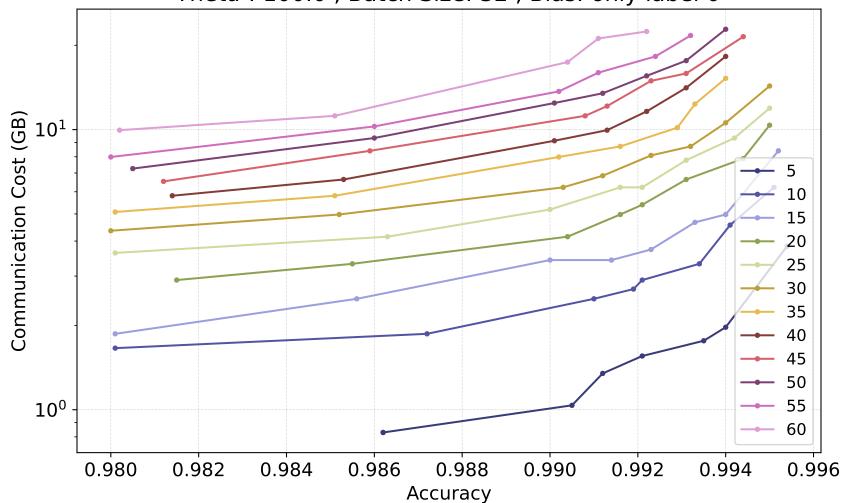
Theta: 75.0, Batch Size: 32, Bias: only label 0



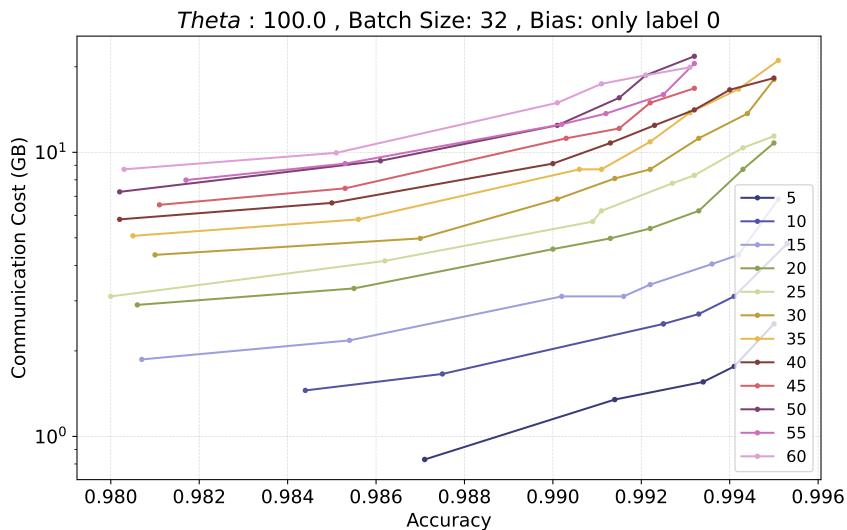
gm Theta: 100.0, Batch Size: 32, Bias: only label 0 Communication Cost (GB) 10^{1} 10 15 20 25 30 35 40 45 50 10⁰ 55 60 0.980 0.982 0.984 0.986 0.990 0.992 0.994 0.988 0.996 Accuracy

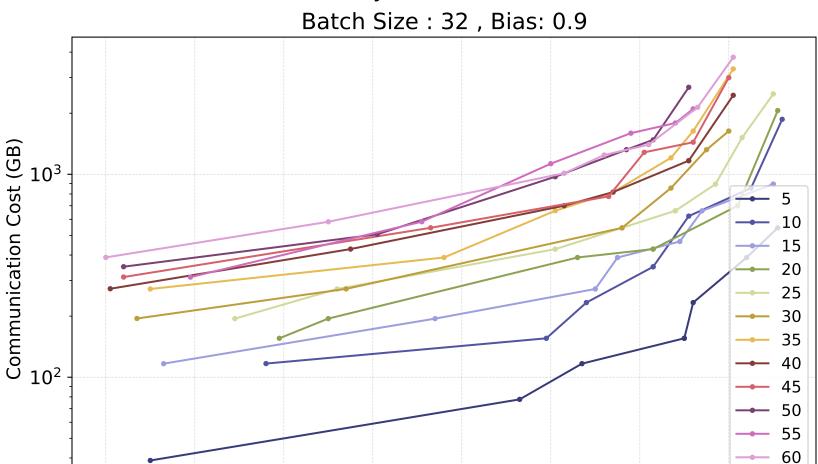
naive





linear





0.980

0.982

0.984

0.986

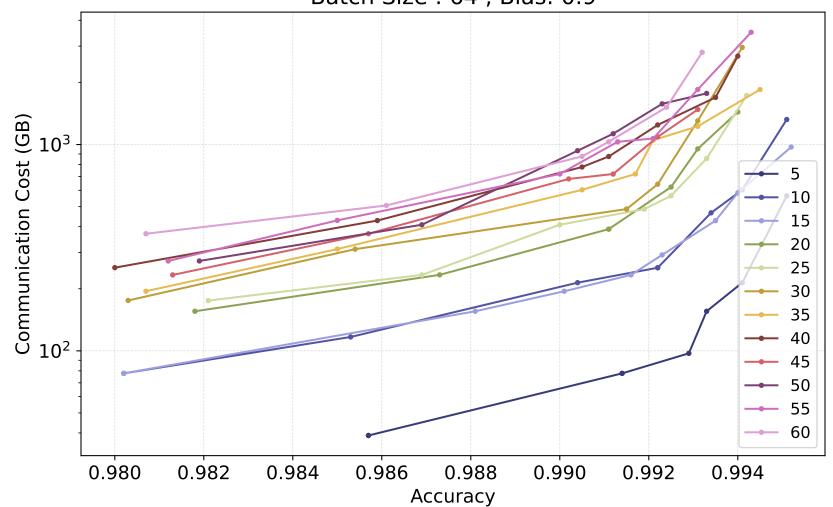
0.988

Accuracy

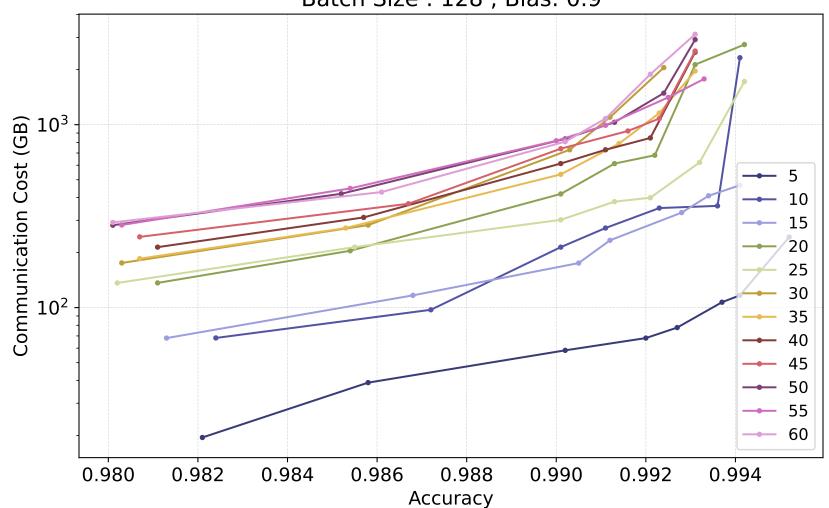
0.990

0.992

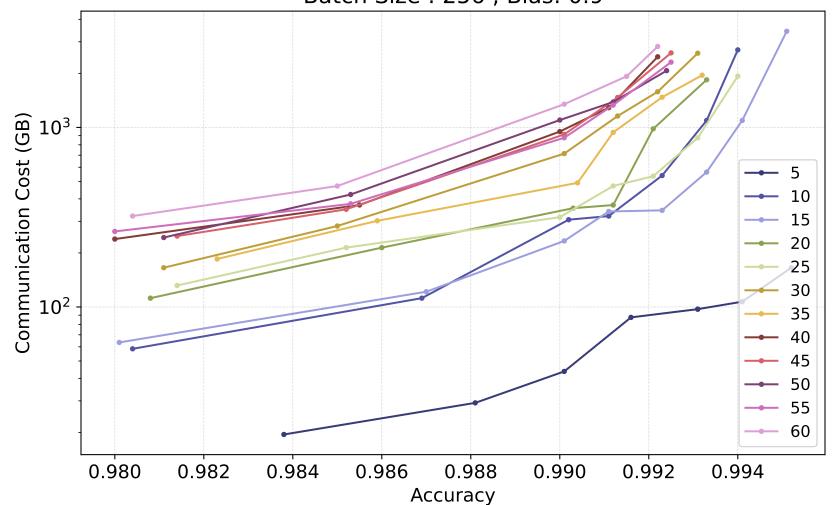
Batch Size: 64, Bias: 0.9



Batch Size: 128, Bias: 0.9







gm Theta: 15.0, Batch Size: 32, Bias: 0.9 Communication Cost (GB) 10² 10 15 20 25 30 35 40 10¹ 50 55

0.990

0.988

Accuracy

0.992

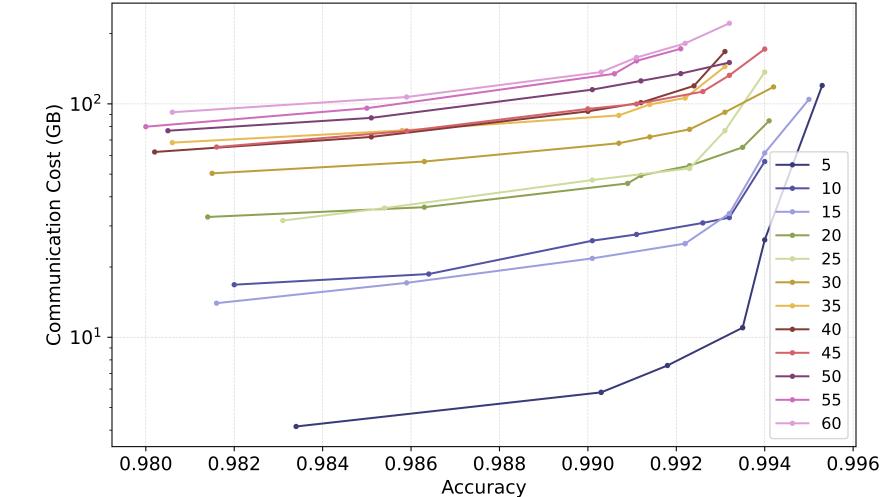
0.994

60

0.980

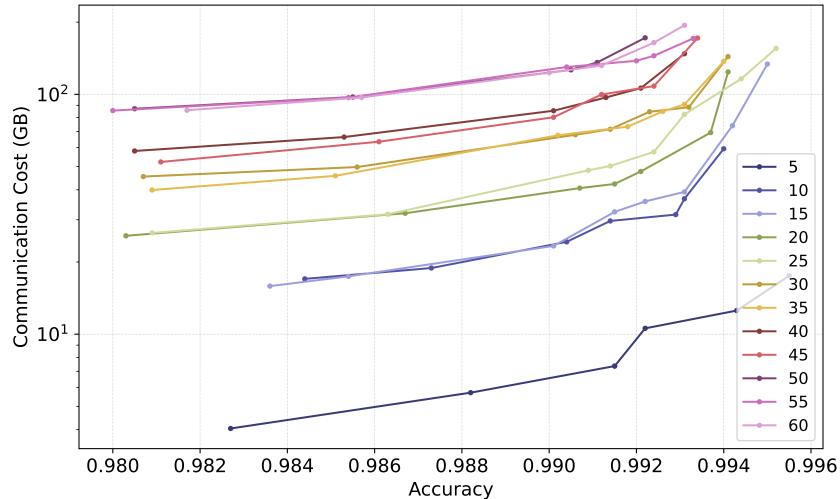
0.982

naive Theta: 15.0, Batch Size: 32, Bias: 0.9

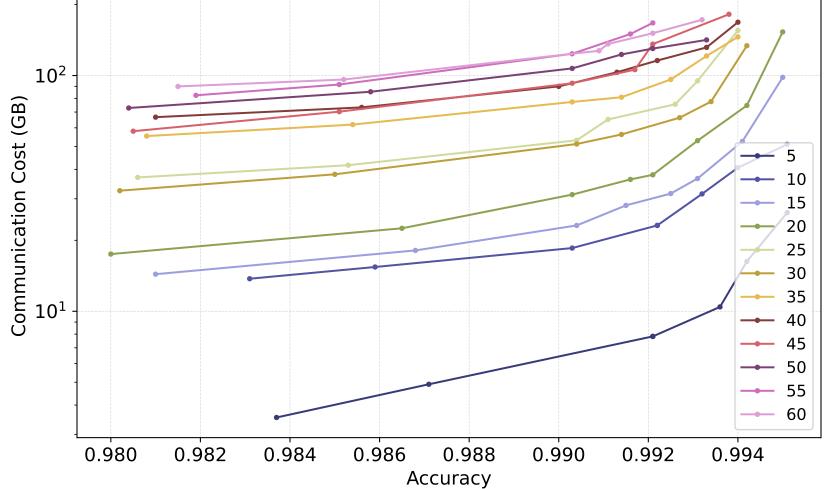


linear





sketch Theta: 15.0, Batch Size: 32, Bias: 0.9



gm Theta: 20.0, Batch Size: 32, Bias: 0.9 Communication Cost (GB) 101 10 15 20 25 30 35 40 10¹ 45 50 55 60 0.980 0.982 0.984 0.986 0.988 0.990 0.992 0.994 0.996 Accuracy

naive Theta: 20.0, Batch Size: 32, Bias: 0.9 10² Communication Cost (GB) 10 15 20 25 30 35 10^{1} 40 45 50 55 **-** 60

0.982

0.984

0.986

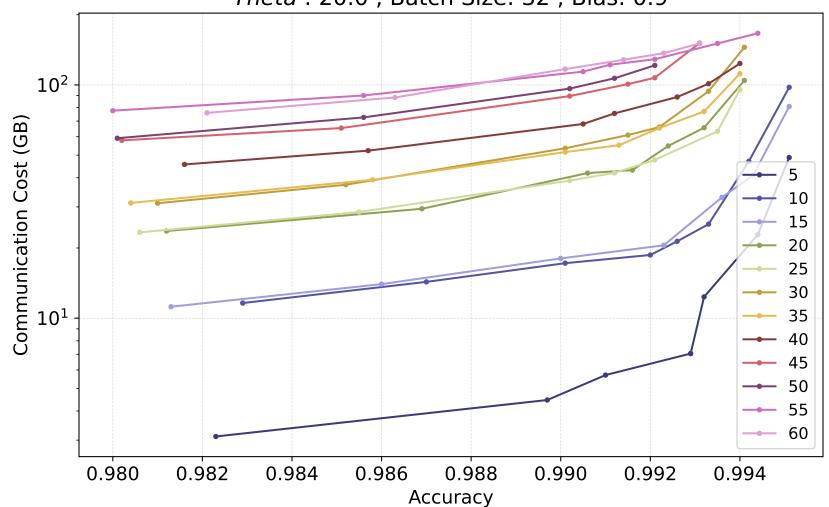
0.988

Accuracy

0.992

0.990

linear
Theta: 20.0, Batch Size: 32, Bias: 0.9



gm Theta: 30.0, Batch Size: 32, Bias: 0.9 Communication Cost (GB) 10 15 20 25 30 35 40 45 50

0.982

0.984

0.986

0.988

Accuracy

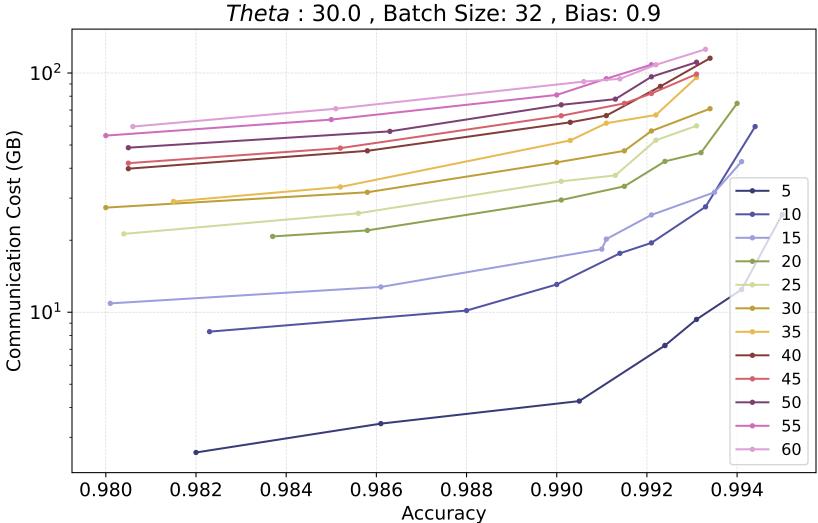
0.990

55 60

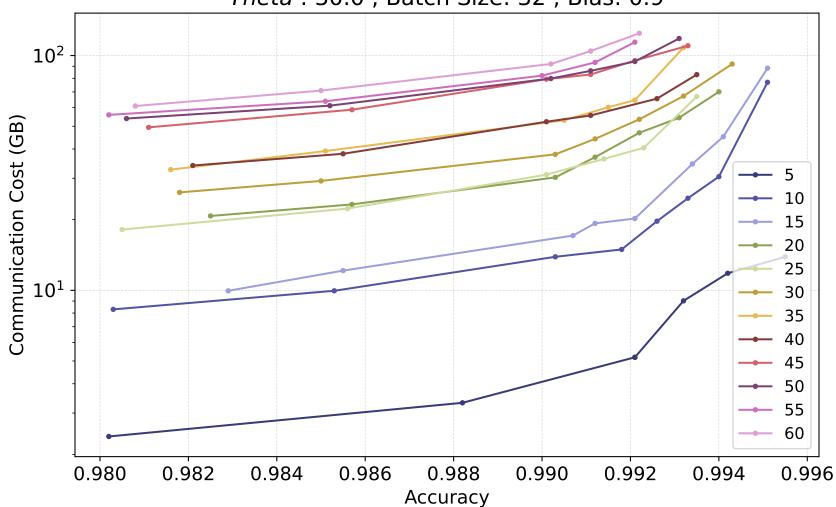
0.996

0.994

naive Thata: 30.0 Batch Size: 32



linear
Theta: 30.0, Batch Size: 32, Bias: 0.9



gm Theta: 50.0, Batch Size: 32, Bias: 0.9 10² Communication Cost (GB) 10 15 20 25 10^{1} 30 35 40 45 50 55

60

0.982

0.984

0.986

0.988

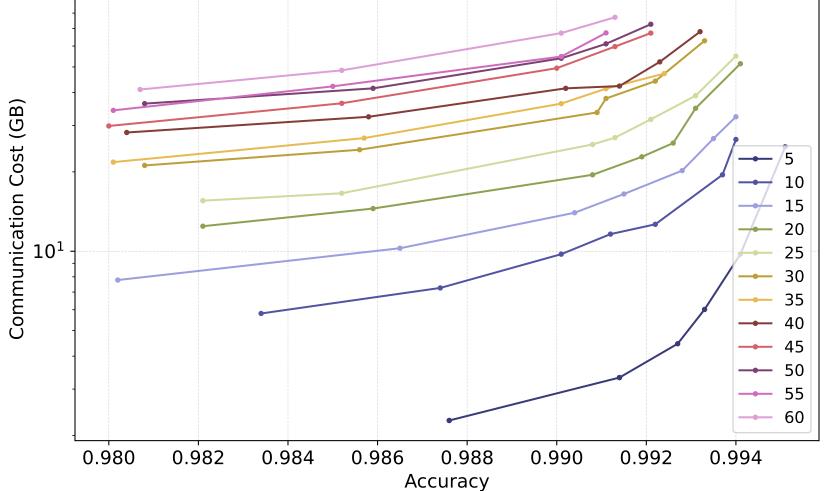
Accuracy

0.990

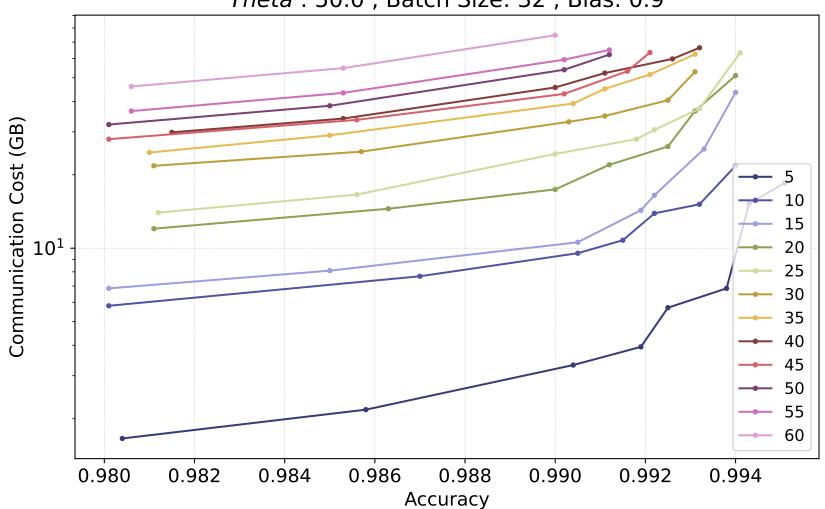
0.992

0.994

naive Theta: 50.0, Batch Size: 32, Bias: 0.9



linear
Theta: 50.0, Batch Size: 32, Bias: 0.9



gm Theta: 75.0, Batch Size: 32, Bias: 0.9 10² Communication Cost (GB) 10 15 20 10¹ 25 30 35 40 45 50 55 **—** 60

0.982

0.984

0.986

0.990

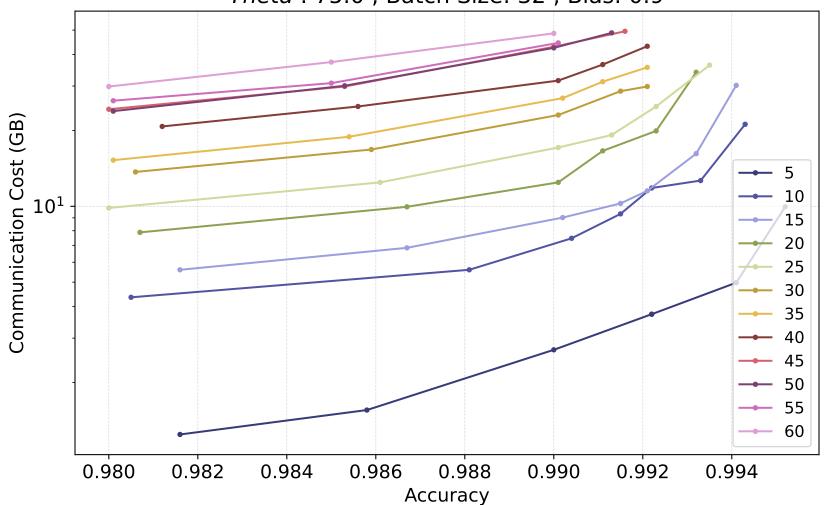
0.988

Accuracy

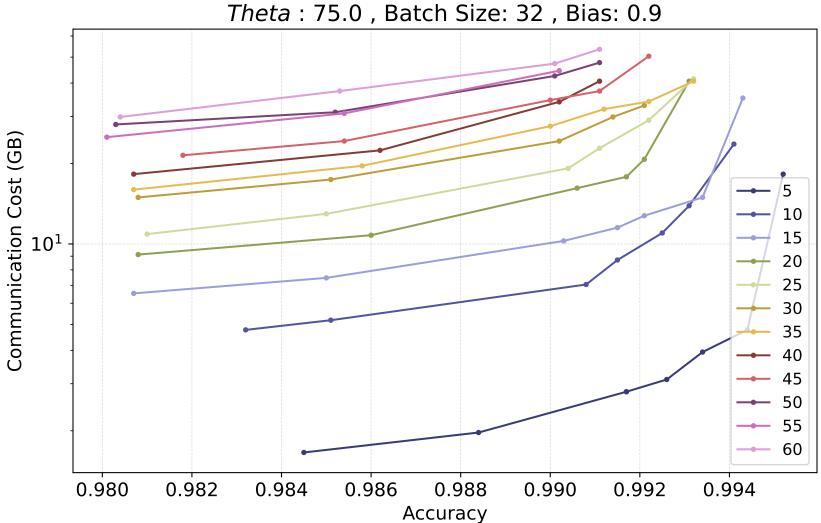
0.992

naive

Theta: 75.0, Batch Size: 32, Bias: 0.9

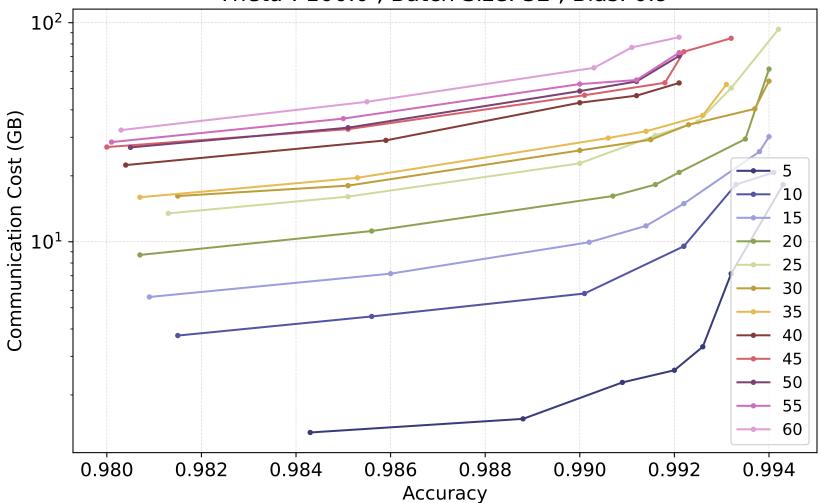


linear

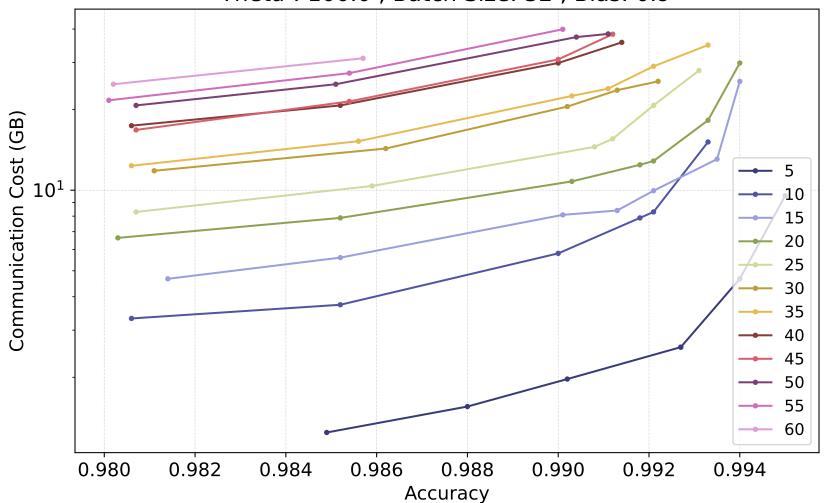


gm

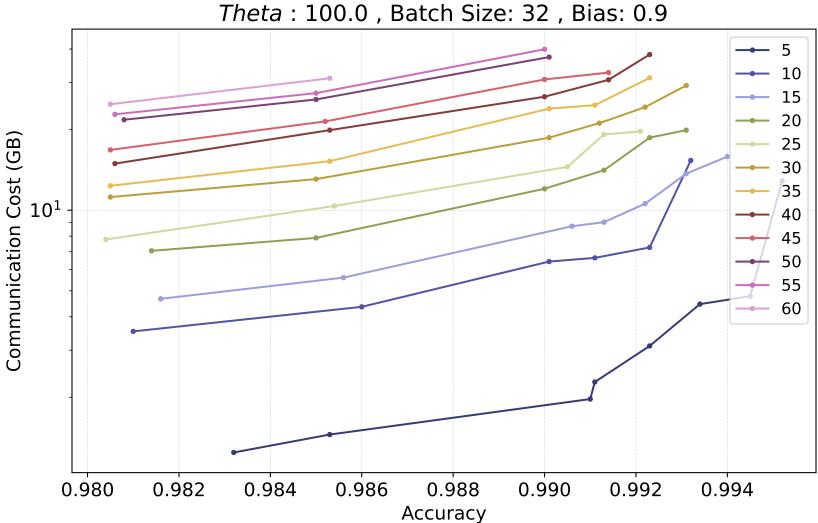
Theta: 100.0, Batch Size: 32, Bias: 0.9



naive Theta: 100.0, Batch Size: 32, Bias: 0.9



linear



sketch Theta: 100.0, Batch Size: 32, Bias: 0.9 Communication Cost (GB) 10¹ 10 15 20 25 30 35 40 45 50 55 10^{0} 60 0.980 0.982 0.984 0.986 0.990 0.992 0.994 0.988 Accuracy