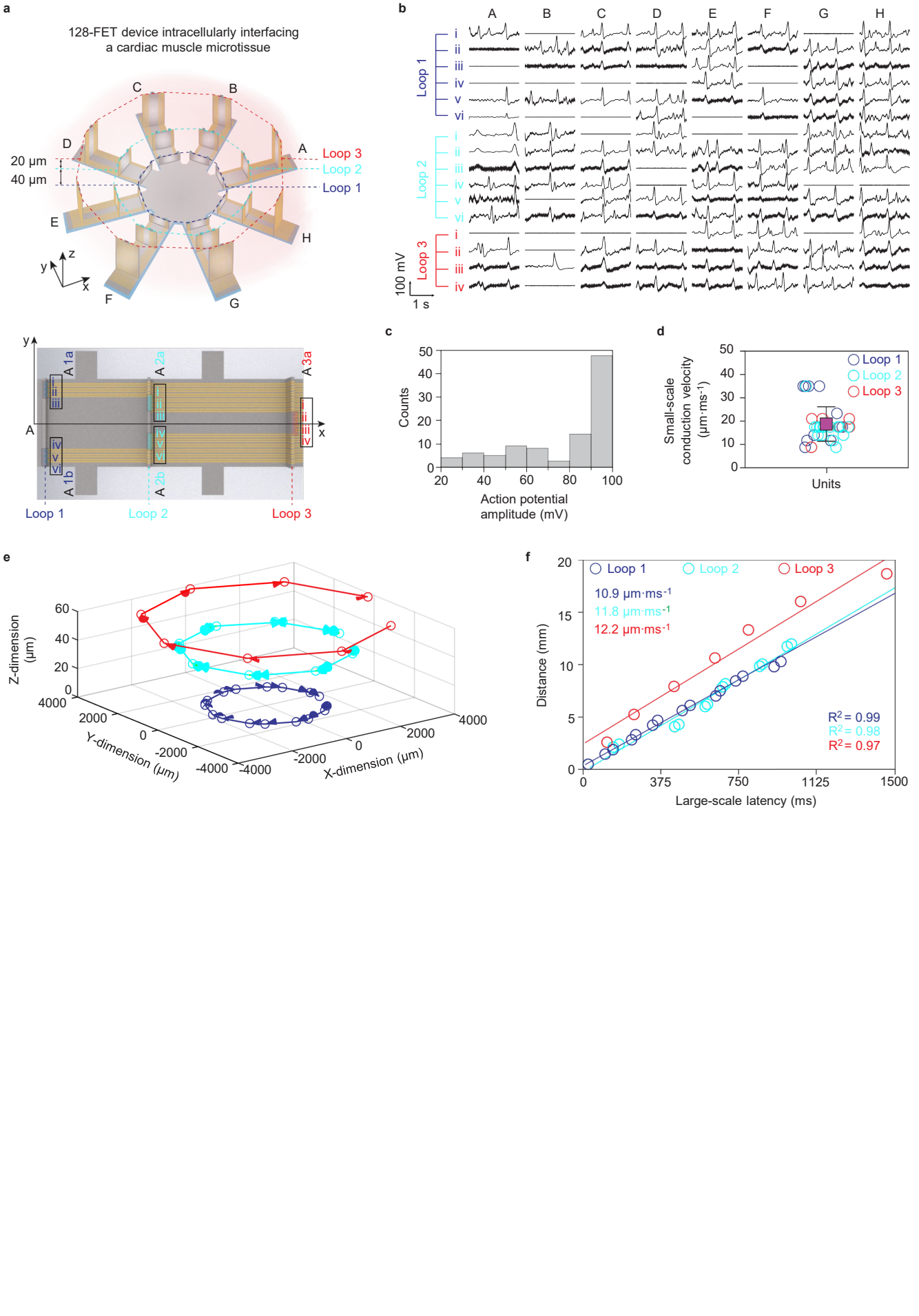
a
128-FET device intracellularly interfacing
a cardiac muscle microtissue
C
B
D
A
20 µm
40 µm
Loop 3
Loop 2
Loop 1
E
H
z
y
x
F
G
A 1a
A 2a
A 3a
A 1b
A 2b
Loop 1
Loop 2
Loop 3
b
A
B
C
D
E
F
G
H
Loop 1
Loop 2
Loop 3
100 mV
1 s
c
Counts
Action potential
amplitude (mV)
d
Small-scale
conduction velocity
(µm·ms⁻¹)
Units
e
Z-dimension
(µm)
Y-dimension (µm)
X-dimension (µm)
f
10.9 µm·ms⁻¹
11.8 µm·ms⁻¹
12.2 µm·ms⁻¹
R² = 0.99
R² = 0.98
R² = 0.97
Distance (mm)
Large-scale latency (ms)