

Product Brief

High-Sensitivity Ultra-High-Speed NEO Series

High-Sensitivity Ultra-High-Speed camera adopted a new generation of BSI sensor, which improve the capture efficiency of incident photons and realizes transient image capture within short exposure time, and is applied in the fields of hypersonic gas dynamics, high-speed shock and vibration and bubble dynamics.

NEO 25M/C 1280x1024 @25000fps

NEO 20M/C 1280x1024 @20000fps

NEO 16M/C 1280x1024 @16000fps



Key Features



Peak QE

85%

High-Sensitivity &
Ultra-High-Speed Sensor

BSI CMOS

High-Speed RAM Storage

320GB

1,000,000fps

At 1280x16 resolution 96,000fps at 256 rows



Built-in mechanical shutter



-35° ~ 60°C



- 10Gb network interface
- SDI/HDMI video interface
- IRIG_B code timing input interface
- Dual power interface 18-28VDC



IP64 protection standard



30Grms @11ms
3-axis 6-direction
60 pulses



Anti-transport vibration

250ns

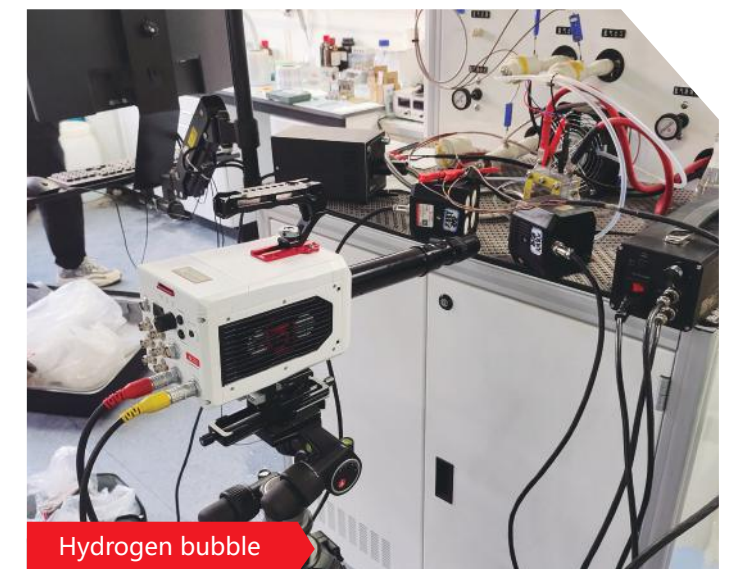
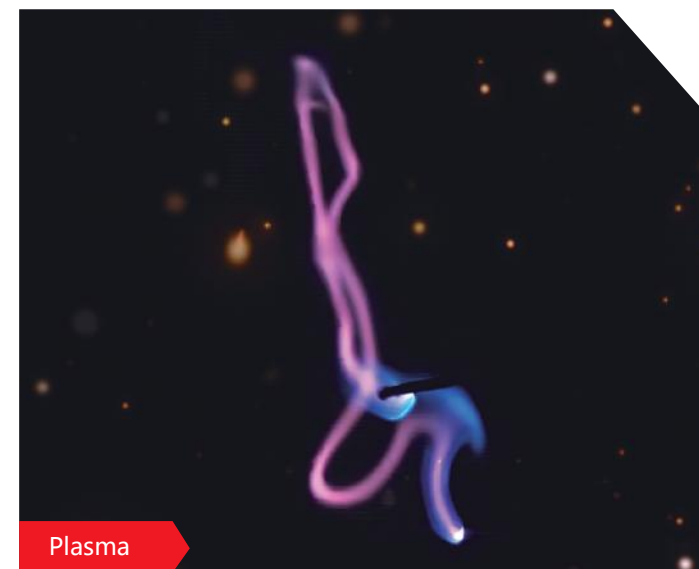
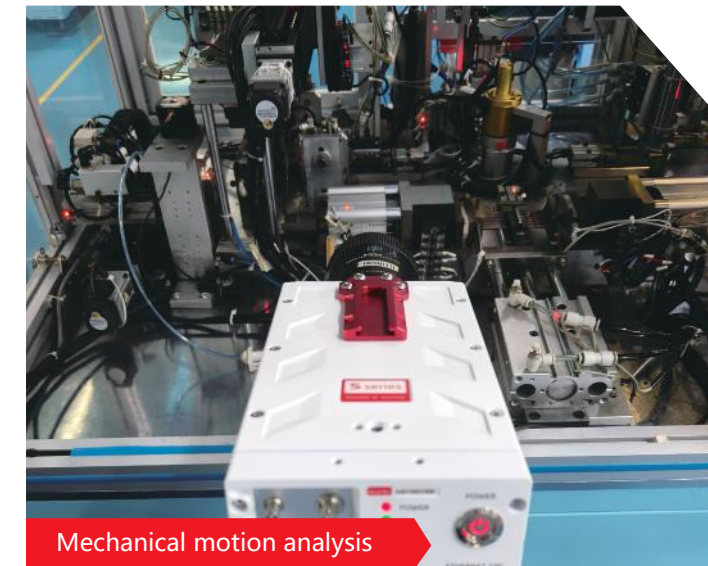
Straddle time for PIV

Image intelligent trigger

EMC

EMC protection

Typical Cases



Product Parameters

Key parameters

SKU	NEO 25M/C	NEO 20M/C	NEO 16M/C
Sensor	BSI CMOS	BSI CMOS	BSI CMOS
Resolution	1280×1024	1280×1024	1280×1024
Frame	25000fps	20000fps	16000fps
Shutter	Global shutter	Global shutter	Global shutter
Min. exposure time	150ns	150ns	150ns
PIV	250ns	250ns	250ns
AE	Available	Available	Available
EDR	Available	Available	Available

Resolution-Frame- Recording time

SKU	NEO 25M/C(Based on 320GB)		NEO 20M/C(Based on 320GB)		NEO 16M/C(Based on 320GB)	
Resolution	Frame rate	Recording Time	Frame rate	Recording Time	Frame rate	Recording Time
1280×1024	25000	6.39	20000	8.49	16000	11.11
1280×896	29000	6.26	23000	8.42	18000	11.32
1280×720	35000	6.31	28000	8.32	22000	11.56
1280×640	40000	6.39	32000	8.36	25000	11.42
1280×512	47000	6.92	40000	8.49	32000	11.11
1280×256	96000	6.74	78000	8.75	62000	11.53
1280×16	1000000	11.42	645000	18.81	570000	24.55

Connectivity and Signaling

SKU	NEO 25M/C	NEO 20M/C	NEO 16M/C
Record button	Available	Available	Available
Data interface	10 Gb/ Gb Ethernet	10 Gb/ Gb Ethernet	10 Gb/ Gb Ethernet
Video interface	SDI/HDMI	SDI/HDMI	SDI/HDMI
Sync Input Interface	3.3/5V TTL	3.3/5V TTL	3.3/5V TTL
Sync Output Interface	5V TTL	5V TTL	5V TTL
Timing	DC IRIG_B in	DC IRIG_B in	DC IRIG_B in
Control interface	Reserve RS422	Reserve RS422	Reserve RS422
Trigger Input	Pulse trigger signal	Pulse trigger signal	Pulse trigger signal
I/O	1 output reserved for customization	1 output reserved for customization	1 output reserved for customization

Memory

SKU	NEO 25M/C	NEO 20M/C	NEO 16M/C
High-speed internal RAM	320GB	320GB	320GB

Mechanical Specifications

SKU	NEO 25M/C	NEO 20M/C	NEO 16M/C
Lens	EF standard,F optional, C optional	EF standard,F optional, C optional	EF standard,F optional, C optional
Size W×H×D	≤125×125×210mm	≤125×125×210mm	≤125×125×210mm
Weight	≤4500g	≤4500g	≤4500g
Mounting hole	Top Bottom Left and right sides with 1/4 threaded mounting holes	Top Bottom Left and right sides with 1/4 threaded mounting holes	Top Bottom Left and right sides with 1/4 threaded mounting holes
Cooling	Fans	Fans	Fans

Electrical Specifications

SKU	NEO 25M/C	NEO 20M/C	NEO 16M/C
Electricity supply	24VDC	24VDC	24VDC
Power wastage	≤200W	≤200W	≤200W

Environmental Specifications

SKU	NEO 25M/C	NEO 20M/C	NEO 16M/C
Operating temperature	-10~50℃	-10~50℃	-10~50℃
Operating temperature optional	-40~60℃	-40~60℃	-40~60℃
Operating humidity	0~95%	0~95%	0~95%
Protection level	IP64	IP64	IP64
Shock	30Grms @11mSec 3 axes 60 pulses	30Grms @11mSec 3 axes 60 pulses	30Grms @11mSec 3 axes 60 pulses
Vibration	Resistant to transportation vibration	Resistant to transportation vibration	Resistant to transportation vibration
EMC	Available	Available	Available

Dimension Drawing

NEO 25M/C NEO 20M/C NEO 16M/C

