

XGbE-60



More than a camera: a flexible and powerful imaging platform for SDA networks

The foundation of the XGbE-60 lies in its **native 10 GbE IP connectivity**. This system connects directly to Ethernet networks, streamlining installation and configuration. Supporting SFP+ modules, it delivers data transfer rates of up to 10 gigabits per second, ensuring smooth transmission of high-resolution image streams without bottlenecks.

Network-based architecture makes scaling seamless: multiple units can be deployed across complex environments without overwhelming system resources. Each camera can be individually managed and monitored, allowing operators to scale from a single unit to a large, synchronized array with ease.

The move toward distributed SDA ground networks is clear: more stations, wider coverage, lower operational overhead. And the XGbE-60 eliminates the traditional challenges of large-scale, multi-camera deployments through network-first design and intelligent synchronization.

The XGbE-60 is a **powerful solution for multi-camera installations and complex imaging environments**. With a large-format CMOS sensor, state-of-the-art cooling, ultra-low noise, and robust network features, this camera sets a new benchmark for SDA and astronomy research imaging systems.

Deploy Faster with Standard Infrastructure

Connects directly to standard Ethernet SFP+ switches, integrating effortlessly into existing network infrastructures without specialized hardware requirements. For rapid deployment and straightforward maintenance.

Mission-Critical Reliability

Multi-server support provides automatic failover protection. If one server goes down, your cameras continue capturing to backup servers, ensuring continuous operation in critical environments.

Exceptional Performance at Scale

The cluster optimized development handles massive volumes of high-resolution imagery across multiple cameras simultaneously: received at 100Gb/s - or higher - and scalable to higher bit rates to maximize the number of cameras/per server. Hardware and software optimization delivers the low latency and high throughput that real-time applications demand.

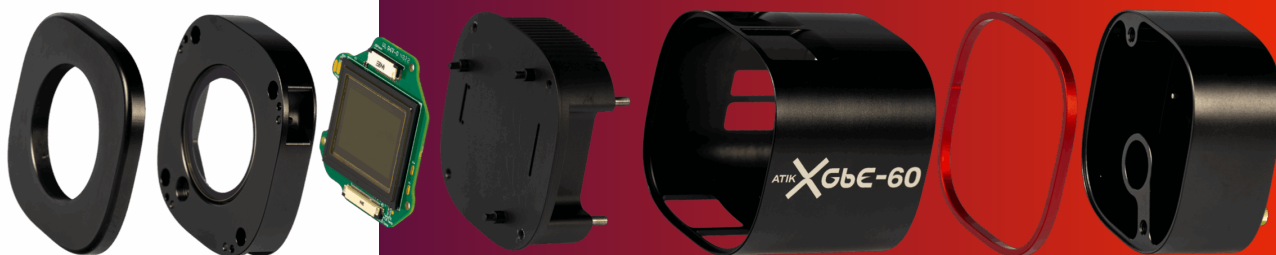
Synchronize Without the Headaches

Precision PTP and NTP protocols deliver perfect frame alignment across all cameras. One GPS module synchronizes your entire network. No need for electrical trigger cables between cameras means dramatically simplified installation and reduced maintenance.

Scale Confidently

Start with a few cameras or deploy hundreds. This cluster-optimized architecture scales seamlessly from small installations to expansive multi-camera networks, providing the flexibility to expand as your requirements evolve.





XGbE Technical Specifications

	XGbE-60
Image sensor	Sony IMX455 CMOS (Mono/Color)
Resolution	9576 × 6388
Sensor diagonal (effective pixels)	43.3 mm (36 mm x 24 mm)
Pixel size	3.76 µm
Full well capacity	51 000 e ⁻
Read noise	1.4 e ⁻ (High Gain Mode) 3.6 e ⁻ (Low Gain Mode)
Dark current	0.0002 e ⁻ /p/s at -15°C
Cooling Capacity	35°C below room temperature [testing conditions: 25°C; 50% humidity, non-condensing]
Mount type	M54 × 0.75 mm
ADC	16 bit
Back focus distance	17.5 mm ±0.5 mm (9 mm ±0.5 without levelling plate)
Reading mode	Electronic Rolling Shutter
Exposure range	0.001s to 24 hours
Frame rate	4 FPS
Power supply	12VDC 5A