



# Tolling+

## Born for MLFF tolling

Two AI accelerators for unseen performances

- ❖ The Dual AI Accelerator offers a revolutionary solution for challenging multilane free flow (MLFF) tolling applications assuring maximum transit detection performance with an accuracy rate up to 99,9% without using external trigger device.
- ❖ Tolling+ camera can detect and evaluate transits using OCR and context channels. This improves the visibility of objects in different working conditions, as it operates in both the infrared and visible fields. This results in better performance in various lighting conditions and for complex objects like license plates that are dirty or damaged.
- ❖ It ensures real-time and reliable detection even in high-traffic scenarios, reducing congestion and enabling seamless toll collection.
- ❖ Tolling+ is equipped with new high-quality sensor (up to 8Mpx on the OCR channel), providing better image quality and covering up to 2 lanes with overlap in free flow tolling applications.
- ❖ Dedicated hardware for AI algorithms allows the camera to achieve unparalleled performance and accuracy.
- ❖ Compatible with Stark, the new secure by design software architecture, provides a fully parametrizable platform, totally modular, with a multilingual and super user-friendly web interface.
- ❖ It can detect vehicles up to 320 km/h (198 mph) with a detection accuracy level of 99,9%.
- ❖ Tolling+ camera can be easily integrated and connected to external devices using REST API interface, making interaction with external classifiers (laser scanner, radar, loops, etc.), RFID antenna and vehicle axle information easier.





## FREE FLOW TOLLING

	TOLLING+ 55	TOLLING+ 85
Software features and Performance		
Software platform	Stark	
AI hw accelerator	2 hardware accelerators	
Lane Detected	1 lane with overlap	2 lanes with overlap
Working Distance	Up to 40m - 115 ft	
Detection	Up to 99.9%	
Reading	Up to 99.5%	
OCR	Up to 3 ANPR (ALPR) engines on board	
Third party OCR	Optional	
Classification	Optional	
Vehicle Color	Optional	
Vehicle Maker	Optional	
Vehicle Model	Optional	
Video Streaming	Color video streaming via standard RTSP protocol	
AES256	Yes	
SHA2	Yes	
Image Compression	JPG	
Streaming Profile	H.264, H.265	
Configuration		
Web Server	Installation and configuration with on board Web Application	
Integration	Support for HTTP REST API	
Date and Hour	Synchronization via NTP protocol or optional GPS	
Software Update	Upgrading via Web Application and integration protocols	
Data Transmission		
Output Action Types	HTTP, HTTPS, FTP, SFTP, TCP RAW, Serial Communication, Local Storage	
Message formats	Fully customizable message formats including JSON, XML, custom string	
Configuration	Configurable events/actions and metadata	
Serial Port	Yes, RS485 full duplex	
Digital output event	Yes	
FTP Server	Yes, access to storage partition	
Op. Mode		
Autotrigger	Self-triggering based on AI image analysis on multiple lanes, even without plates	
Trigger mode	Image capture and processing triggered by Ethernet or digital signal	

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System		
ANPR (ALPR) camera	5 Megapixels Grayscale	8 Megapixels Grayscale
Context Camera	5 Megapixels Color	
Illuminator	12 high power LEDs, infrared @ 850 nm	
Lenses	Fixed lens configuration	
Operating System	Linux Operating System	
Custom software	Optional, with Linux container	
Digital I/O	1 Optoisolated input - 1 Relay Output – 2 Strobe outputs	
IP Protection	IP68	
Ethernet	GigaBit Ethernet 10/100/1000	
Storage	uSD up to 128 GB	
Internal SSD	Optional up to 1TB	
GPS	Optional	
LTE	Optional	
WiFi	Yes	
PSE	Optional	
Technical Data		
Operating & Storage Temperature	From -40° to +60° C From -40° to +140° F	
Operating & Storage Humidity	Up to 95% non-condensing	
Dimensions	290 x 127 x 235 mm - 11.4 x 5.0 x 9.3 in (excluding antenna and connectors)	
Weight	6,5 kg - 14.3lbs	
Power supply voltage	24 Vdc	
Power consumption (typical)	40W (standard config), 50W (full config)	
Power consumption (maximum)	82W	

### Part Numbers

TOLLING+		
F02332-000	Tolling+ 55	
F02333-000	Tolling+ 85	