

Photo Camera Datasheet

Spring, 2016

Overview

The photo camera accessory connects to the Syrus via (RS-232) serial port (RX & TX cables) and takes photos based on any configurable event conditions. The camera is fully integrated with the Pegasus Gateway and its APIs allowing you to take low, medium, or high resolution photos based on multiple conditions.



Features

- Connect up to 3 photos simultaneously with the Serial Expander accessory
- Take photos upon request (SMS Alias, Platform button)
- Take photos based on events (Panic Press, Door Opened, Aggressive Driving event)
- Configure Low, Medium, High Resolution Photos
- High level APIs for taking and retrieving multiple photos
- Capture exactly what you're looking for with the Syrus advanced event configuration engine

Technical Specifications

Sensor	
Resolution	640x480px / 320x240px / 160x120px
Power Supply	DC+5V, 9-36V
Focal Distance	2.0mm, 2.8mm, 3.6mm, 12.0mm
Baud Rate	115,200bps
Serial Interface	RS232/RS485/TTL
Infrared	Infrared Light
Night Vision Distance	3-20 meters
Image Sensor	CMOS OV7725
Cable Length	4 meters
Connector	DB9 (RS-232)

Operation Temperature	-20 - 85°C
Operation Humidity	20-80%RH
Material	Waterproof IP67 Metal Case
Minimum Lumens	1 Lux
Night Vision Lumens	5 Lux
White Balance	Automatic
Exposure	Automatic
Auto Gain Control	Automatic
Other	Anti-Shake, Anti-interference

Dimensions



Installation Tips





It is recommended to use a “surge” protection for the power of the camera accessory, as sometimes transient voltages found in vehicle’s can cause permanent damage to the camera.





An example of a surge protection: [Transient Voltage Surge Protection](#)

Installation on Syrus3G

Follow the pinout guide below and connect all cables of the serial camera and to Syrus’ power wire and to the serial cables as follow:

Pinout

Syrus Cables				
	Green	Main Power	12V-24V	This cable provides same power as the Red cable Main Power. Connect it to the Camera’s main power cable (RED)
	Brown	Ground	0V	Pin 16 on Syrus 2 devices – must be connected to the Syrus GND
	Orange	TX	Transmit Data	Must be connected to the camera’s Green cable (in the serial port)
	Purple	RX	Receive Data	Must be connected to the camera’s Yellow cable (in the serial port)

Camera Cables				
	Red	Main Power	12V	Must be connected to the Syrus main power cable (green – pin #7)
	Black	Ground	0V	Must be connected to the Syrus GND (black – pin #16)
	Green	RX	Receive Data	Must be connected to the Syrus’ Orange cable
	Yellow	TX	Transmit Data	Must be connected to the Syrus’ Purple cable



Installation on Syrus 2G

Follow the same process for Syrus3G above for power and ground connection cables and just connect the serial camera cable to Syrus 2G serial port:



Photos

Low Resolution

Low Resolution



160 x 120 px

Approx. 2KB to 4KB

Medium Resolution



Medium Resolution



320 x 240 px



Approx. 5KB to 15KB

High Resolution

High Resolution



640 x 480 px

Approx. 15KB to 30KB

FAQ

- **Is the camera waterproof?**
The camera is IP67 rated. This means it is protected from total dust ingress, and from immersion between 15 centimeters and 1 meter in depth.
- **Can it takes photos at night?**
Yes, the camera has infrared sensors that let you take photos at night.
- **Does it take videos?**
No, it's a photo camera only.
- **How many photos can the Syrus store?**
450 photos = low resolution approximately 3kb
140 photos = Medium resolution approximately 10kb
65 photos = High resolution approximately 20kb
- **How long does it take to upload photos?**
On 2G approximately 30 - 60 seconds for medium resolution photos, on 3G UMTS

approximately 8-20 seconds. The difference is based on the amount of pixels in the photo and the network coverage at the time of upload.

- **How often can I take a photo?**

Photos can be taken in intervals of 10-15 seconds if using low resolution. 20-30 seconds in medium resolution. And 45-1min in high resolution.

- **What's the recommended data plan?**

If you plan on taking medium size photos every time an important event occurs for example, ignition on, door opened, aggressive driving detected, speeding, etc. we recommend using a monthly data plan of about 10-15 MB.