Siqura TrafficServer™

Features

- Traficon powered Incident Detection
  - Stopped vehicle and wrong-way drivers
  - Smoke detection (in tunnels only)
  - Occupancy and flow speed
  - Speed drop and under speed
  - Pedestrians
- High-quality video encoding
  - Quadstreaming support
  - H.264, MPEG-2, MPEG-4 and MJPEG
  - Low latency
- Field hardened
- Audio, data and digital I/O
- Open Streaming Architecture

New Product Information

Description

The Siqura® TrafficServer™ is an intelligent solution for traffic applications. It offers a combination of incident detection, traffic data collection, and camera monitoring in a single temperature-hardened module. With proven Traficon technology embedded, the TrafficServer™ provides real-time data and image information for optimal traffic control and accurate incident detection. Utilizing the full power of state-of-the-art DSPs, the TrafficServer™ can simultaneously encode and stream in different formats, in real time with low latency, providing the best image quality for every situation. This unique combination of video and traffic management, assists traffic operators in reducing traffic jams and improving road safety.

Multi-codec and multi-streaming
The versatile TrafficServer™ is capable of streaming H.264, MPEG-2, MPEG-4 and MJPEG simultaneously. Each stream is optimized for its purpose. Traffic data and events generated by the detection analytics can be displayed in the image, giving the operator a clear overview of the traffic situation. The power to choose between different video compression algorithms ensures interoperability with existing applications.

Audio, data, and I/O contacts
Combining streaming video with duplex audio, serial data, and I/O contacts over IP, the TrafficServer™ provides all the interfaces necessary for any ITS application including: Bidirectional audio for intercoms or emergency phones; serial data for PTZ control or VMS signs; digital i/o for door contacts or PLC systems.

Fiber option
The TrafficServer™ is optionally available with a pluggable SFP slot for connections via fiber optic cable (/SFP). A range of multimode or single-mode XSNet™ SFP devices fit the empty SFP slot.

Siqura Open Solutions
The Siqura® TrafficServer™ is part of Siqura, a complete offering of video surveillance equipment and solutions. Siqura offers video codec/servers, IP cameras, video management, network storage, and configuration software. To integrate both video management (live viewing, retrieval of stored images, event-triggered switching) and traffic management (traffic data collection, events, incidents) in a single traffic management system, Optelecom-NKF can also provide SDKs and API descriptions.

Ordering information

Model	Description	Housing	Managed
Siqura TrafficServer	H.264 multicodec w/ embedded AID, audio, data and CCs	Rack-mount	HTTP/SNMP/MX
Siqura TrafficServer-SFP	H.264 multicodec w/ embedded AID, audio, data and CCs, 100MB SFP slot	Rack-mount	HTTP/SNMP/MX
Siqura TrafficServer /SA	Stand-alone version of rack-mount models	Stand-alone	HTTP/SNMP/MX

Siqura TrafficServer™

Preliminary Technical Specifications

Video

Video channels	1x PAL/NTSC (Auto/PAL/NTSC)
Input level	1 Vpp (±3 dB)
Compression algorithm	H.264 BP (ISO/IEC 14496-10) MPEG-2 (ISO/IEC 13818-2), MJPEG,MPEG-4 (ISO/IEC 14496-2, ISMA comp.)
Type of streaming	UDP/IP (multi- and/or unicast)
Number of output streams	Up to 20
Input impedance	75Ω/Hi-Z selectable
Video Motion Detection	Yes (user-defined masking)
Encoding latency	<130 ms typ.
Resolution	D1, ½D1, 2CIF, CIF, QCIF, VGA
GOP structure	I, IP (selectable/user profiles)
Frame rate	1 to 30 fps
Quad streaming:[1]	D1@30fps H264 + D1@30fps MPEG-2[2] + D1@ 30fps MPEG-4 + CIF@1fps MJPEG
Output data rate	up to 20 Mb/s (CBR or VBR selectable/user profiles)
Video settings	User profiles, contrast, brightness, color saturation, hue, sharpness
On Screen Display (OSD)	3x Text lines (configurable: position, color, border/outline color, font size),1x image in BMP, GIF, or JPEG format (configurable: position, scaling, AID overlay)
Live View Encoder (MJPEG)	HTTP, FTP pull
Connector type	BNC 75Ω (gold-plated center pin)

Audio

Number of channels	2 (stereo, full-duplex)
Number of streams	3 (multi- and/or unicast)
Maximum bandwidth	20 Hz to 20 kHz
Sampling resolution	8/16-bits linear PCM or G.711
Input level	Adjustable, mic or line
Output level	Adjustable, 3 Vrms max.
Input impedance	>20 kΩ or 600Ω bal.
Output impedance	<100Ω bal.
Connector type	RJ45

Transmission interface

Number of interfaces	1
Interface 10/100Base-TX	Fast Ethernet Autonegotiation, half-duplex/full-duplex, 10/100 Mb/SFP option Empty SFP slot for 100 Mbps SFP device
Protocols	H. 264 BP, MPEG-4 ES, MPEG-2 TS, MPEG-2 ES, (M)JPEG, RTP, RTCP, RTSP, TCP, UDP, IP, DHCP, IGMPv2, (S)NTP, MX/IP, HTTP, SNMP v2, FTP, TelNet, DiffServ, SAP, UPnP
Connector type	RJ45

Powering

Power consumption	<5W
Rack-mount units	MC-10 and MC-11 power supply cabinets
Stand-alone units (/SA)	11 to 19 VDC (PSA-12 DC/25 or PSR-12 DC)

Management

LED status indicators	
DC	Power-on indicator (green)
NV	No video on input (red)
SYNC	All links are operational (green); failure in RX stream(s) (yellow); failure in TX stream(s) (red)
Ethernet port	Green LED: on=100 Mb, off=10 Mb; Amber LED: on=link okay, flashes with activity
Network Management & Control	SNMP v2, MX™, HTTP API, HTML (password protected)

Environmental

Operating temperature	-40° F to +165° F (-40 °C to +74 °C)
Relative humidity	<95% as long as there is no condensation.
MTBF	TBD
Safety & EMC	TBD

Mechanical

Dimensions (h x w x d)	5.04 x 1.34 x 7.5 in. (128 x 34 x 190 mm)
Weight (approx.)	15.80 oz. (450g)
Housing	Rack-mount or stand-alone (/SA)

Contact Closure

Number of channels	2x in, 2x out
Number of streams	2x 3 (multi- and/or unicast)
Output	Fail-safe, potential-free
Connector type	RJ45

Data

Number of channels	2 (full-duplex)
Number of streams	2x 3 (multi- and/or unicast)
Interfaces	1x RS232 1x RS422/485 (2- or 4-wire)
Stream	TCP/UDP/MX configurable
Data rate	300 b/s to 230.4 kb/s
Connector type	RJ45

[1] Indicated combinations are based on 100% DSP capacity
[2] I-frame only, GOP = 1

Optelecom-nkf