T2000 On-Vehicle NVR

SY-T2000-IE1

With native connection to Synectics Cloud Services, the T2000 enables real-time tracking and monitoring of vehicles, over-the-air video uploads, and effortless export of video incidents for easy collaboration and sharing.

The latest evolution of Synectics' T-series Network Video Recorder (NVR), the T2000, brings IoT-ready functionality to the on-vehicle market and can support up to 16 full-HD digital cameras*.

Featuring a built-in GSM modem for 4G connectivity and seamless access to Synectics Cloud Services, the combination of the T2000 and our cloud-based software enables security and fleet management in one, unified platform.

Integration to Synectics Cloud Services enables:

- Access to live CCTV, telematics, and vehicle health data
- Historical route analysis, incident creation, and footage export
- End-to-end evidence management and collaboration with emergency services, insurers, and other third parties
- Easy management of footage requests
- Fleet-wide asset management

As a standalone NVR, the T2000 features core functionality that transport operators depend upon including GPS and CAN bus support, built-in tri-axis accelerometer, independent monitor outputs, and a secure proprietary file system.

The T2000 can be tailored to specifications and operational requirements. Optional storage expansion through Network Attached Storage (NAS) offers increased retention or higher frame rates and resolutions.

A highly reliable device, the unit is designed to comply with EU standards, IP4X protection, and transport-specific standards for road vehicles relating to EMC, shock, vibration, and temperature.

Features

- Powerful and efficient Intel Atom processor
- Up to 32 digital HD IP video streams
- Embedded storage solution
- Built-in GPS, dual SIM GSM modem, tri-axis accelerometer, and CAN bus support
- Dual independent monitor outputs
- E-Mark, CE, and FCC certification

* Requires external PoE switch

SYNECTICS

Specifications

GENERAL	
Dimensions (WxHxD) mm	261 x 170 x 60 (excluding connections)
Mounting	Wall mount VESA 100 x 100
Chassis Construction	Extruded aluminium alloy
CPU (Processor)	SoC Intel® Atom™ x7-E3950 (quad-core 1.6GHz, 12W TDP)
RAM (Memory)	4GB SO-DIMM DDR3L
PSU Input	9V – 36V DC
Consumption	12V @ 5A
Operating System	Linux with proprietary VM-based application

CAMERA	
Video Inputs	Up to 16 full-HD digital IP cameras (PAL / NTSC) – external POE switch(es) required
Streams per Input	Total: 2 (1 HD for recording and 1 SD for display output)
Maximum Resolution / Frame Rate	3840 x 2160: up to 25/30 fps

RECORDING	
Hard Drive	2.5" SATA III 6Gb/s (Serial-ATA) [Hard drive not included]
Maximum Hard Drive Height	15 mm
Hard Drive Size	Choice of disk sizes available up to 4TB
Resolution IP Camera	Determined by camera stream resolution
Frame Rate	Up to 25/30 fps per channel
File System	Synectics File System for lower-energy use and maximum recording efficiency, integrity, and security
Recording Disk Write Cycle	1 second

VIDEO COMPRESSION	
Compression	Selectable H.264 AVC high profile / main profile (MPEG4 part 10)
Data Rate	Maximum 6Mb/s per IP camera Maximum total throughput for all connected IP cameras ~64Mb/s

MONITOR OUTPUTS	
Digital	1 x VGA (1920 x 1200 @ 60Hz) and 1 x HDMI (3840 x 2160 @ 30Hz)
Display Format	All monitor outputs configurable as full-screen, 1x2, and 2x2

AUDIO	
Inputs	4 mono channels via IP camera microphone
Input Level	1V RMS
Compression	G.711
Sampling Rate	8K / 16K

NETWORK	
Interface	RJ-45 GbE by Intel® I211
Protocols Supported	RTP/RTSP / TCP/IP / UDP / IGMP / SNMP / HTTP / NTP
Password Levels	Administrator / Super User / User
Supported Internet Browsers	Internet Explorer 11 / Edge / Chrome / Firefox

OPERATION		
CAN 2.0	Communications interface	DB9 terminal block
USB 3.1 Gen 1	Communications interface (peripherals)	4 ports
GPS	NMEA serial from vehicle	Via RS-232 COM port
GSM	Cellular network interface 3G/4G LTE	Dual SIM Antenna via SMA
Serial Data	Serial COM port	RS-232/422/485
Digital I/O	Configurable via webpage	8x DI / 4x DO
Events	Built-in tri-axis accelerometer Comprehensive health and event recording Comprehensive data recording (geofencing and real-time tracking via Synectics Cloud Services) Event-driven incident retrieval (via Synectics Cloud Services) Configurable ignition-based shutdown timer	

ENVIRONMENTAL	
Environment	IP4X protection
Cooling	Fanless passive cooling to prevent dirt/dust ingress
Operating Temperature	-30°C ~ +70°C with air flow
Storage Temperature	-40°C ~ 80°C
Humidity	10% ~ 95% non-condensing
Operating Shock	50 Grms, half-sine 11 ms duration (w/ SSD, according to IEC60068-2-27)
Operating Vibration	5 Grms, 5-500 Hz, 3 axes (with SSD, according to IEC60068-2-64) MIL-STD-810F 514.5C-2 (SSD)
Weight (Net/Gross)	2.4 kg / 3.8 kg
Certifications	EMC, CE, FCC, and E-Mark

PART CODES
SY-T2000-IE1

SY-T2000-IE1 Rear View

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Literature Reference: SYT2000-IE1/1120/A4 Iss 1