## **T2000 On-Vehicle NVR** SY-T2000-U52 / SY-T2000-U54

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.

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. In addition to the removable hard drives, optional storage expansion through Network Attached Storage (NAS) offers increased retention or higher frame rates and resolutions.

A highly reliable device in a wide range of environmental conditions, the unit is designed to comply with EU standards and transport-specific standards for various vehicle types relating to EMC, shock, vibration, and temperature.

## Features

• 16 built-in POE+ RJ-45 ports

- Up to 32 digital IP video streams
- Up to 4x 2.5" removable hard disks
- Built-in GPS, optional dual SIM GSM modem, tri-axis accelerometer, and CAN bus module
- 3x independent monitor outputs
- E-Mark, CE, and FCC certification
- Compliant with EN50155 and ISO 7637-2



## Specifications

(excluding connections / mounting brackets)           Mounting         Wall mount brackets included           Mounting         Extruded aluminium and heavy-duty steel (IP30)           CPU i Processon         Intel® Celeron G3900TE (SWTDP)           RAM (Memory)         4 GB SO-DIMM DDR4           SPU Input         9 V - 36V DC           Consumption         2 4V @ 10A           Operating System         Linux with proprietary/Whased application           CAMERA         Up to 16 full-HD digital IP cameras (PAL / NTSC)           Video Inputs         16k POE (802.3at 15 AW/port) POE + 602.3at 30W/port)           Maximum Resolution / Frame Rate         3640 x 2160: up to 25/30 fps           RECORDING         SYT2000 US2: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000 US2: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000 US2: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000 US2: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000 US2: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000 US2: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000 US2: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000 US2: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000 US2: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000 US2: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000 US2: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000 US2: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000 US2: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT200 US2: 2x removable caddies supportin	-		
Dimensions (WAHxD) mm       SVF2000-UEst: 200 x 90 z v10.4         Mounting       Wall mount brackets included         Chassis Construction       Extruded alumnihum and heavy duty steel (IP30)         Chassis Construction       Intel® Celeron G300TE (39W TDP)         RAM (Memory)       4GB SO-DIMM DDR4         PSU I prote       9V - 96V DC         Consumption       24V 49 10A         Operating System       Linux with proprietary VM-based application         CAMERA       Up to 16 full-HD digital IP cameras (RAL / MTSC)         Wideo Inputs       Up to 16 full-HD digital IP cameras (RAL / MTSC)         System       Set 200 US 23 df 5A.Wpont / POE+ 602.33 df 30.Wport)         Maximum Resolution / Frame Rate       3840 v2160: up to 25/30 fps         Streams per Input       Total : 2 (11 HD for recording and 150 For display output)         Maximum Resolution / Frame Rate       3840 v2160: up to 25/30 fps         RECORDING       Hard Drive Size         Hard Drive       SYT2000-US2: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s         Hard Drive       SYT2000-US2: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s         Hard Drive Size       Choice of disk sizes available up to 4TB         Resolution / Camera       Determined by camera stream resolution         Frame Rate       Up to 25/30 (fps per channel	GENERAL		
Chassis Construction       Extruded aluminium and heavy duty steel (IP30)         CPU (Processor)       Intel® Celeron G390TE (SWTDP)         RAM (Memory)       4GB SQ-DIMM DDR4         PSU Input       9V – 36V DC         Consumption       24V @ 10A         Operating System       Linux with proprietary VM-based application         CAMERA       Up to 16 full-HD digital IP cameras (PAL / NTSC).         Video Inputs       16x POE (802.3et 15.4W/Joort / POE + 802.3et 30W/Jport)         Maximum Resolution / Frame Rate       3840 x 2160. up to 25/30 fps         RECORDINC         Hard Drive faight         Besolution / Frame Rate         SVF12000-U52: 2x removable caddies supporting 2x 2.5" SATA III 6Gb/s         RECORDINC         Hard Drive Height         Hard Drive Height         Hard Drive Size Resolution / Frame Rate         SVF12000-U52: 2x removable caddies supporting 2x 2.5" SATA III 6Gb/s         RECORDINC         Hard Drive Height         Hard Drive Size Resolution / Frame Rate         Bottom IP Camera         Recording Drive Size Resolution Prove Hard Drive Size Resolution Prove Size Resolution Prove Size Resolution Prame Rate       Up to 25/30 fps per channel	Dimensions (WxHxD) mm	SY-T2000-U54: 280 x 99.2 x 210.4	
CPU (Processon)       Intel® Celeron G3900TE (35WTDP)         RAM (Memory)       4GB SO DIMM DDR4         PSU Input       9V – 36V DC         Consumption       24V @ 10A         Operating System       Linux with proprietary VM-based application         CAMERA       Up to 16 full-HD digital IP cameras (PAL / NTSC)         Video Inputs       106 × 100 × 10	Mounting	Wall mount brackets included	
AAM (Memory) 4GB SO-DIMM DDPA PSU Input 9/ -38V DC Consumption 24V @ 10A Operating System Linux with proprietary VM-based application CAMERA Up to 16 full-HD digital IP cameras (PAL / NTSC) Video Inputs 16x POE (802.3af 15 4/Wpcm / POE + 802.3at 30W/port) Max 200W 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 <b>RECORDING</b> SYT2000-U52: 2x removable caddies supporting 2x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT200-U550 ST Compression Synectics File System for Iowerenergy use and maximum recording efficiency, integrity, and securit Maximum total throughput for all connected IP cameras -64Mb/s MONITOR OUTPUTS Digital 1 x VGA (1920 x 1200 @ 60Hz) 1 x HOM (B840 x 2160 @ 60Hz) 1 x HOM (B840 x 2160 @ 60Hz) 1 x HOM (B840 x 2160 @ 60Hz)	Chassis Construction	Extruded aluminium and heavy-duty steel (IP30)	
PSU Input 9V - 36V DC Consumption 24V @ 10A Operating System Linux with proprietary VM-based application CAMERA Up to 16 full-HD digital IP cameras (PAL / NTSC) Video Inputs 106 PDE (802.3af 15.4/W/port) / POE+ (802.3at 30W/port) Max 200W 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 RECORDING Maximum Hard Drive Height 5YT2000-U52: 2x removable caddies supporting 2x 2.5" SATA III 6Gb/s SYT2000-U52: 2x removable caddies supporting 2x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s SYT2000-U54: 15m Atard Drive Size Conice of disk sizes available up to 4TB Compression Selectable H264 AVC high profile / Maximum recording efficiency, integrity, and securit Pacta Rate Maximum folly/s per IP camera Maximum folly/s per IP camera Maximum folly/s per IP camera Maximum folly/s per IP camera Maximum folly/s per IP camera AtaR atare Maximum folly/s per IP camera Maximum folly/s per IP camera AtaR atare Maximum folly/s per IP camera Maximum folly/s per IP camera Maximum folly/s pe	CPU (Processor)	Intel® Celeron G3900TE (35WTDP)	
Consumption       24V @ 10A         Operating System       Linux with proprietary VM-based application         CAMERA       Up to 16 full-HD digital IP cameras (PAL / NTSC)         Video Inputs       16x POE (802.3af 15.4W/port) / POE+ (802.3af 30W/port)         Max 200W       Max 200W         Streams per Input       Total: 2 (1 HD for recording and 1 SD for display output)         Maximum Resolution / Frame Rate       3840 x 2160: up to 26/30 fps         RECORDING         Hard Drive         Hard Drive       SYT2000-U52: 2x removable caddles supporting 4x 2.5" SATA III 6Gb/s         SYT2000-U52: 2x removable caddles supporting 4x 2.5" SATA III 6Gb/s         Hard Drive Street Choice of disk sizes available up to 4TB         Maximum Hard Drive Height       15mm         Hard Drive Size       Choice of disk sizes available up to 4TB         Pesolution IP Camera       Determined by camera stream resolution         Frame Rate       Up to 25/30 fps per channel         File System       Synectics File System for lowerenergy use and maximum recording efficiency, integrity, and security         Compression       Selectable H.264 AVC high profile / main profile (MPEG4 part 10)         Maximum total throughput for all connected IP cameras -64Mb/s       Maximum total throughput for all connet areas -64Mb/s	RAM (Memory)	4GB SO-DIMM DDR4	
Operating System       Linux with proprietary VM-based application         CAMERA       Up to 16 full-HD digital IP cameras (PAL / NTSC)         Video Inputs       16x POE (802.3af 15.4W/port) / POE+ (802.3at 30W/port)         Maxinum Resolution / Frame Rate       3840 x 2160: up to 25/30 fps         RECORDING       SYT2000-U52: 2x removable caddles supporting 2x 2.5" SATA III 6Gb/s         SYT2000-U54: 2x removable caddles supporting 2x 2.5" SATA III 6Gb/s       SYT2000-U54: 2x removable caddles supporting 4x 2.5" SATA III 6Gb/s         Hard Drive       SYT2000-U54: 2x removable caddles supporting 4x 2.5" SATA III 6Gb/s         Maximum Hard Drive Height       15mm         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         VIEEO COMPRESSION       Maximum total throughput for all connected IP camera         Compression       Selectable H.264 AVC high profile / main profile (MPEG4 part 10) Maximum total throughput for all connected IP camera Maximum total throughput for all connected IP camera Maximum total throughput for 20 @ 60Hz) 1 x DVI-D (3840 x 2160 @ 60Hz) 1 x HDMI (3840 x 2160 @ 60Hz) 1 x HDMI (3840 x 2160 @ 60Hz) <td>PSU Input</td> <td>9V – 36V DC</td>	PSU Input	9V – 36V DC	
CAMERA Up to 16 full-HD digital IP cameras (PAL / NTSC) 164 POE 1602.3af 15.4W/port) / POE+ 602.3af 30W/port) Max 200W Streams per Input Total: 2 (1 HD for recording and 1 SD for display output) Maximum Resolution / Frame Rate SYF12000-U52: 2x removable caddles supporting 2x 2.5" SATA III 6Gb/s SYF12000-U54: 2x removable caddles supporting 4x 2.5" SATA III 6Gb/s SYF12000-U54: 2x removable caddles supporting 4x 2.5" SATA III 6Gb/s SYF12000-U54: 2x removable caddles supporting 4x 2.5" SATA III 6Gb/s Hard Drive Hard Drive IBight Hard Drive Height Hard Drive Height Ibight I	Consumption	24V @ 10A	
Up to 16 full-HD digital IP cameras (PAL / NTSC) 16x POE (802.3af 15.4W/port) / POE+ (802.3at 30W/port) Max 200W         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         SYT2000-U52: 2x removable caddies supporting 2x 2.5" SATA III 6Gb/s SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s         Hard Drive         SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s         Hard Drive (s) not included         Maximum Hard Drive Height       15mm         Hard Drive Size         Choice of disk sizes available up to 4TB         Recording Disk Write Cycle         Image Rate         Up to 25/30 fps per channel         File System for lowerenergy use and maximum recording efficiency, integrity, and security         Recording Disk Write Cycle         Image Rate         Up to 25/30 fps per channel         File System for lowerenergy use and maximum recording efficiency, integrity, and security         Recording Disk Write Cycle         Selectable H.264 AVC high profile / main profile (MPEG4 part 10) <td< td=""><td>Operating System</td><td>Linux with proprietary VM-based application</td></td<>	Operating System	Linux with proprietary VM-based application	
Video Inputs       16x POE (802.3at 15.4W/port) / POE+ (802.3at 30W/port) Max 200W         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         Retor Video US2: 2x removable caddies supporting 2x 2.5" SATA III 6Gb/s SY12000-U52: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s         And Drive         And Drive SY12000-U52: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s         And Drive Six Colore of disk sizes available up to 25/30 fps         Maximum Hard Drive Height         Total Colore of disk sizes available up to 4TB         Recording Disk Write Cycle         Provide Up to 25/30 fps per channel         File System for lower-energy use and maximum recording efficiency, integrity, and security         Recording Disk Write Cycle         VIDEO COMPRESSION         Compression         Selectable H.264 AVC high profile / main profile (MPEG4 part 10)         Maximum total throughput for all connected IP camera         Maximum total throughput for all connected IP camera         Maximum total throughput for all connected IP camera         Selectable H.264 AVC high profile / main profile (MPE	CAMERA		
Maximum Resolution / Frame Rate 3840 x 2160: up to 25/30 fps           RECORDING           Hard Drive         SY-T2000-U52: 2x removable caddies supporting 2x 2.5" SATA III 6Gb/s SY-T2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s           Hard Drive         Hard Drive(s) not included           Maximum Hard Drive Height         15mm           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 securit           Recording Disk Write Cycle         1 second           VIDEO COMPRESSION         Selectable H.264 AVC high profile / main profile (MPEG4 part 10)           Data Rate         Maximum total throughput for all connected IP cameras ~64Mb/s           MONITOR OUTPUTS         1 x VGA (1920 x 1200 @ 60Hz)           Digital         1 x VGA (1920 x 2160 @ 60Hz)           1 x DVI-D (3840 x 2160 @ 60Hz)         1 x HDMI (3840 x 2160 @ 60Hz)           Digital         1 x VGA (1920 x 1200 @ 60Hz)           1 x HDMI (3840 x 2160 @ 60Hz)         1 x HDMI (3840 x 2160 @ 60Hz)	Video Inputs	16x POE (802.3af 15.4W/port) / POE+ (802.3at 30W/port)	
RECORDING         Hard Drive       SYT2000-U52: 2x removable caddies supporting 2x 2.5" SATA III 6Gb/s         Hard Drive       SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s         Hard Drive       Hard Drive(s) not included         Maximum Hard Drive Height       15mm         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       Maximum 6Mb/s per IP camera         Compression       Selectable H.264 AVC high profile / main profile (MPEG4 part 10)         Data Rate       Maximum total throughput for all connected IP cameras ~64Mb/s         MONITOR OUTPUTS       1 x VGA (1920 x 1200 @ 60Hz)         Digital       1 x VGA (1920 x 2160 @ 60Hz)         Digital       1 x HDMI (3840 x 2160 @ 60Hz)         Display Format       All monitor outputs configurable as full-screen, 1x2, and 2x2	Streams per Input	Total: 2 (1 HD for recording and 1 SD for display output)	
SY-T2000-U52: 2x removable caddies supporting 2x 2.5" SATA III 6Gb/s         Hard Drive       SY-T2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s         Hard Drive(s) not included       Hard Drive(s) not included         Maximum Hard Drive Height       15mm         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 securit         Recording Disk Write Cycle       1 second         VIDEO COMPRESSION       Compression         Compression       Selectable H.264 AVC high profile / main profile (MPEG4 part 10)         Data Rate       Maximum total throughput for all connected IP camera ~64Mb/s         MONITOR OUTPUTS       1 x VGA (1920 x 1200 @ 60Hz)         Digital       1 x VGA (1920 x 1200 @ 60Hz)         Display Format       All monitor outputs configurable as full-screen, 1x2, and 2x2	Maximum Resolution / Frame Rate	3840 x 2160: up to 25/30 fps	
Hard Drive       SYT2000-U54: 2x removable caddies supporting 4x 2.5" SATA III 6Gb/s         Hard Drive(s) not included       Hard Drive(s) not included         Maximum Hard Drive Height       15mm         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       Selectable H.264 AVC high profile / main profile (MPEG4 part 10)         Data Rate       Maximum 6Mb/s per IP camera         MONITOR OUTPUTS       1 x VGA (1920 x 1200 @ 60Hz)         Digital       1 x VGA (1920 x 1200 @ 60Hz)         Digital       1 x NDVI-D (3840 x 2160 @ 60Hz)         Display Format       All monitor outputs configurable as full-screen, 1x2, and 2x2	RECORDING		
Maximum Hard Drive Height       15mm         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         Fle 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         Digital       1 × VGA (1920 × 1200 @ 60Hz) 1 × DVI-D (3840 × 2160 @ 60Hz) 1 × HDMI (3840 × 2160 @ 60Hz) 1 × HDMI (3840 × 2160 @ 60Hz)         Display Format       All monitor outputs configurable as full-screen, 1x2, and 2x2	Hard Drive		
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) 1 x DVI-D (3840 x 2160 @ 60Hz) 1 x HDMI (3840 x 2160 @ 60Hz)         Display Format       All monitor outputs configurable as full-screen, 1x2, and 2x2		Hard Drive(s) not included	
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         MONITOR OUTPUTS       1 × VGA (1920 × 1200 @ 60Hz)         Digital       1 × VGA (1920 × 1200 @ 60Hz)         1 × HDMI (3840 × 2160 @ 60Hz)       1 × HDMI (3840 × 2160 @ 60Hz)         Display Format       All monitor outputs configurable as full-screen, 1x2, and 2x2	Maximum Hard Drive Height	15mm	
Frame Rate       Up to 25/30 fps per channel         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       Selectable H.264 AVC high profile / main profile (MPEG4 part 10)         Data Rate       Maximum 6Mb/s per IP camera         Monitor OUTPUTS       Maximum total throughput for all connected IP cameras ~64Mb/s         Digital       1 x VGA (1920 x 1200 @ 60Hz)         1 x HDMI (3840 x 2160 @ 60Hz)       1 x HDMI (3840 x 2160 @ 60Hz)         Display Format       All monitor outputs configurable as full-screen, 1x2, and 2x2	Hard Drive Size	Choice of disk sizes available up to 4TB	
File System       Synectics File System for lower-energy use and maximum recording efficiency, integrity, and security         Recording Disk Write Cycle       1 second         VIDEO COMPRESSION       Selectable H.264 AVC high profile / main profile (MPEG4 part 10)         Data Rate       Maximum 6Mb/s per IP camera         MONITOR OUTPUTS       1 x VGA (1920 x 1200 @ 60Hz)         Digital       1 x DVI-D (3840 x 2160 @ 60Hz)         1 x HDMI (3840 x 2160 @ 60Hz)       1 x HDMI (3840 x 2160 @ 60Hz)         1 x HDMI (3840 x 2160 @ 60Hz)       1 x HDMI (3840 x 2160 @ 60Hz)	Resolution IP Camera	Determined by camera stream resolution	
File System       Synectics File System for lower-energy use and maximum recording efficiency, integrity, and security         Recording Disk Write Cycle       1 second         VIDEO COMPRESSION       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       1 x VGA (1920 x 1200 @ 60Hz) 1 x DVI-D (3840 x 2160 @ 60Hz) 1 x HDMI (3840 x 2160 @ 60Hz)         Digital       1 Monitor outputs configurable as full-screen, 1x2, and 2x2	Frame Rate	Up to 25/30 fps per channel	
VIDEO COMPRESSION         Compression       Selectable H.264 AVC high profile / main profile (MPEG4 part 10)         Data Rate       Maximum 6Mb/s per IP camera         MONITOR OUTPUTS       Maximum total throughput for all connected IP cameras ~64Mb/s         Digital       1 x VGA (1920 x 1200 @ 60Hz)         1 x DVI-D (3840 x 2160 @ 60Hz)       1 x HDMI (3840 x 2160 @ 60Hz)         Display Format       All monitor outputs configurable as full-screen, 1x2, and 2x2	File System		
Compression       Selectable H.264 AVC high profile / main profile (MPEG4 part 10)         Data Rate       Maximum 6Mb/s per IP camera         MONITOR OUTPUTS       Maximum total throughput for all connected IP cameras ~64Mb/s         Digital       1 x VGA (1920 x 1200 @ 60Hz)         1 x DVI-D (3840 x 2160 @ 60Hz)       1 x HDMI (3840 x 2160 @ 60Hz)         1 x HDMI (3840 x 2160 @ 60Hz)       1 x HDMI (3840 x 2160 @ 60Hz)	Recording Disk Write Cycle	1 second	
Data Rate       Maximum 6Mb/s per IP camera         Maximum total throughput for all connected IP cameras ~64Mb/s         MONITOR OUTPUTS         Digital       1 × VGA (1920 × 1200 @ 60Hz)         1 × DVI-D (3840 × 2160 @ 60Hz)         1 × HDMI (3840 × 2160 @ 60Hz)	VIDEO COMPRESSION		
Data Hate       Maximum total throughput for all connected IP cameras ~64Mb/s         MONITOR OUTPUTS       1 x VGA (1920 x 1200 @ 60Hz)         Digital       1 x DVI-D (3840 x 2160 @ 60Hz)         1 x HDMI (3840 x 2160 @ 60Hz)       1 x HDMI (3840 x 2160 @ 60Hz)         Display Format       All monitor outputs configurable as full-screen, 1x2, and 2x2	Compression	Selectable H.264 AVC high profile / main profile (MPEG4 part 10)	
1 x VGA (1920 x 1200 @ 60Hz)         Digital       1 x DVI-D (3840 x 2160 @ 60Hz)         1 x HDMI (3840 x 2160 @ 60Hz)         Display Format       All monitor outputs configurable as full-screen, 1x2, and 2x2	Data Rate		
1 x VGA (1920 x 1200 @ 60Hz)         Digital       1 x DVI-D (3840 x 2160 @ 60Hz)         1 x HDMI (3840 x 2160 @ 60Hz)         Display Format       All monitor outputs configurable as full-screen, 1x2, and 2x2	MONITOR OUTPUTS		
	Digital	1 x DVI-D (3840 x 2160 @ 60Hz)	
	Display Format	All monitor outputs configurable as full-screen, 1x2, and 2x2	

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

NETWORK		
Interface	SY-T2000-U52: 8x POE RJ-45 GbE by Intel® i211-AT SY-T2000-U54: 16x POE RJ-45 GbE by Intel® i211-AT	
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 (optional)	DB9 terminal blocks
USB 3.0	Communications interface (peripherals)	4 ports
GPS	NMEA serial from vehicle	Via RS-232 COM port
GSM	Cellular network interface 3G/4G LTE (optional)	Dual SIM Antenna via SMA
Serial Data	Serial COM port	RS-232/422/485
Digital I/O	Configurable via webpage	6x in/2x out (isolation voltage 5 kV)
Events	Built-in tri-axis accelerometer (optional) 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	IP30 protection	
Cooling	Fanless passive cooling to prevent dirt/dust ingress	
Operating Temperature	-40°C ~ +70°C	
Storage Temperature	orage Temperature -40°C ~ +80°C	
Humidity	0% ~ 95% non-condensing	
Operating Shock	EN (IEC) 61373 category 1 class B, half-sine pulse, 5g, 30ms longitudinal direction), 3g, 30ms (vertical/transverse direction) compliant	
Operating Vibration	3 Grms w/ SSD (5 to 500Hz, X/Y/Z direction, random, operating) MIL-STD-810G, method 514.6C-VL category 4 compliant	
Weight (Net/Gross)	SY-T2000-U52: 4.92 kg / 5.75 kg SY-T2000-U54: 4.92 kg / 5.74 kg	
Certifications	EMC, CE, FCC, and E-Mark Compliant with EN50155 and ISO 7637-2	

PART CODES	
8 Channel NVR	SY-T2000-U52 (no options) SY-T2000-U52-CANG (with CAN + G sensor module) SY-T2000-U52-GSM (with GSM module) SY-T2000-U52-CANG-GSM (with CAN + G sensor & GSM module)
16 Channel NVR	SY-T2000-U54 (no options) SY-T2000-U54-CANG (with CAN + G sensor module) SY-T2000-U54-GSM (with GSM module) SY-T2000-U54-CANG-GSM (with CAN + G sensor & GSM module)
Standard Modules	CAN + G sensor PCIe module: SY-T2000-U5-OPT-CANG GSM PCIe module: SY-T2000-U5-OPT-GSM



Synectics sales@synecticsglobal.com synecticsglobal.com Specifications subject to change. E & OE.

Literature Reference: SYT2000-U52-U54/1120/A4 Iss 1 Copyright © Synectic Systems Group Limited 2020. All Rights Reserved.