

# TRM-1610M/1610S

16CH Mobile Network Video Recorder

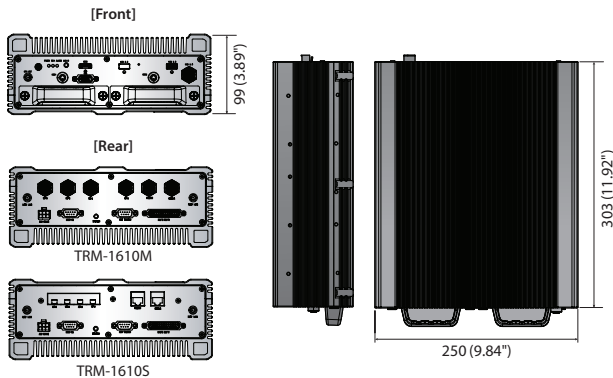


## Key Features

- Up to 16CH 12megapixel supported
- H.265, H.264, MJPEG codec supported
- WiseStream support
- SUNAPI / ONVIF camera recording
- Max. 128Mbps recording
- Plug & play by 4 PoE / PoE+ ports
- M12 connector (TRM-1610M)
- 2 SATA (Front-swap)
  - Max. 2TB (HDD, Non-RAID mode)
  - Max. 4TB (SSD, Non-RAID mode)
- RAID 1 support

## Dimensions

Unit : mm (inch)



## Contents



Control Box

GPS

WiFi Antenna

## Optional



SPN-10080P

SPN-10080PM

		TRM-1610M	TRM-1610S
<b>DISPLAY</b>			
N/W Camera	Inputs / Resolution	Max. 16CH (4 PoE, M12) / CIF ~ 12MP	Max. 16CH (4 PoE, RJ-45) / CIF ~ 12MP
	Protocols	SUNAPI, ONVIF	
	Local Display	HDMI / VGA	
Live	Multi Screen Display	[Local monitor] 1 / 2V / 3V / 4 / 6 / 8 / 9 / 13 / 16 / Auto sequence,	[Web] 1 / 4 / 9 / 16 / Auto sequence
	Performance	[Local monitor] 1.2M (30fps), 8.3M (120fps), 1080p (480fps)	
<b>PERFORMANCE</b>			
Operating System	Embedded	Linux	
	Compression	H.265, H.264, MJPEG, WiseStream (H.265, H.264)	
	Recording Bandwidth	Max. 128Mbps	
	Resolution	CIF ~ 12MP	
Recording	Mode	Manual, Schedule (Continuous / Event), Event (Pre / Post), Emergency	
	Retention	Retention per channel (1~400 days)	
	Event Trigger	Alarm input (16), Video loss, Camera event (Sensor, MD, Video analytics, Defocus), G-Sensor (3 Axis)	
	Event Action	E-mail, Alarm out, Buzzer, Monitor out	
	Playback Bandwidth	32Mbps (16CH simultaneously)	
	User	Max. 4 users (Local 1, Remote 3)	
Search & Playback	Mode	Date & Time (Calendar) / Event log list / Text search / Smart search	
	Simultaneous Playback	Max. 16CH (Local monitor, CMS)	
	Resolution	CIF ~ 12MP	
	Fish-eye Dewarping	Web / CMS	
	Playback Control	Fast/Slow Forward/Backward, Move one step up/down	
	Default Built-in	0TB ~ 4TB	
Storage	Internal HDD	2SATA (Front-swap) - Max. 2TB (HDD, Non-RAID mode) - Max. 4TB (SSD, Non-RAID mode)	
	RAID	RAID-1	
	File Backup	Exe (GUI), JPG / AVI (Excluding GPS information) (Network)	
Backup	Function	Multi channel (Upto 16CH) Play, Date-time / Title / GPS display	
	Type / Wifi Backup Performance	Auto (Wifi), Manual (HDD / SSD) / Max. 150Mbps (IEEE802.11ac)	
Sensor	Input / Output	16 / 6	
Audio	Input / Compression	16CH (Network) / G.711, G.726, AAC (16 / 48KHz)	
	Audio Communication	2-way	
<b>NETWORK</b>			
Interface		M12 (Gigabit ethernet x 2)	RJ-45 (Gigabit ethernet x 2)
Protocol Support		TCP/IP, UDP/IP, RTP (UDP), RTP (TCP), RTSP, NTP, HTTP, DHCP (Server, Client), PPPoE, SMTP, ICMP, IGMP, ARP, DNS, DDNS, uPnP, HTTPS, SNMP, ONVIF (Profile-S), SUNAPI (Server, Client)	
DDNS		Hanwha DDNS	
Transmission Bandwidth	Wired (LAN)	Max. 256Mbps	
Max. Remote Users		Search 3 / Live unicast 10 / Live multicast 20	
IP		IPv4	
Security		IP address filtering, User access log, 802.1x, Encryption	
Wireless	WiFi	Internal (802.11 n (2.4G) / ac (5G), Dual antenna (MIMO))	
	3G/LTE	Support external 3G / LTE router (Ethernet)	
Language		English, French, German, Italian, Spanish, Russian, Turkish, Polish, Dutch, Swedish, Czech, Portuguese, Danish, Rumanian, Serbian, Croatian, Hungarian, Greek, Norwegian, Finnish, Korean, Chinese, Japanese, Thai	
OS		Window 7, 8, 10, Mac OS X (10.8 or above)	
Web Browser		MS IE, Google Chrome, Mac Safari	
Viewer Software	Type	SSM Transportation, WebViewer, Wisenet Mobile Viewer	
	CMS Support	Support SDK / CGI (SUNAPI) for integration to 3rd party VMS	
<b>FUNCTIONS</b>			
	Register	Auto mode, Manual mode	
Camera Setup	Setup Items	IP address, Add profile edit, Bitrate, Compression, Camera MD setup, Camera video setup (Simple focus, Brightness / Contrast, Flip / Mirror, IRIS, WDR, D&N, SSNR, Shutter, SSDR, DLS), Fisheye dewarping mode, Hallway View setup, Camera webpage, WiseStream Off / On	
Camera Control	PoE Power Control	Monitor PoE/PoE+ power consumption, Off / On control for each PoE/PoE+ camera, Remote reset for each PoE/PoE+ camera	
	Time Sync.	NVR time protocol for PoE/PoE+ camera (Time sync based on NVR time), GPS time sync	
PTZ	Control / Preset	Via GUI, WebViewer / 300 Presets	
Smart Phone	Support Model / Protocol Support	I-Phone, Android / RTP, RTSP, HTTP, CGI (SUNAPI)	
	Control	Live (16CH) : Multi-profile support, Playback (1CH)	
	Max. Remote Users	Search 3 / Live unicast 10 / Live multicast 20	
System Control		Mouse, Web	
<b>INDICATOR / INTERFACE</b>			
	Indicator	LED (Status indicator) 3EA : Power 1, Alarm 1, Record 1	
Front	Power Switch / Audio	1ea / Out (1ea, Line)	
	HDMI / VGA	2ea (Support Live screen upto 16 div. mode, Clone)	
	USB / GPS	HDMI : Upto 4K (3840 x 2160), VGA : Max. 1080p	
	HDD Key Lock	3ea (M12 x 1, USB-A x 2) / 1ea (SMA, F)	
	Ethernet	LAN / WAN : 2ea (1Gbps, M12)	LAN / WAN : 2ea (1Gbps, RJ-45), PoE Camera Input : 4ea (100Mbps, M12)
Connections	Control/I/O	DB15 1ea (External control box)	
	Alarm	(1) Status LED (2) G-Sensor (3 Axis) (3) Emergency recording button (4) Power Switch (5) Audio out	
	Serial / WiFi	DB25 1ea (1) In (16ea) (2) Out (6ea)	
	Reset / Power Cord	Reserved / 2ea (RP-SMA, F)	
		Switch 1ea / 6pin connector 1ea	
<b>SYSTEM</b>			
Power Management	Shutdown Delay	Max. 72Hrs (User selectable), Support CGI shutdown	
	Startup Delay	0sec (Default) ~ 10min (User selectable)	
Log	Log List	Max. 20,000 (System log, Event log each)	
<b>GENERAL</b>			
Electrical	Input Voltage / Current	9 ~ 36V DC (Battery power detection & Low power limit setup)	
	Power Consumption / PoE Budget	Low temperature in use: Max. 93W, Room temperature: Max. 67W / Max. 32W	
Environmental	Operating Temperature / Humidity	-25°C ~ +55°C (-13°F ~ +131°F) : HDD installed	
		-40°C ~ +70°C (-40°F ~ +158°F) : Industrial SSD installed / 20% ~ 85% RH	
Mechanical	Color / Material	Black / Aluminium	
	Dimensions (WxHxD)	250 x 99 x 303mm (9.84" x 3.89" x 11.92")	
	Weight	7.35Kg (16.2 lb)	
<b>STANDARD APPROVAL</b>			
General		CE, FCC, UL	
Special		EN-50155 (Rail shock / Vib), EN-50121-4 (Railway FMC)	
<b>Control Box</b>			
<b>INDICATOR / INTERFACE</b>			
Top	Indicator	LED (Status indicator) 6ea : Power 1, Alarm 1, Record 1, GPS 1, RAID 1, HDD Error 1	
	Emergency Button	1ea	
Connections	Audio / Power Switch	Out 1ea (RCA, Line) / 1ea	
	Main I/O	1ea (DB9)	
<b>SYSTEM</b>			
Mechanical	Color / Material	Black / Aluminium	
	Dimensions (WxHxD)	Approx. 118 x 29.2 x 70mm (4.64" x 1.15" x 2.75")	
	Weight	200g (0.44 lb)	

\* The latest product information / specification can be found at hanwha-security.com

\* Design and specifications are subject to change without notice.

\* Wisenet is the proprietary brand of Hanwha Techwin, formerly known as Samsung Techwin.