



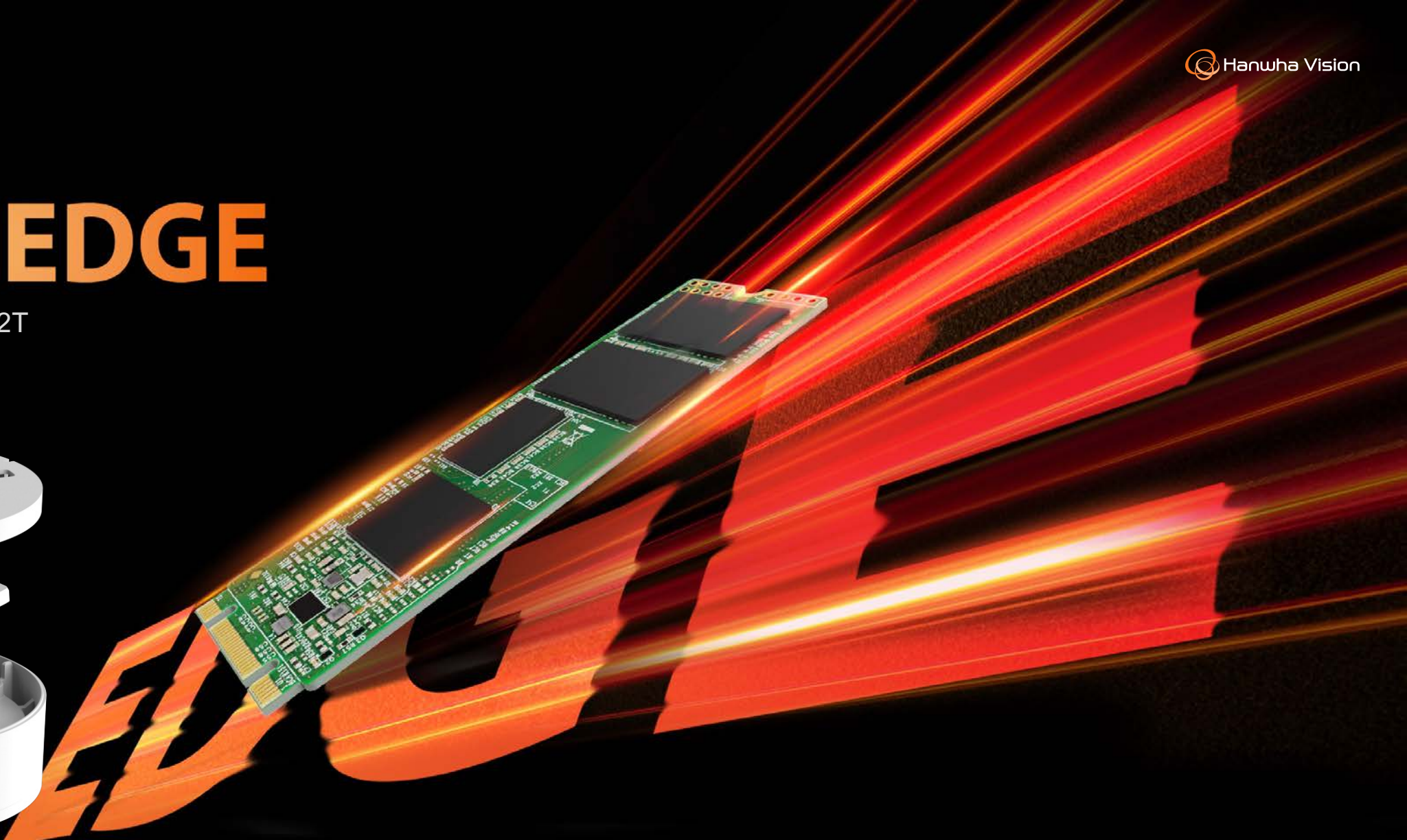
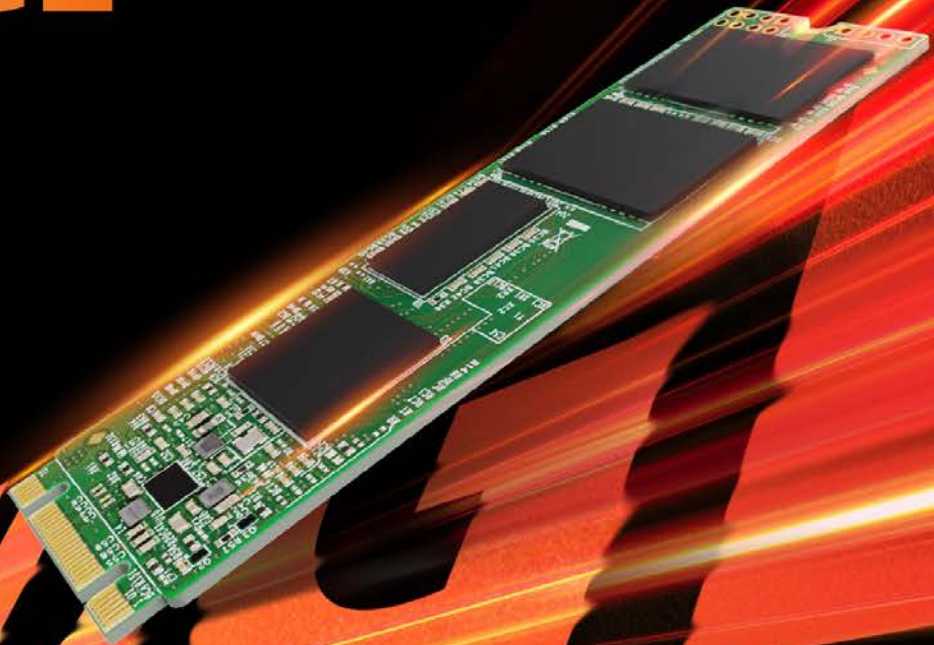
June 2023 New Product Introduction

Hardware PM Team

06.02.2023

SolidEDGE

PNV-A6081R-E1T/E2T

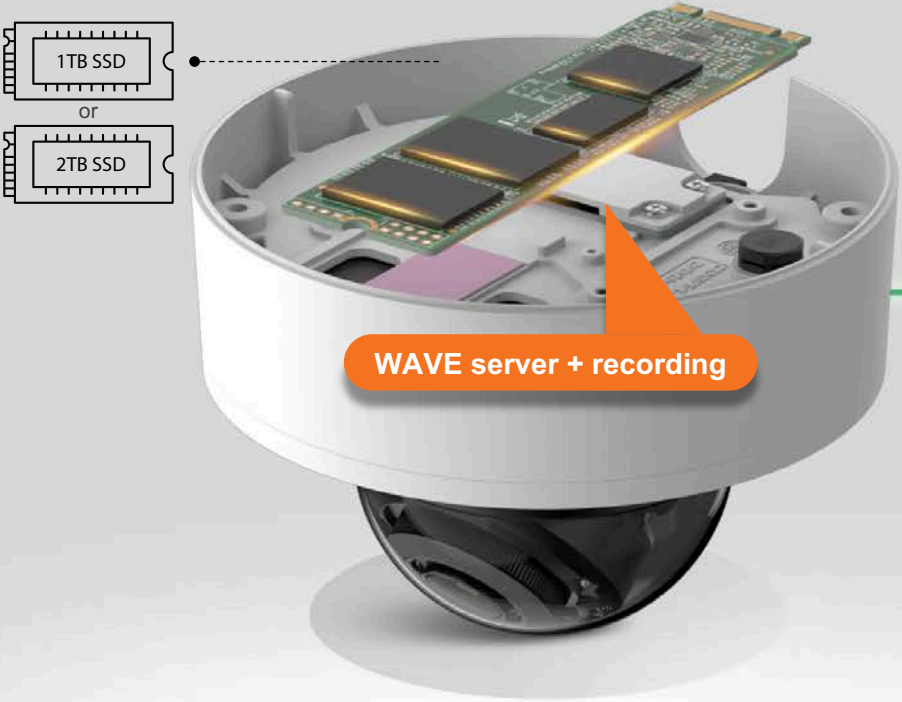


Server-less Solution

A SolidEDGE system is composed of one or more SolidEDGE cameras, each with an embedded WAVE VMS server. Choose models with 1TB or 2TB of SSD* storage options for each SolidEDGE camera.

*The SSD used is a rugged industrial grade SSD with an operating temperature of -40C to 85C

SolidEDGE Camera



PNV-A6081R-E1T MSRP \$ 2,750
PNV-A6081R-E2T MSRP \$ 3,100

Monitoring/Recording with WAVE

SolidEDGE Capabilities

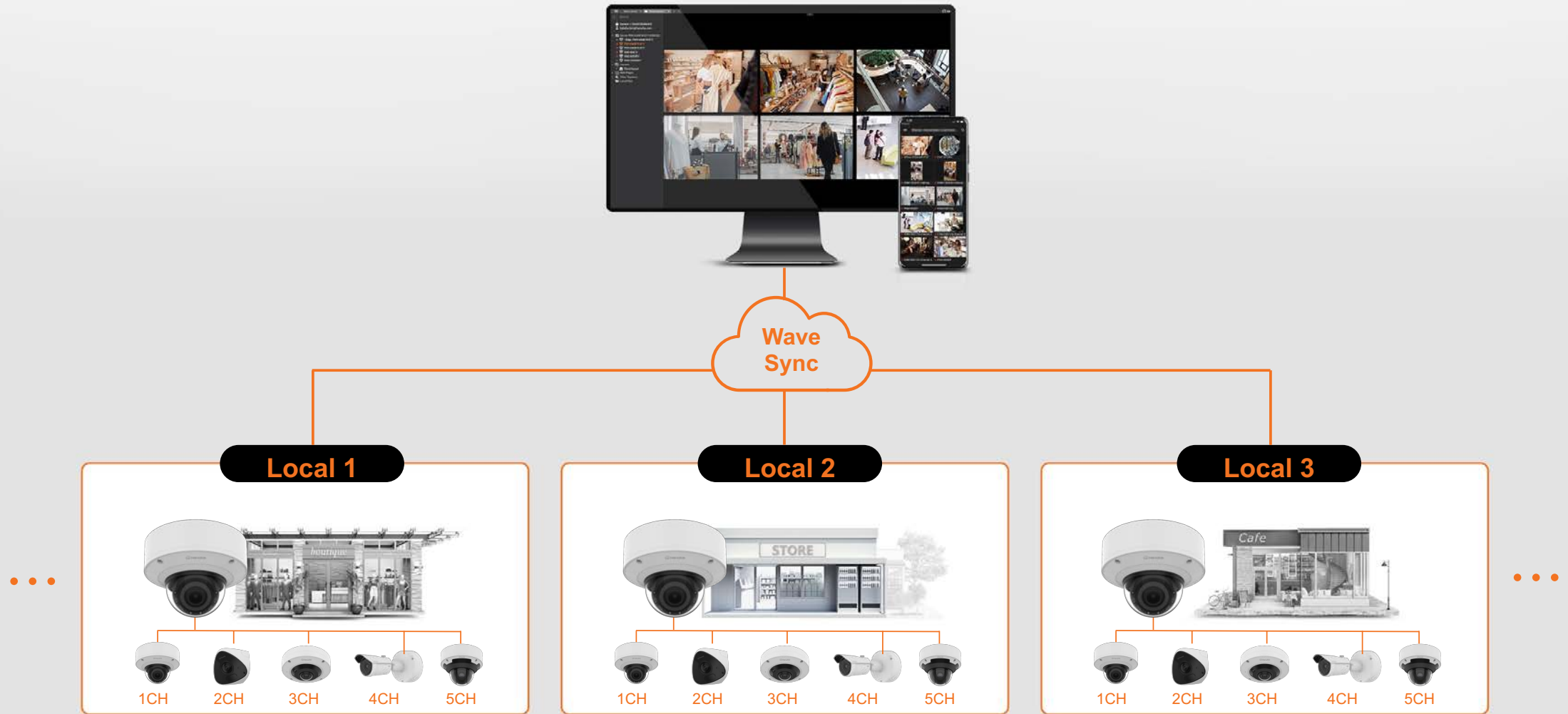
Each SolidEDGE camera can record up to 5 additional cameras to the system*, which bring the total number of camera per EDGE system to 6 cameras, including the SolidEDGE camera.

30 SolidEDGE servers can be merged with 6 cameras each which bring the total cameras per system to **180 cameras**



Cloud Video Management with WAVE Sync

Each SolidEDGE system can be accessed using WAVE Sync



SSD Health Status

✂ Setup - Event - Storage - Info

You can monitor the Health Status of the SSD drive from the camera web page just in case if there is an issue (for troubleshooting purpose only)

SSD Health

Storage

Storage action setup

Device	Enable	Free size	Total size	Status	
SSD	On	1698.5GB	1907.7GB	Ready to use	Initialize

ⓘ Initialization will delete the app, saved data, and partition settings.

SSD partitions

Partition	File system	Mount point	Free size	Total size	Status	
01	ext4	/mnt/sda1	8.7GB	9.3GB	Ready to use	Format
02	ext4	/mnt/sda2	1689.8GB	1780.3GB	Ready to use	Format

App installation

Software	Not installed
Install	wave-server-5.1.0.36580-linux_arm64.hanwha_edge1-private-pr ... Install

Info

SSD Info

SSD info

Write speed 4.016 Mbps
Read speed 0 Mbps
Power-on hours 0days 1hours

Valid spare blocks

Remaining lifetime

Temperature



38°C

More info ▲

Model : TS2TMTS952T2-HWT
FW Version : 02J0T6OC
Serial No : H825000086

ID	Attribute name	Value
01	Read Error Rate	0
05	Reallocated Sectors Count	0
09	Power-On Hours	1
0C	Power Cycle Count	20
94	SLC Total Erase Count	173

OK

Initialize and partitioning the SSD

✂ Setup - Event - Storage - Initialize

Make two Partitions:

- 1) 10GB for the WAVE installation
- 2) Rest of the free space for Recording

Note: WAVE will only be installed on the first partition

The camera is offering flexibility on the size and the number of partitions for future adjustments or custom configuration in the future but for now the above is the recommended settings

Device	Enable	Free size	Total size	Status	
SSD	On	1698.5GB	1907.7GB	Ready to use	Initialize

ⓘ Initialization will delete the app, saved data, and partition settings.

Partition	File system	Mount point	Free size	Total size	Status	
01	ext4	/mnt/sda1	8.7GB	9.3GB	Ready to use	Format
02	ext4	/mnt/sda2	1689.8GB	1780.3GB	Ready to use	Format

App installation

Software: Not installed

Install: wave-server-5.1.0.36580-linux_arm64.hanwha_edge1-private-pr ... Install

Initialize

Total size : 1907.7GB

- Partition 1 : 10GB
- Partition 2 : 1897.7GB
- Free size: 0GB
- ⚠ No free space

Add Reset

Partition	File system	Size [min 5GB]
1	ext4	10 GB
2	ext4	1897.7 GB

OK Cancel

Formatting one partition of the SSD

✂ Setup - Event - Storage - Format

You can also format each partition individually:

(1) Initiating the format of the first partition will generate an Alert that the system will stop functioning

vs.

(2) Initiating the format of the second partition will generate a warning that the all recorded data will be lost

Storage

Storage action setup Info

Device	Enable	Free size	Total size	Status	
SSD	On	1698.5GB	1907.7GB	Ready to use	Initialize

ⓘ Initialization will delete the app, saved data, and partition settings.

SSD partitions

Partition	File system	Mount point	Free size	Total size	Status	
01	ext4	/mnt/sda1	8.7GB	9.3GB	Ready to use	Format
02	ext4	/mnt/sda2	1689.8GB	1780.3GB	Ready to use	Format

App installation

Software	App installation	
Install	Not installed	Install

Confirm

All saved data will be deleted. Do you want to proceed?

OK Cancel

Confirm

Alert

If you format partition 1, the WAVE program is deleted and the camera monitoring function will not operate. Do you want to proceed?

OK Cancel

Downloading WAVE “SolidEDGE version”

Installing WAVE



A new build will be added to the Windows and Linux version which is ARM → EDGE version

This is the only build you can install on the SolidEDGE

This build will get updated with every WAVE release just like the Windows and Linux versions

5.1.0.36580 Video Management System

PUBLISHED 27 Mar 2023

Build

- 36580-vms_5.1

In-Client Upgrade:

Build Number: **36580**

Password: **xu6sps**

Download Links:

[SDK](#)

[UNIVERSAL](#)

[LINUX](#)

[ARM](#)

- Edge - Server installer: [wave-server-5.1.0.36580-linux_arm64.hanwha_edge1-private-prod.zip](#)
- NVIDIA Jetson / ARM64 - Client installer: [wave-client-5.1.0.36580-linux_arm64-private-prod.deb](#)
- NVIDIA Jetson / ARM64 - Server installer: [wave-server-5.1.0.36580-linux_arm64-private-prod.deb](#)
- Raspberry Pi / ARM32 - Server installer: [wave-server-5.1.0.36580-linux_arm32-private-prod.deb](#)

[MACOS](#)

[WINDOWS](#)

Installing WAVE on the “SolidEDGE”

Installing WAVE

Browse to the EDGE version of WAVE and click on install ← this process will take maybe up to ~2 minutes.

Please note

- Leave the EDGE version in it's ZIP format and don't unzip it before installing on the SolidEDGE
- If the installation progress bar didn't appear then format the 1st partition and try again

The screenshot displays the WAVE installation interface. At the top, a file icon is followed by the filename `wave-server-5.1.0.36580-linux_arm64.hanwha_edge1-private-prod.zip`, which is highlighted with a red box. Below this is the "Storage" section, containing a "Storage action setup" table and "SSD partitions" table. The "Storage action setup" table has columns for Device, Enable, Free size, Total size, Status, and an Initialize button. The "SSD partitions" table has columns for Partition, File system, Mount point, Free size, Total size, Status, and a Format button. At the bottom, the "App installation" section shows a "Software" list with "Not installed" status and an "Install" button next to the filename, also highlighted with a red box. A red arrow points from this button to a zoomed-in view of the "App installation" section at the bottom, which shows a progress bar and an "Install" button, with a red box highlighting the progress bar area.

Device	Enable	Free size	Total size	Status	
SSD	On	1698.5GB	1907.7GB	Ready to use	Initialize

Partition	File system	Mount point	Free size	Total size	Status	
01	ext4	/mnt/sda1	8.7GB	9.3GB	Ready to use	Format
02	ext4	/mnt/sda2	1689.8GB	1780.3GB	Ready to use	Format

Software	Status
wave-server-5.1.0.36580-linux_arm64.hanwha_edge1-private-pr...	Not installed

App installation	Software	Status
	Install	Installing

Starting the WAVE server:

Now you can start the WAVE server by clicking on the Start button.

Out of the box condition the WAVE server also needs to be started the first time.

Storage

Storage action setup Info

Device	Enable	Free size	Total size	Status	
SSD	On <input type="button" value="v"/>	1698.2GB	1907.7GB	Ready to use	<input type="button" value="Initialize"/>

ⓘ Initialization will delete the app, saved data, and partition settings.

SSD partitions

Partition	File system	Mount point	Free size	Total size	Status	
01	ext4	/mnt/sda1	8.4GB	9.3GB	Ready to use	<input type="button" value="Format"/>
02	ext4	/mnt/sda2	1689.8GB	1780.3GB	Ready to use	<input type="button" value="Format"/>

App installation

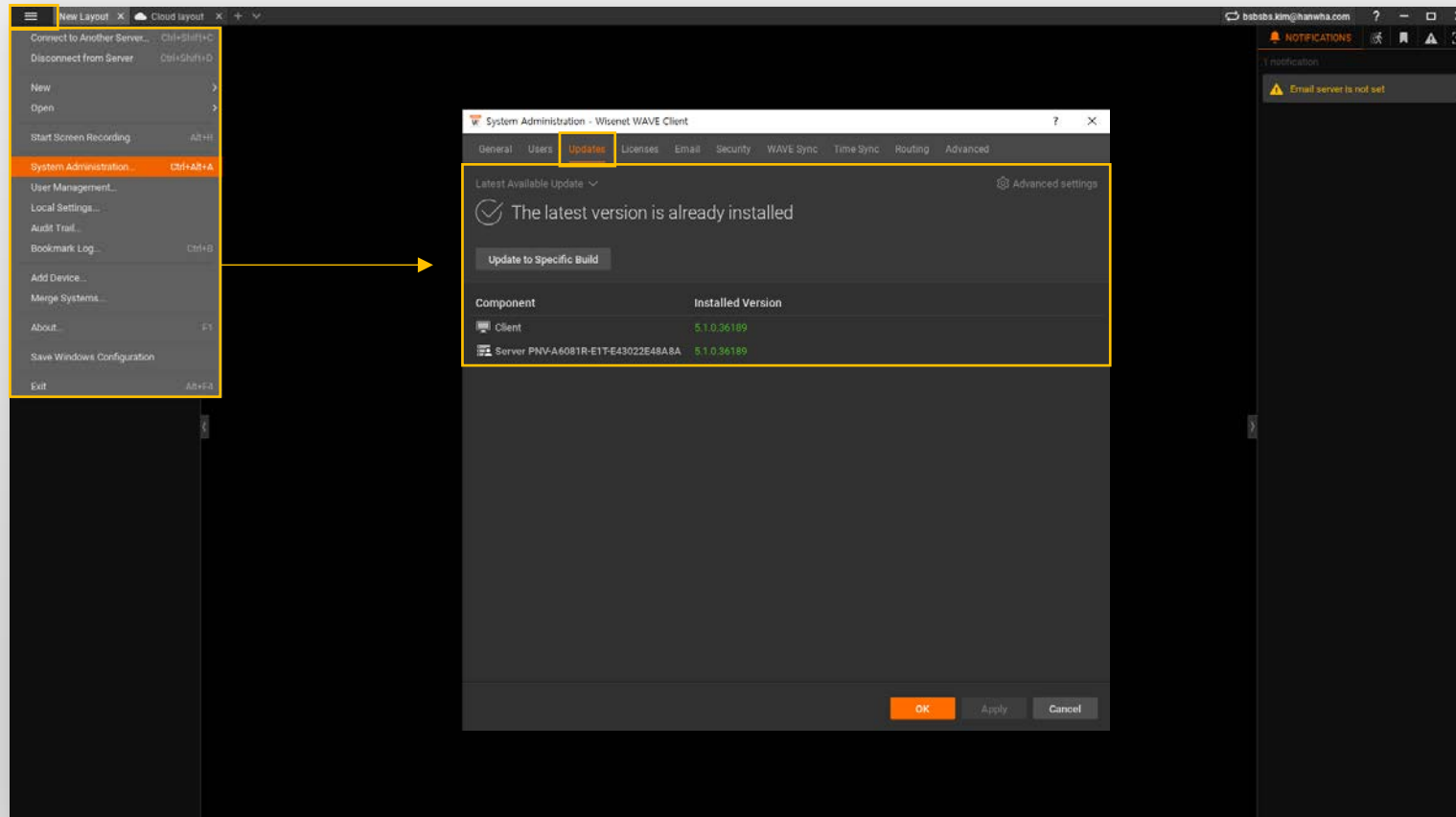
Software	Ready to use	<input type="button" value="Start"/>			
Install	<input type="button" value="..."/>	<input type="button" value="Upgrade"/>	<input type="button" value="Delete"/>		

Software	Running	<input type="button" value="Stop"/>			
Install	<input type="button" value="..."/>	<input type="button" value="Upgrade"/>	<input type="button" value="Delete"/>		

Updating the WAVE Server From the Client

Updating WAVE

The user can also update the WAVE server from the client as any other WAVE server.



Don't lose your license:

The SolidEDGE will have one WAVE-Pro license installed/activated on the system and the user can add more (up to 5 more).

But there are a few actions can delete the license and the user MUST backup the license before executing these actions, please see below

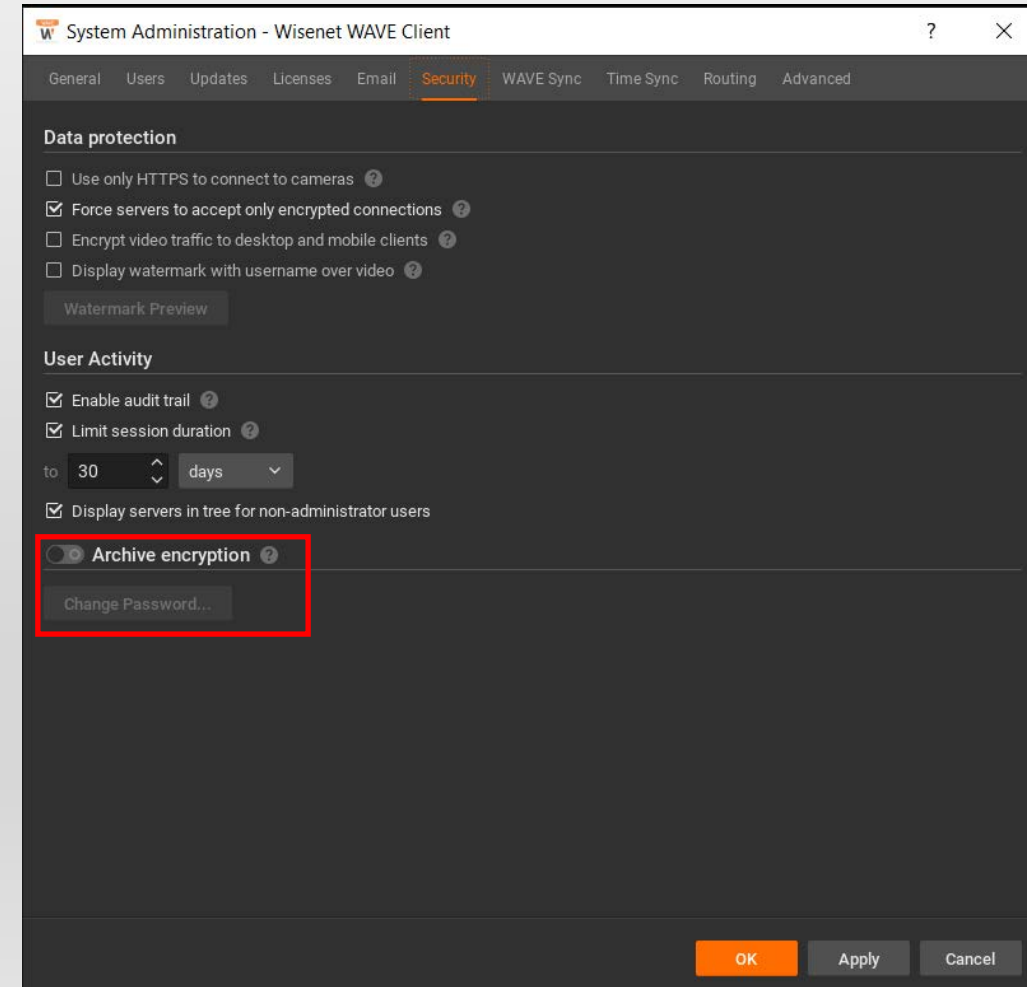
	Condition	WAVE License
1	Initialize SSD Drive	Deleted
2	Format WAVE Install Partition (#1)	Deleted
3	Format WAVE Media Partition (#2)	Preserved
4	Delete WAVE install via Camera I/F	Deleted
5	Updating WAVE via Camera I/F	preserved
6	Updating WAVE Via WAVE In Client upgrade	preserved
7	Camera Factory Default	preserved
8	Camera Firmware Update	preserved

It is always recommended that the user backup the license at the time of installation.

The license can be recovered by contacting customer service if the license is lost without being saved previously.

General Notes:

- ❖ The SolidEDGE will have WAVE 5.1 pre-installed with 1 WAVE-pro license pre-installed
 - ❖ Users can purchase new WAVE pro licenses to add new cameras to the system for up to 5 additional licenses
 - ❖ There are no hard limit on how many licenses the user can install and technically the SolidEDGE server can support more cameras if it falls within 33mbps BUT it is not tested and not recommended.
- ❖ The SolidEDGE can handle a bandwidth of up to 33mbps and 6 total video streams (Multi-sensors will be using 4 streams even though it only need one WAVE pro license)
- ❖ Onvif cameras can be added to the system, as the system is not limited to Hanwha cameras
- ❖ Currently only motion detection will be enabled, we are still working on adding AI and other IVA analytics
- ❖ The recommendation is to merge systems within a local site
- ❖ The Server default name will change to SolidEDGE
- ❖ Archive Encryption is not tested, so please don't use for now
- ❖ The only competitor in the market today that has something similar is Digital Watchdog MEGApix CaaS
 - ❖ They are using SD card 1TB Max **vs. SSD up to 2TB**
 - ❖ They can only record that one camera per system and merge up to 30 systems total **vs. up to 6 cameras per SolidEDGE**



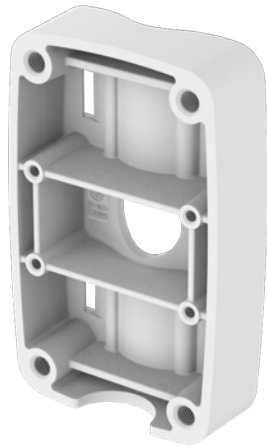
Installation solutions



SBP-300PMW2

Pole Mount Adaptor

- **Replacement for SBP-300PMW1**
- Color: White
- Stainless steel straps included (80mm/3.15in)
- Compatibility:
 - TNO-7180RLP, SBP-300WMW, SBP-300WMW1



NOTE:
Added compatibility for TNO-7180RLP

Explosion Proof PTZ Camera updates

- New & improved enclosure
- New camera based on XNZ-6320A



Explosion proof Camera overview

- Basic XNZ-6320 & XNZ-6320A in the enclosure
- **Certified to be used in Hazardous locations**
 - **Certifications: cLCus C1/D1/INMETRO / cLC CSA**
 - 2 Megapixel (1920 x 1080) resolution
 - 4.44 ~ 142.6mm Optical 32x zoom, Digital 32x zoom
 - Max. 60fps@all resolutions (H.265 / H.264)
 - H.265, H.264, MJPEG Codec, Multiple streaming
 - Day & Night (ICR), WDR (150dB), Defog
 - DIS with built-in Gyro sensor
 - Video & Audio Analytics
 - PoE, SFP, SD/SDHC/SDXC memory slot



New Models

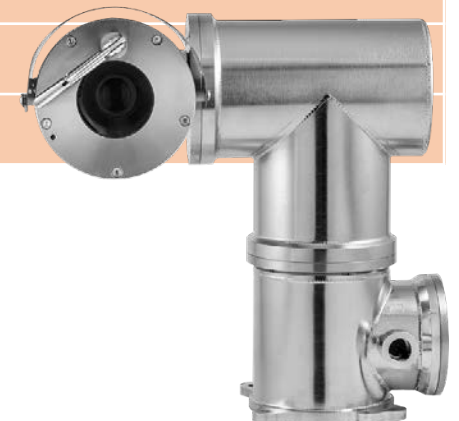
INMETRO	Ex d IIC T4 (T5 On Request) Gb -60°C ≤ Ta ≤ +60°C Ex tb IIIC T135°C Db IP66/67. Certificate Number: TUV 12.1080X / TUV 12.1081X
cLCus C1/D1	Class I, Division 1, Groups B,C,D, -60°C ≤ Ta ≤ 60°C T4/ Class II, Division 1, Groups E, F, G IP67 CSA-C22.2 No:30-M1986 No:25-1966(R2009) CSA-C22.2 No:60065-03(R2012) & UL1203, UL60065(ED.7). Certificate Number: 11671-1S / 11677-1S
cLC CSA	Ex d IIC T4 (T5 On Request) LC1311396 -60°C ≤ Ta ≤ +60°C. CAN CSA-C22.2 No.60079-0:2011 & 60079-1-2011. Certificate Number: 11396-1S-CSA



Current Models

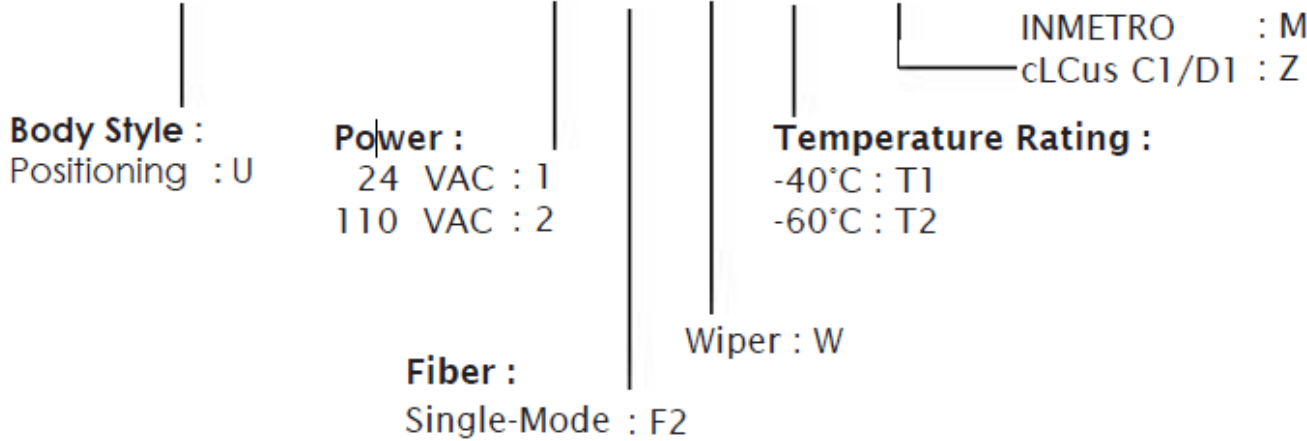
What are the changes with the New Model?

Features	Current Models (XP-40)	New Models(XP-40B)	Advantage
Overall weight reduction	117LB	72LB	~37% Weight reduction. Advantage for shipment and installation
Unit size (HxWxD) (mm)	475 x 512 x 480	401 x 418 x 457	Small difference in overall size
Certified Temperature (UL cert)	-50°C to +70°C	-60°C to +70°C	Small difference in temp. rating
Cable entries	Separate cable entries	Cable entries 2 x M25 as standard	Same type of cable entries, easy for installation
Serviceability	Two different access	Easy to open	Easy to open and access cables and motor assembly
New components to address service issues	Service issues with vertical and horizontal movements (PTRZ), Internal cables etc	New Transformer for the motor that was causing failure, Fibre optics module, fuse accessible from terminal chamber	Previous motor failure should overcome due to new transformer. Fiber optics module option, Fuse accessible from terminal chamber – Easy to access.
Unit labelling	2 separate labels	Single label	
Warranty	3 years initially (extended)	5 year standard warranty	



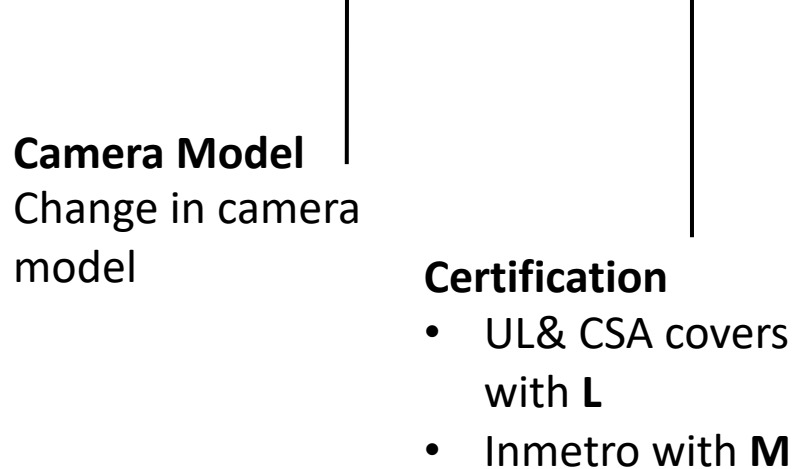
Current Models

TNU-X6320E2F2WT1-Z



New Models

TNU-X6320A1F2WT1-M



In the new model numbers you will see the changes in Camera model and Certifications

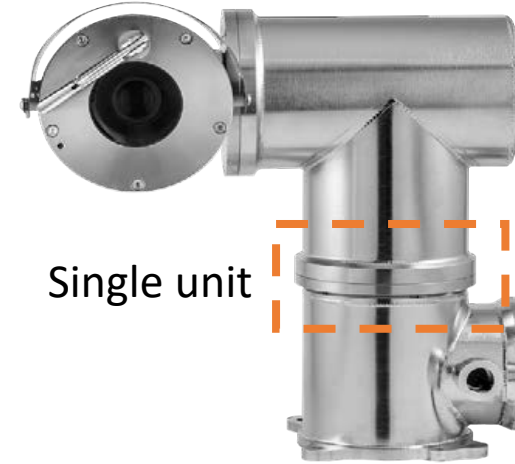
Easy Serviceability in the new version

Current unit (XP40)



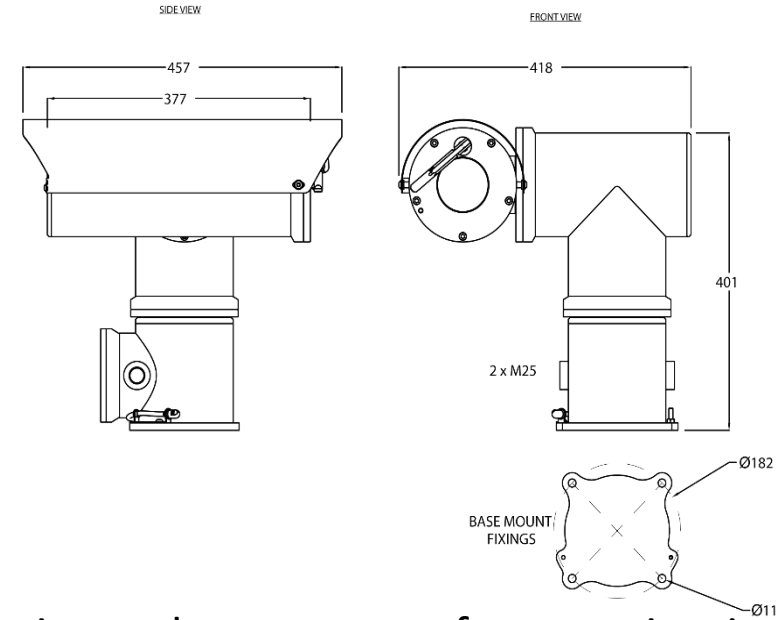
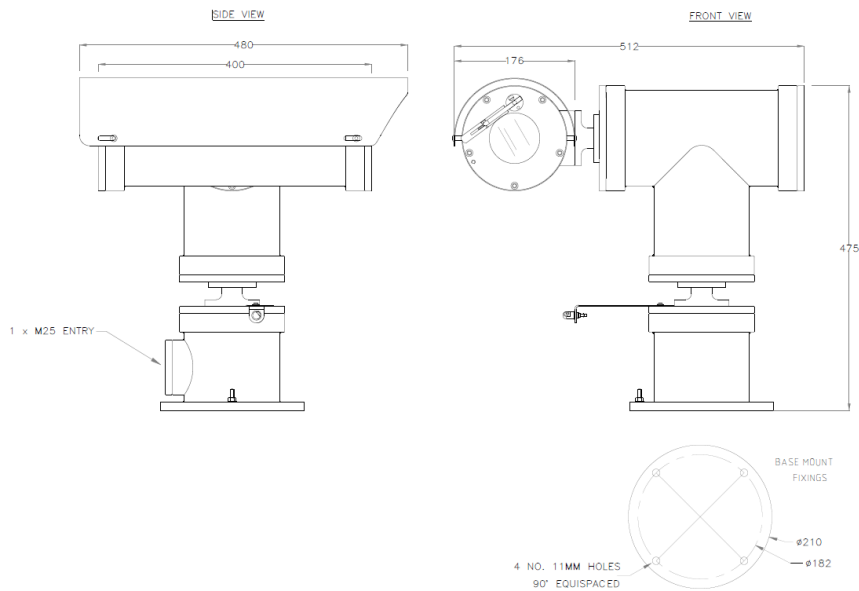
Dual sections

Newer unit (XP40B)



Single unit

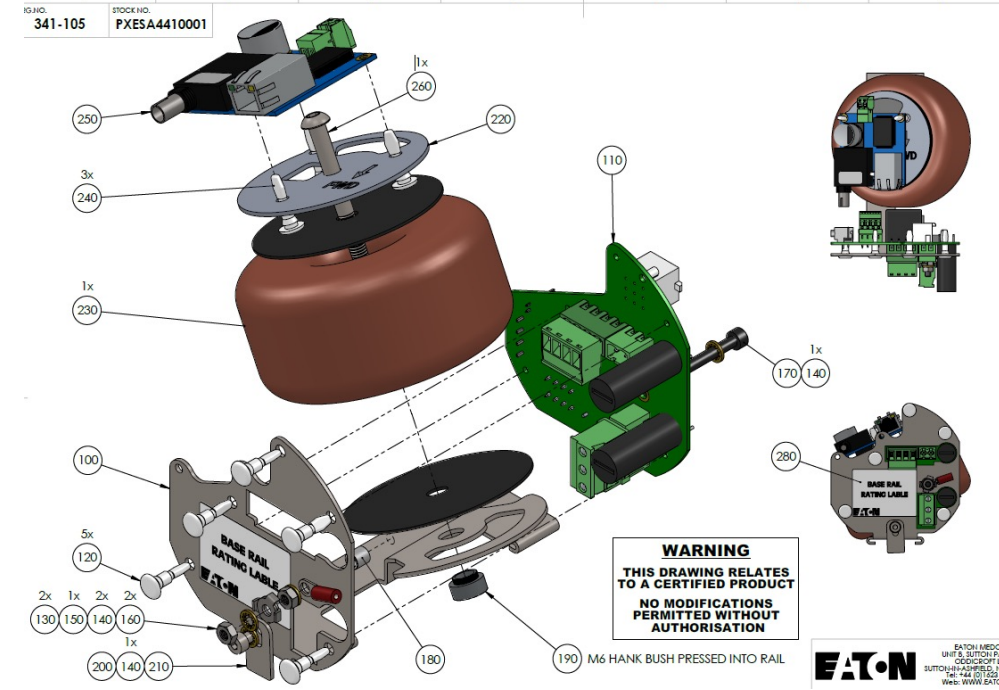
Internal component access



Needs to open two different sections to access fuse, transformer cable connectors

Single section and easy to open for accessing internal components for service

Easy Serviceability in the new version



All internal serviceable components such as motor, fuse and cable access are from a single opening.

HT-E-BPW6800 (Stainless steel PTZ Wall mount)



HT-E-XWP10UL (Washer tanker for all cameras with wiper model)



All previous accessories remains the same and compatible with old and newer models

Questions