Upgrade your Trimble MX system with the Horus MX Extensions

THERMAL | HIGH RESOLUTION | AI | IMAGERY BASED 3D MESHES

HORUS MAKE SENSE

MX Extension portfolio

All hardware & software extensions can be used on the full MX portfolio. Including the MX7, MX50 and the MX9

MX7

Mobile Image Capturing system

MX50

Mobile scanning & imaging for asset management and road maintenance

MX9

Mobile scanning & imaging for surveying and engineering

MX High-Resolution extension

End to End solution incl. the high-resolution camera(s) rigging and software

Cost effective and high-performance high-resolution capturing camera system in a small form factor enclosure

- Fully integrated, turnkey solution
- Stable, reliable and repeatable HR camera solution for land-based mobile mapping applications.

Application adding High-Resolution imagery

By adding high resolution imagery to your current MX system you are able to capture high-end street level imagery for more detailed road inspection and asset mapping applications and be ready for automated feature extraction, scanning POI's and creating virtual 3D mesh surroundings.

- Asset management in public spaces
- Road maintenance
- Points of interest extraction

MX - Thermal extension

End to End extension kit including the thermal camera(s) rigging and software

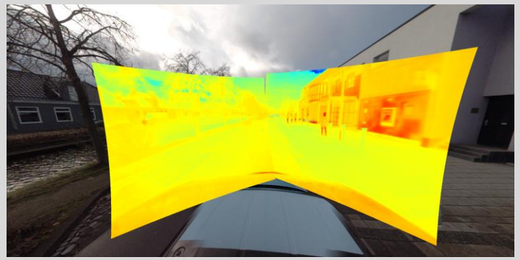
Cost effective and high-performance thermal capturing camera system in a small form factor enclosure

- Fully integrated, turnkey solution
- Stable & reliable IR camera set up
- No postprocessing of images
- Georeferenced
- Direct temperature read-out available from image for fast thermal evaluation

Application adding thermal imagery

By adding the thermal extension kit your current MX system will be ready for:

- Tunnel inspections,
- Capturing asset failing (overheating equipment),
- Checking real estate insulation problems,
- Measuring heat stress in cities.



Mercaido AI

Horus AI platform including AI models for automated feature extraction

An online platform where you can get access to a library of street level imagery relevant AI models.

MERCAIDO AUTOMATED MAPPING

Application adding AI models to Street-level imagery

Automated feature extraction as a service. Automated feature extraction was never that easy.

- Make data GDPR Compliant: LPR, faces, persons, vehicles
- Automated feature extraction: Light poles, Utility signs
- Automated road maintenance detect: Guard rails, traffic signs, asphalt cracks &raveling, iRAP

Digital Twins 2.0

Software suite to transform HR imagery into lightweight 3D Meshes

We built a proposition on top of our High-resolution extension to create 3D meshes out of high-resolution imagery.

<u>Imagery based 3D Mesh</u>

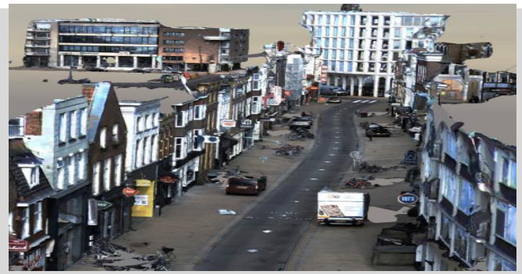
- Fast, User friendly &Very cost effective

3D

Application imagery-based 3D Meshes

Transform high-resolution imagery into imagery-based 3D Meshes tailored for

- User friendly asset management & urban Surveys,
- Determination of the state & condition of the assets.



Product sheet

High-Resolution MX Extension

Capture Street Level Imagery Like Never Before

Mobile mapping needs intelligent solutions
The mobile mapping is asking for more intelligent and better ways of capturing in-depth street level imagery. Needed functionality like real-time stitching, automated object recognition and virtual 3D meshes became the new standard.

Upgrade at an instance
The Horus HR extension is perfect to upgrade your MX system by capturing high resolution imagery. It doesn't matter if your system is brand new or being used already. It will fit & work in just minutes

Upgrading the Trimble MX with HR imagery
By adding high resolution imagery you are able to capture high-end street level imagery for road inspection and asset mapping applications. For example functionality like automated feature extraction, scanning POI's and creating virtual 3D mesh surroundings.

Key Features

- Extension on the MX7 and the MX9 systems
- Cost effective and high-performance high resolution capturing camera system in a small form factor enclosure
- Fully integrated, turnkey solution
- Stable and reliable HR camera solution for land-based mobile mapping applications like road maintenance, extracting POI's and creating detailed 3D meshes

Contains

A) Hardware

- Recording unit
- Allied Vision Alvium cameras
- 3 HR Camera set up roof mount
- Horus junction box
- Horus Trigger cable
- Disk size 2TB (~ 400KM)

B) Software

- Horus Framework license (pipeline to grab stitch and stream)
- Horus Geosuite (per workstation)
  - Horus Immersive View Builder
  - Horus Layer Manager
  - Horus Ortho Tool
  - Horus Position Fixer
  - Horus Movie Maker (export to JPEG/GeoTiff)

Camera setup & roof mount

Recording & Junction box

Horus Geosuite software

Rugged transport case

Technical specifications

Camera overview

• Camera	Allied Vision Alvium
• Lens	12mm
• ADC	12-bit
• Megapixels	16MP
• Shutter	Global shutter
• Sensor Name	Sony IMX542
• Sensor Type	CMOS

Performance specifications

- Data throughput 5GB/KM (photo every 3 meters)
- Power Requirements External power 240W – 12V
- 12 V to be connected to extra car battery, battery not included

Physical characteristics

Physical - Cam setup

• Dimensions [W x H x L]	30cm × 55cm × 24cm
• Interface	USB 3.1 Gen 1
• Mass 3-cam set up	3.5 Kg

Physical – Horus junction box

• Dimensions [W x H x L]	30cm × 45cm × 30cm
• Mass	2 Kg

Environmental characteristics

- IP54 proof

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