TACHYON 6400 CORE
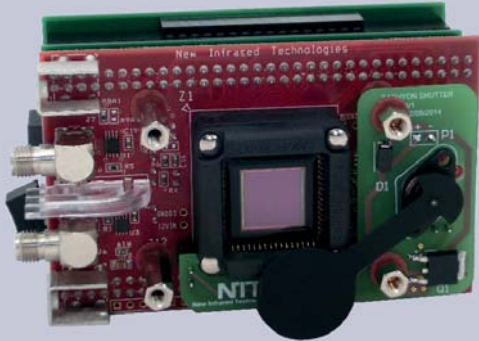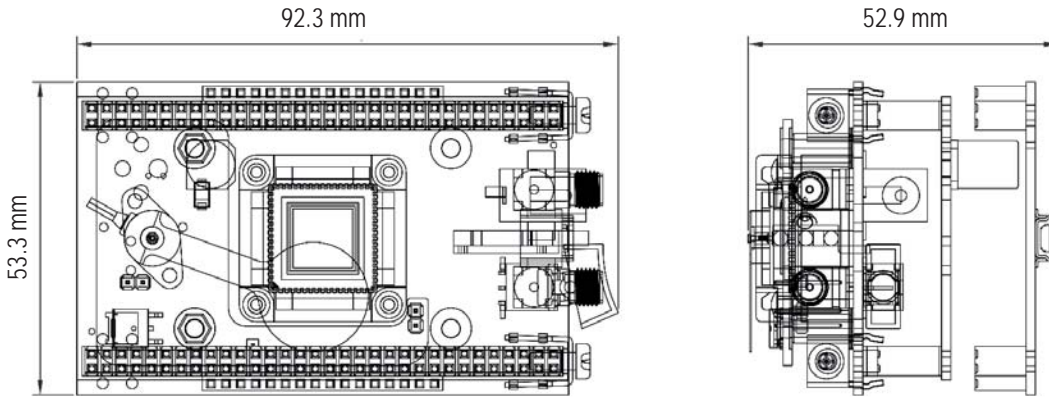
Plug & play uncooled MWIR imaging module with USB connection and frame rates up to 2 kHz
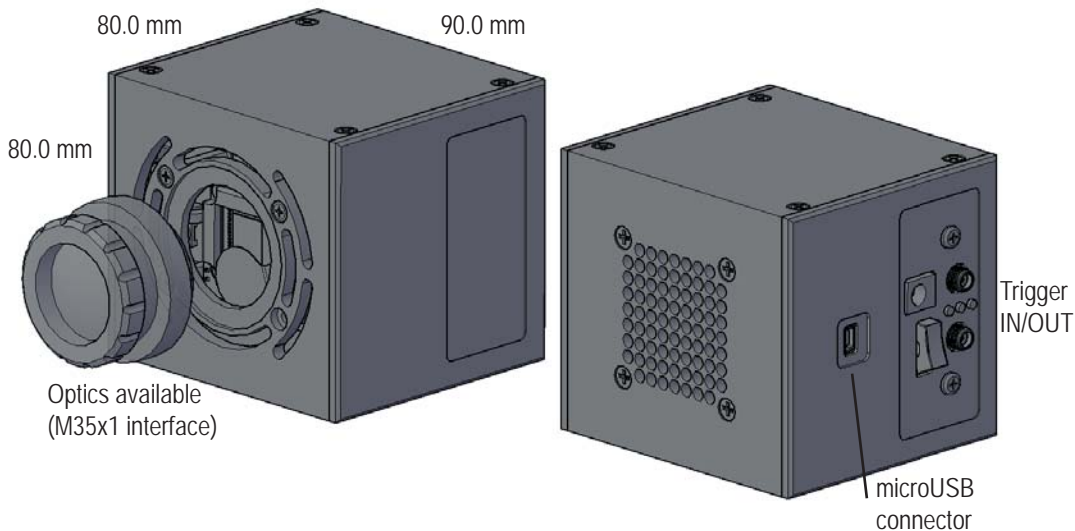
- Electronic OEM module system with control and communications interface for TACHYON 6400 FPA (2nd gen. FPA with ROIC, 80x80)
- FPA included with the module
- Band of detection: MWIR (1 - 5 microns)
- Peak wavelength of detection: 3.7 microns
- Mechanical shutter incorporated in the module for 1-pt offset correction
- Integration time: selectable via software (100 – 1000 us)
- CORE versions & maximum frame rates (@ minimum integration time):
    - TACHYON 6400 CORE-S: 500 Hz
    - TACHYON 6400 CORE-HS: 2000 Hz
- Slower acquisition speeds are possible using longer integration times
- FPA biasing voltage: selectable (0 V to 4 V, with current measurement)
- Minimum temperature of detection: 100 ºC
- Communication interface: USB 2.0, high-speed (up to 480 Mbps)
- Data transmission: raw data, 10 bits
- Acquisition trigger (TRIGGER IN): SMA connector, 2 modes: start/stop, burst
- Output trigger (TRIGGER OUT): SMA connector, 1 pulse per image
- Power: 6W (external power, 12 VDC, 500 mA)
- Dimensions of the OEM electronic module (in mm): 54 (L) x 93 (W) x 53 (H)
- Metal housing available, with M35x1 optics interface, side connectors, fan and tripod screw [housing dimensions, in mm: 80 (L) x 90 (W) x 80 (H)]
- Software included: NIT SOFTWARE SUITE (Acquisition and visualization SW)
- DLL for custom software programming available
- Optics available (M35x1 interface): f=35 mm
- Modifications of the product: available upon request
- Industrial applications: industrial welding process monitoring, gas detection, machine vision, laser monitoring
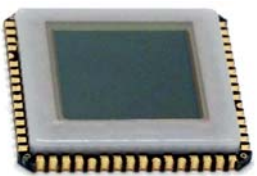- Defense applications: muzzle flash detection, Active Protection Systems, PICS

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TACHYON 6400 CORE OEM module

92.3 mm

53.3 mm

52.9 mm

TACHYON 6400 CORE
with external housing and lens

80.0 mm

90.0 mm

80.0 mm

Optics available
(M35x1 interface)

Trigger
IN/OUT

microUSB
connector

TACHYON 6400 FPA

- FPA resolution: 80x80 (6400 pixels)
- Band of detection: MWIR (1 - 5 um)
- Peak detection wavelength: 3.7 um
- Pixel size: 130x130 um^2
- Pixel pitch: 135 um
- A/D readout electronics: on-chip
- Dark current cancellation: on-chip
- Readout method: Snapshot
- Frame rate: 2000 fps (max)

- Integration time: 100 us – 1 ms
- Data format: raw, 10 bit
- Digital interface for FPA control and data acquisition/transmission
- Packaging: SMD / LCC 64 pins (4x16) / 720x720 mils / pitch: 40 mils
- Power supply: 3.3 V, 0.5 W

Typical applications

- *Industrial manufacturing process control (welding, cutting, etc.)*
- *Laser process monitoring*
- *Gas and flame detection*
- *Machine vision*
- *OEM integration*
- *Defense applications: muzzle flash detection, Active Protection Systems, PICS*

Industries of use

- *Automotive industry*
- *Home appliance manufacturing*
- *Metallurgy and steel industry*
- *Petrochemical industry*
- *Defense*

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