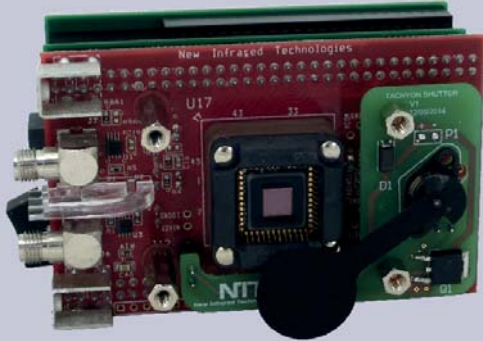


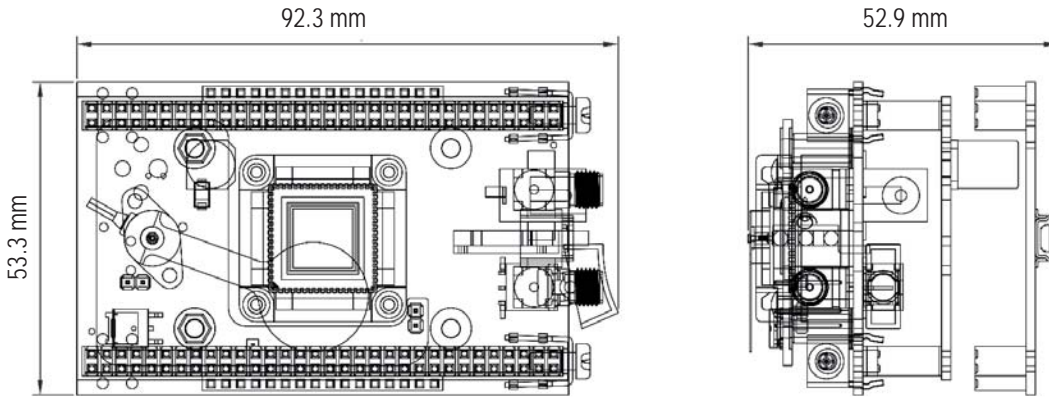
TACHYON 1024 CORE

Plug & play uncooled MWIR imaging module with USB connection and frame rates up to 10 kHz

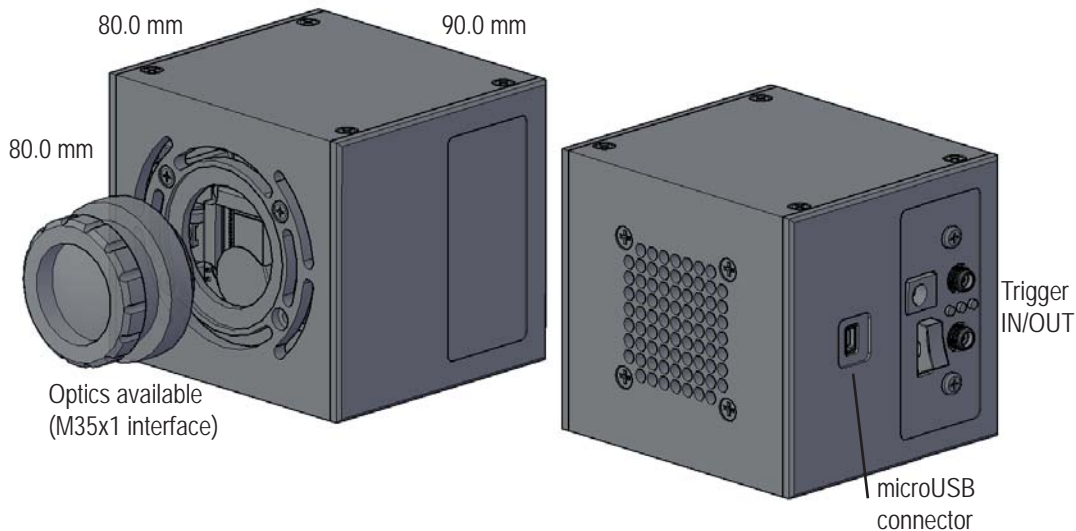


- ▶ Electronic OEM module system with control and communications interface for TACHYON 1024 FPA (2nd gen. FPA with ROIC, 32x32)
- ▶ FPA included with the module
- ▶ Band of detection: MWIR (1 - 5 microns)
- ▶ Peak wavelength of detection: 3.7 microns
- ▶ Mechanical shutter incorporated in the module for 1-pt offset correction
- ▶ Integration time: selectable via software (100 – 1000 us)
- ▶ CORE versions & maximum frame rates (@ minimum integration time):
 - ▶ TACHYON 1024 CORE-S: 2000 Hz
 - ▶ TACHYON 1024 CORE-HS: 10000 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 °C
- ▶ 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=9 mm, f=24 mm, f=48 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

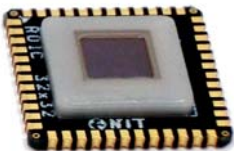
TACHYON 1024 CORE OEM module



TACHYON 1024 CORE with external housing and lens



TACHYON 1024 FPA



- ▶ FPA resolution: 32x32 (1024 pixels)
- ▶ Band of detection: MWIR (1 - 5 μm)
- ▶ Peak detection wavelength: 3.7 μm
- ▶ Pixel size: 130x130 μm^2
- ▶ Pixel pitch: 135 μm
- ▶ A/D readout electronics: on-chip
- ▶ Dark current cancellation: on-chip
- ▶ Readout method: Snapshot
- ▶ Frame rate: 10000 fps (max)
- ▶ Integration time: 100 μs – 1 ms
- ▶ Data format: raw, 10 bit
- ▶ Digital interface for FPA control and data acquisition/transmission
- ▶ Packaging: SMD / LCC 48 pins (4x12) / 560x560 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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