

nHSC-31-S1

Network-Based High-Speed Camera with Built-in Recorder

**CURTISS-
WRIGHT**

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Key Features

- High resolution (1280 x 1024 pixels)
- High frame rate (up to 500 frames per second at full resolution)
- Built-in CompactFlash recorder
- Provides analog video and data/clock output for image preview
- Rugged, lightweight and miniature size
- IRIG AC, DC or IEEE 1588 for time synchronization and timestamp support
- Real-time clock timestamp support
- Circular buffer for pre-event and post-event image capture
- 100/1000BASE-T Ethernet
- 28V power

Applications

- High-speed film camera replacement
- Component testing
- Vehicle testing
- Materials testing

Overview

The high-speed [nHSC-31-S1 series](#) camera design provides a unique solution for applications where space is at a premium, including airborne, automotive and ground testing.

The nHSC-31-S1 series camera is a standalone and/or networked high-speed camera that is capable of 500 frames-per-second operation. The camera includes an integrated CompactFlash recorder to allow easy removal of critical post-test data. It also provides integrated video preview and easily integrates into a system with other TTC network equipment including switches, recorders and the nMGR-2000-1 high-speed camera manager.

The nHSC-31-S1 series camera is configured using TTCWare software. The images that are stored in the camera's memory are transferred to a PC and converted to industry standard image formats.

Specifications

General

- Power: +28VDC \pm 4
- Resolution: Full – 1280 x 1024 pixels
- Frames-per-second @ full resolution: Up to 500
- Sensor size: 22.4 mm diagonal
- Exposure: Fixed
- Built-in volatile DRAM: 4 GB
- Non-volatile memory: Integrated CompactFlash+ recorder supports up to a 32 GB card
- Pixel depth: 8-bit/10-bit
- Shutter type: Electronic/global
- Shutter exposure time: 1 μ s to 1/fps, selectable
- Camera trigger type: TTL, 28VDC, Ethernet command, differential
- Ethernet: 100/1000BASE-T
- Optical lens options: C-mount
- Video output: RS-170A (NTSC and PAL - compatible) and PCM data/clock

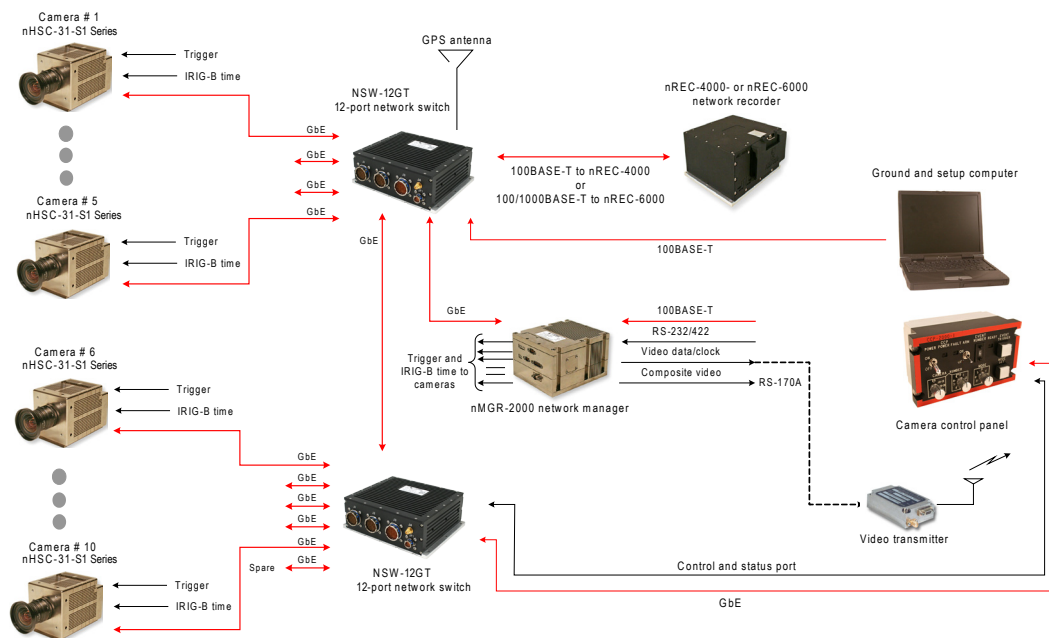


Figure 1: nHSC-31-S1 Series system diagram

Environmental

- Temperature:
 - + Operating: -40°C to +60°C
 - + Storage: -55°C to +100°C
- Random vibration: 15 Grms, 20 to 2,000 Hz, 15 minutes, any axis
- Shock: 20 G sawtooth, 11 mS, 6 shocks, any axis
- Acceleration: 25 G, indefinite duration, any axis

Dimensions and Mechanical

- Dimensions (W x L x H):
 - + nHSC-31-S1-2 and nHSC-31-S1M-1:
 - › 3.37 x 5.49 x 3.92" (85.60 x 139.45 x 99.57 mm) including fastener and clamps (without lens)
 - + nHSC-31-S1(M)-4:
 - › 3.37 x 5.47 x 3.92" (85.60 x 138.94 x 99.57 mm) including fastener and clamps (without lens)
- Weight: 3.13 lbs (1.42 kg)
- Unit connectors: 9-pin and 50-pin D-Subminiature type

Connectors

- Power: MDM-9M
- Ethernet: MDM-9F
- Communications and sync: MDM-37F

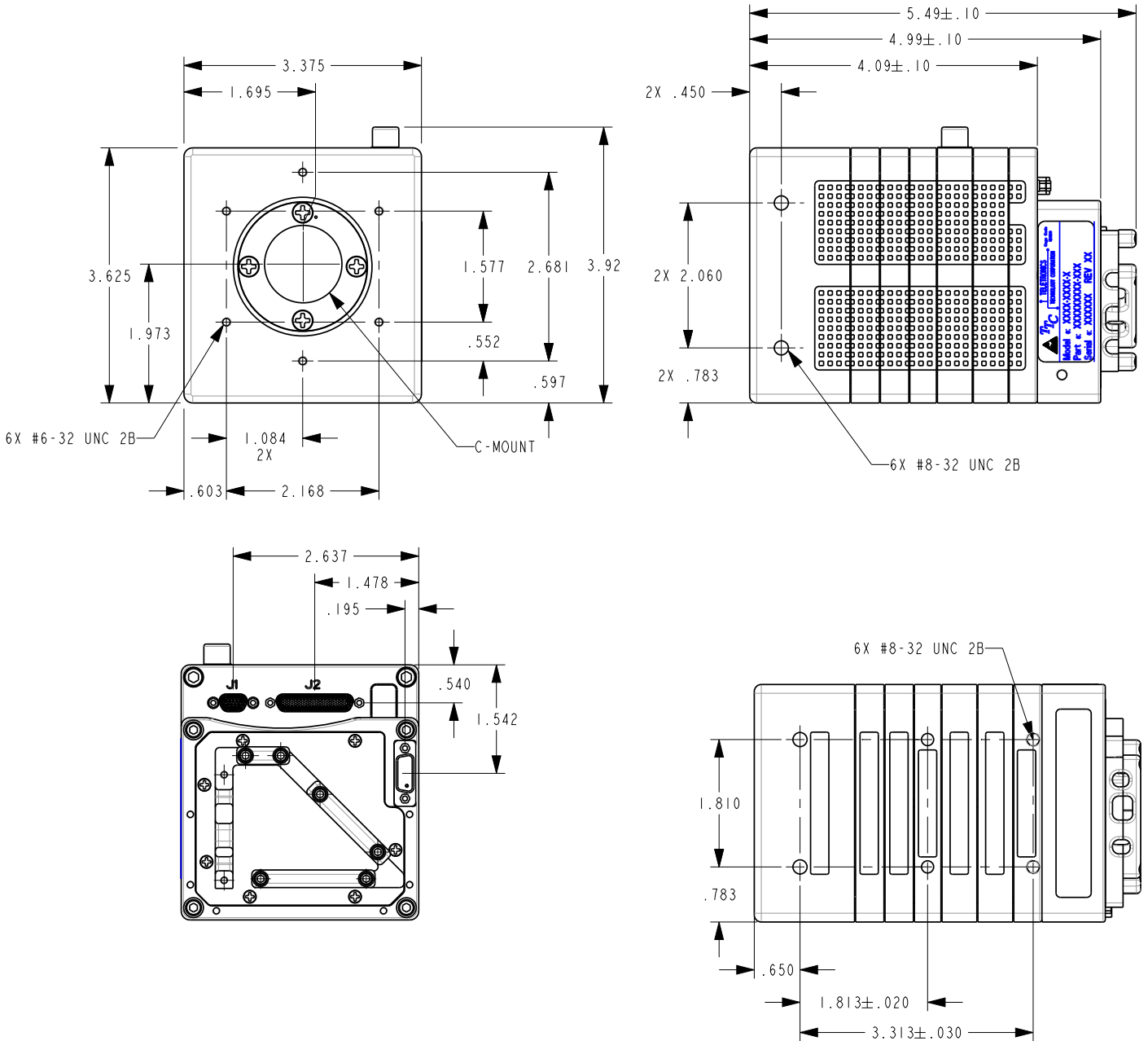


Figure 2: nHSC-31-S1M-1 and nHSC-31-S1-2 outline drawing

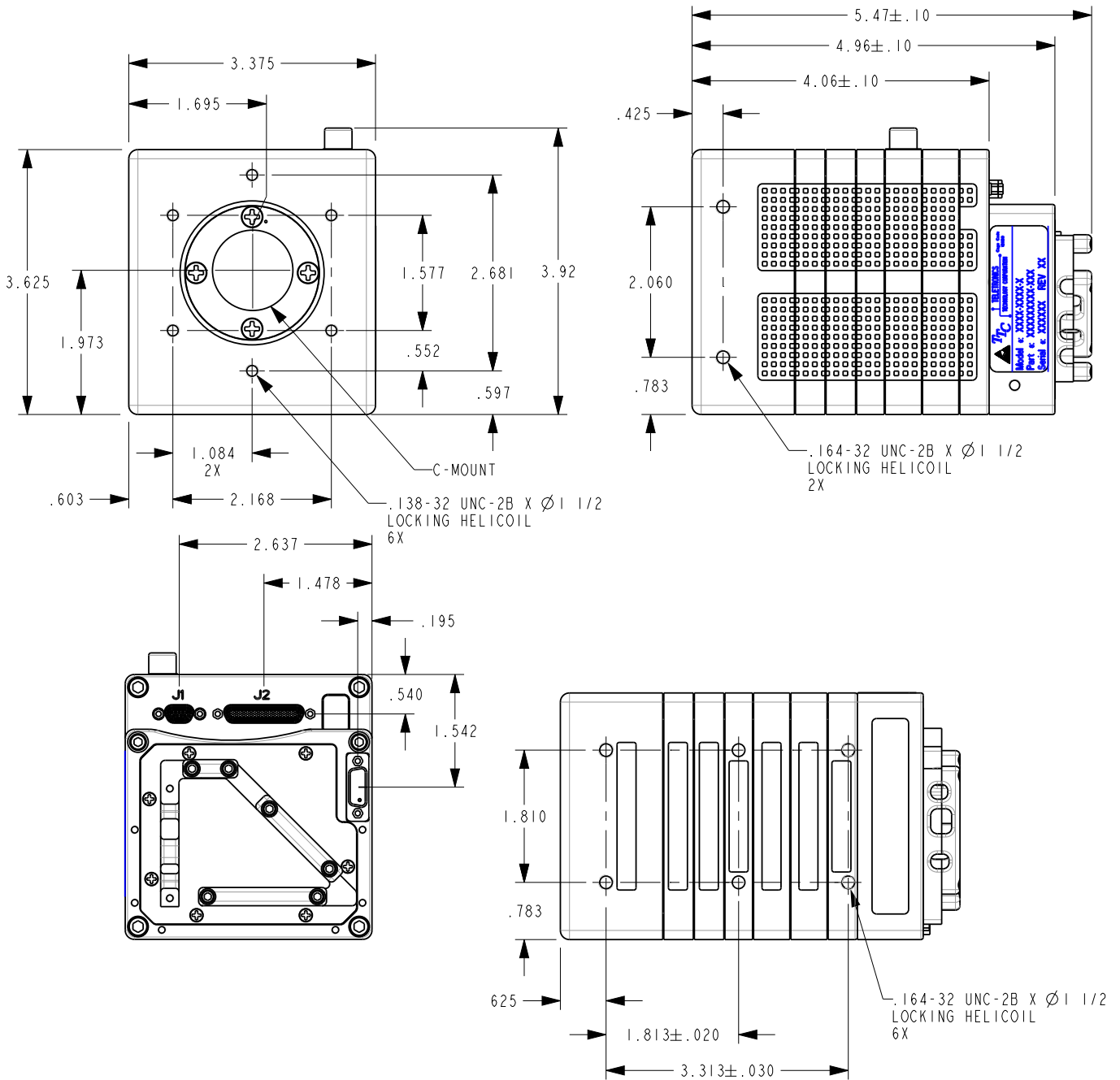


Figure 3: nHSC-31-S1(M)-4 outline drawing

TABLE 1 nHSC-31-S1 Ordering Information	
PART NUMBER	AVAILABLE OPTIONS
nHSC-31-S1M-1	Monochrome network-based high-speed camera with integrated recorder
nHSC-31-S1-2	Color network-based high-speed camera with integrated recorder
nHSC-31-S1(M)-4	Avatar lens compatible network-based high-speed camera with integrated recorder

Contact [Curtiss-Wright](http://Curtiss-Wright.com) for additional product configurations.