

# Hitachi Travelstar C3K80

1.8-inch slim-line hard disk drives for portable consumer devices

## Highlights

- > Ultra-light, ultra-quiet, power efficient
- > Storage capacities from 30 GB to 80 GB
- > 3600 RPMs reduces power consumption
- > Fast power-on-to-ready time
- > Reliable ZIF connector
- > Slim z-height: 5 mm (1 disk), 8 mm (2 disks)
- > Industry-leading operating shock tolerance

## Applications

- > Digital video cameras
- > Portable media players
- > Handheld navigation/GPS devices
- > Other handheld applications



30, 40, 60, 80 GB | 3600 RPM | ATA-7

The Hitachi Travelstar® C3K80 series of 1.8-inch hard disk drives offers up to 80 GB of storage for low-profile, ultra-portable CE devices. It leverages the latest innovations in recording technology, connectivity, power management and shock tolerance to meet the rugged demands of portable use. Its 3600-RPM cycle speed lowers power requirements, extending usage time on a single battery charge in power-critical devices such as digital video cameras, portable media players, handheld GPS navigation devices and more. Ready to integrate into CE designs, the Travelstar C3K80 reduces manufacturers cost and time to market.

## Designed for consumer use

Portable consumer devices live a tough life—in pockets, purses, backpacks, briefcases, almost anywhere. They're dropped on the ground, kicked under the bed and baked in the sun. Naturally, the technology that powers them must be designed for rugged, reliable use and inevitable consumer abuse. The Travelstar C3K80 addresses the most critical requirements of portable CE products, optimizing its features for maximum reliability and consumer enjoyment.

## Reliability

Using advanced perpendicular magnetic recording (PMR) technology, the Travelstar C3K80 improves reliability while increasing drive capacity more than 30% over the previous Travelstar model. Its 40-pin ZIF host connector is more reliable than 50-pin connectors common in notebook drives.

## Low power consumption, long play times

The Travelstar C3K80's 3600-RPM cycle speed contributes to a 20% reduction in power consumption and faster power-on-to-ready times than previous models. Power



management features minimize consumption in idle, read and standby modes where the drive spends most of its time. A highly integrated disk controller SoC uses no external buffers, another contributor to low power performance.

## Exceptional shock protection

The Travelstar C3K80 delivers industry-leading shock tolerance (600 G/2 ms), in part, through reduced slider size (mass), a femto air-bearing slider design, and the femto suspension.

## High-quality audio / ultra-low noise

The Travelstar C3K80 achieves exceptional acoustic performance through fluid dynamic bearing (FDB) motors and optimized seek control. The drive's sound emissions during idle and seek operations (1.6- and 2.2-bels, resp.) are undetectable by the human ear.

## Tailored to manufacturers' needs

The Travelstar C3K80 simplifies integration into most portable designs, making the manufacturers job easier as well. Widely used in CE devices today, the ZIF connector and flexible host-connection cable offer a choice of mounting schemes. A small

	MP3 songs (4 mins)	video hrs (MPEG-2 1 GB/hr)	movies (2.8 GB avg)
80 GB	20,000	80	28
60 GB	15,000	60	21
40 GB	10,000	40	14
30 GB	7,500	30	10

Actual storage may vary depending on compression rate applied.

*Ultra-portable Travelstar C3K80 offers drive capacities to please any media enthusiast.*

## Travelstar C3K80 Specifications

Model(s)	HTC368080H8CE00	HTC368060H8CE00	HTC368040H5CE00	HTC368030H5CE00
Capacity <sup>1</sup>	80 GB	60 GB	40 GB	30 GB
Interface	Parallel ATA-7			
Host connection	ZIF			
Sector size	512 bytes			
Data heads (physical)	4			2
Data disks	2			1
<b>Performance</b>				
Data buffer	128 KB			
Rotational speed	3600 RPM			
Latency average	8.3 ms			
Interface transfer rate (max)	33 MB/sec Ultra DMA mode-2			
PIO	16.6 PIO mode-4			
Seek time	14 ms (read, average)			
<b>Reliability</b>				
Error rate (non-recoverable)	< 1 per 1.0 E 13 bits transferred			
Load / unload cycles	300,000			
<b>Power</b>				
Supply	3.3 VDC (+ 5% / -15%)			
Start up (max)	1.3 W			
Read (average)	0.80 W			
Write (average)	0.80 W			
Active idle (average)	0.35 W			
Standby (average)	0.08 W			
<b>Environmental</b>				
Operating shock (half-sine wave)	600 G/2 ms			
Non-operating shock (half-sine wave)	1500 G/1 ms			
Temperature	5 to 60 °C operating / -40 to 70 °C non-operating			
<b>Acoustics (A-weighted sound power)</b>				
Idle (typical)	1.6 bels			1.4 bels
Seek (typical)	2.2 bels			2.0 bels
<b>Physical size</b>				
z-height	8.0 mm			5.0 mm
Dimensions	W (54 mm) x D (71 mm)			
Weight (max)	59 g			48 g

<sup>1</sup> GB equals one billion bytes when referring to hard drive capacity; accessible capacity may be less

footprint and slim z-height (5 mm for 1-disk models and 8 mm for 2-disk models) provide configuration options. A choice of 30-, 40-, 60-, and 80-GB drives lets manufacturers tailor storage capacity for each product price point.

### Hitachi quality and service

The Hitachi Travelstar family of mobile hard drives is designed to the highest quality standards and contains field-proven components. Hitachi enables global customers to bring their products to market quickly through worldwide technical support and integration services.

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